



FREDRICKSON  
COMMUNICATIONS

119 N. FOURTH STREET, SUITE 202  
MINNEAPOLIS, MN 55401  
612-339-7970

# MN Department of Health Website User Research Study Results

John Wooden and Molly Emmings  
Fredrickson Communications, Inc.

Clients:  
John Stieger, Director of Communications  
Cristyn Rybak, Web Manager

Updated June 7, 2010

C12 - 0021

Level K

Consultant's Report

## Contents

Executive Summary .....	3
About the Minnesota Department of Health Website.....	5
MDH Website Survey Results.....	6
Responses to the survey questions .....	7
About the Usability Test and Focus Groups.....	23
Participants and Logistics .....	23
About the Participants.....	24
Key Findings from the Usability Test.....	28
Impressions of the revised and current home page.....	28
Scenario-by-scenario test results .....	32
Post-Test Ratings.....	48
System Usability Score .....	52
Key Findings from the Focus Groups.....	54
Recommendations.....	61
Appendix A: Personas.....	90

## Executive Summary

The following report presents the results of a user research study of the Minnesota Department of Health (MDH) website. This study was based on three main research methods:

1. A web-based survey
2. Usability testing
3. Focus group discussion sessions

The survey was launched in March, and the usability testing and focus group sessions took place in April. The participants in the usability testing and focus group sessions were selected from a large pool of survey respondents who were representative of the main audiences using the site and of different regions of the state.

At a high level, the key findings from all three of the research methods were consistent: users appreciate and benefit from the very wide range of detailed information on the MDH website and find the information overall to be clear and straightforward. However, their experience *finding* information on the site is often very difficult, whether by means of browsing or searching.

Although the problem with findability was common to all of the site's user groups, those users who do not have a background in healthcare, such as training in nursing, and are only occasional users, have an even more difficult time navigating the site.

The revised home page was seen as a clear improvement over the current MDH home page, both in its appearance and the way in which it helped participants determine in what category they should look for a specific topic. Still, participants felt that there was room for further improvement in helping users to navigate the site. For example, they wanted to see a new and better search engine and some audience-based navigation options, in addition to the topic-based options. They also wanted to see a different way of presenting featured information, or "hot topics," below the banner on the home page. The approach to presenting hot topics that was used on the revised home page was not well-received overall.

In addition, navigation would be improved by taking steps such as creating styles for currently- and previously-selected links, adding a navigation breadcrumb, using the left navigation menu more consistently for local navigation across the site, and ensuring that navigation link labels and the titles of the pages they link to match.

A secondary area of concern that emerged from the research was with the look and feel of the site. It is evident from browsing across different sections of the MDH website that there are many types of inconsistency, which together detract from the overall professionalism of the site. For example, headings and sub-headings are handled differently, the left-column navigation menu is presented differently in places, and the right column is also handled with some inconsistency. Certain sections of the site have a completely different look and feel from most of the rest of the site, such as the Community and Family Health Division and the section on Asthma.

In addition to inconsistencies, the font size is often too small and line lengths are often too long, especially absent a right column. Overall, the site is lacking in photos and other images that would add warmth and aesthetic appeal. Though secondary to the issues with navigation, the presentation issues are nevertheless important. Sites that are perceived as attractive are usually also perceived as easier to use.

In the report, the results of the survey, usability testing, and focus group sessions are discussed in sequence. The feedback from the users provides solid support for updates and improvements to the site. In the final section of the report, a substantial list of recommendations is provided. These cover primary and secondary navigation, search, PDFs, browser compatibility, and visual presentation, in addition to several individual issues.

## About the Minnesota Department of Health Website

The primary mission of the Minnesota Department of Health (MDH) is to protect, maintain, and improve the health of all Minnesotans. Minnesota's public health system is recognized as one of the best in the nation, and the MDH's website is an important channel through which the Department can share news, information, and resources with various key audiences. These include health care professionals, local public health professionals, local and state government staff and officials, and members of the general public.

Among the most frequently used information and resources on the MDH site are the following:

- Birth certificates and death records
- Information about healthy living and chronic disease prevention
- WIC services
- Information about drinking water, water contamination, PFCs, air quality, chemical hazards, radon, mold, and numerous other resources related to the environment and health
- Grants related to healthy living, healthy communities, and disease prevention<sup>1</sup>
- Licenses and certifications
- Ratings and surveys of nursing homes
- Disaster and emergency preparation
- Policies, statistics, and research studies
- H1N1 and other immunization information<sup>2</sup>

The MDH website covers an exceptionally wide range of topics – the quantity of resources and data on the site is impressive. There are more than 30,000 pages of information, with roughly 400,000 visits per month.

## About the user research study

In an effort to learn more about who uses the MDH website, their impressions of the site, and ways to improve it and make it easier to use, a user research study was initiated in March 2010. This study was based on three main research methods:

1. A web-based survey
2. Usability testing
3. Focus group discussion sessions

The purpose and results of each research method are presented in the following pages.

---

<sup>1</sup> Almost two-thirds of MDH's budget is passed through as grants to local governments, tribal governments, and community-based organizations.

<sup>2</sup> The spike in interest in this topic is seasonal and happened to correspond with the timeframe of this study.

## MDH Website Survey Results

A survey concerning MDH website usage and perceptions was opened on March 16, 2010. The purpose of the survey was to learn more about who is using the site and why, and how satisfied users are with the site overall. By early April, over 1300 completed surveys had been submitted.

Based on the survey responses, the general picture of the audience is one that is –

- Predominantly female
- Age 40 or older
- Anglophone (English is their first language)
- Well educated
- Living in Minnesota, most likely in the Twin Cities area
- In a health care profession

In addition to this basic demographic information, the survey results also show that most members of the MDH website audience –

- Use a high-speed Internet connection
- Access the MDH website regularly
- Appreciate the quality and abundance of information on the MDH site
- Sometimes or even often experience difficulty finding some information on the site, either by browsing or searching.
- Use some type of social media, such as Facebook. (The audience was split 60-40 among those who use social media and those who do not.)

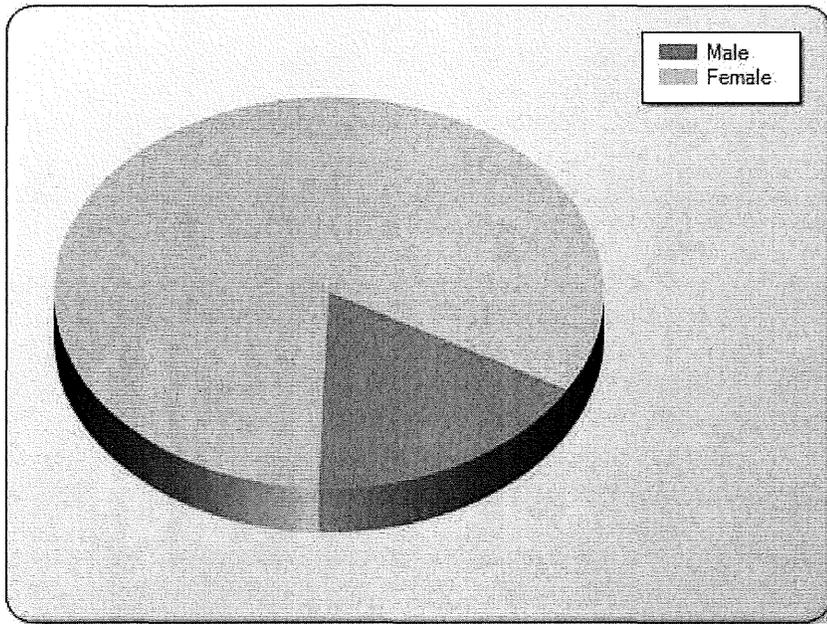
A detailed review of the survey results is presented on the following pages.

## Responses to the survey questions

**Note:** Percentages have been rounded to the nearest whole number. This may result in totals that do not add up to 100.

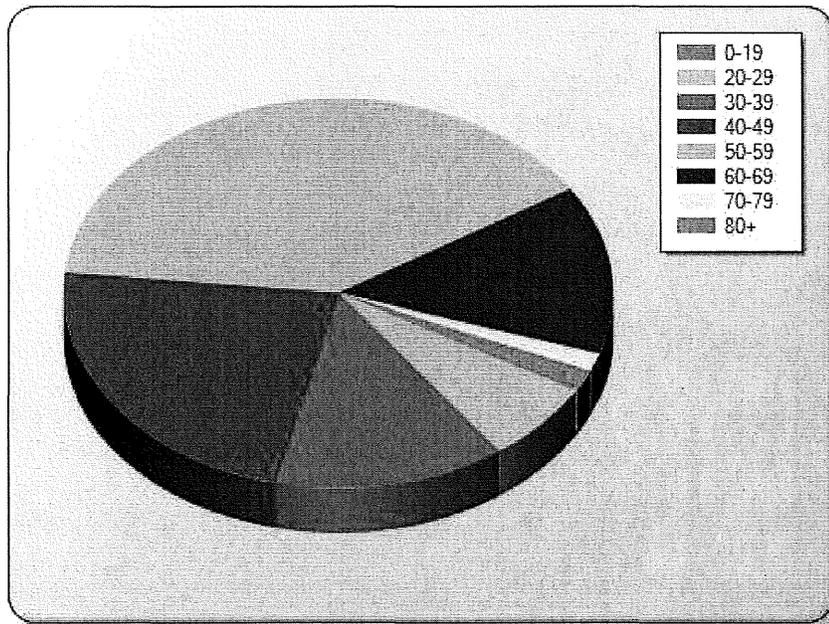
### Gender

Male: 17%  
Female: 83%



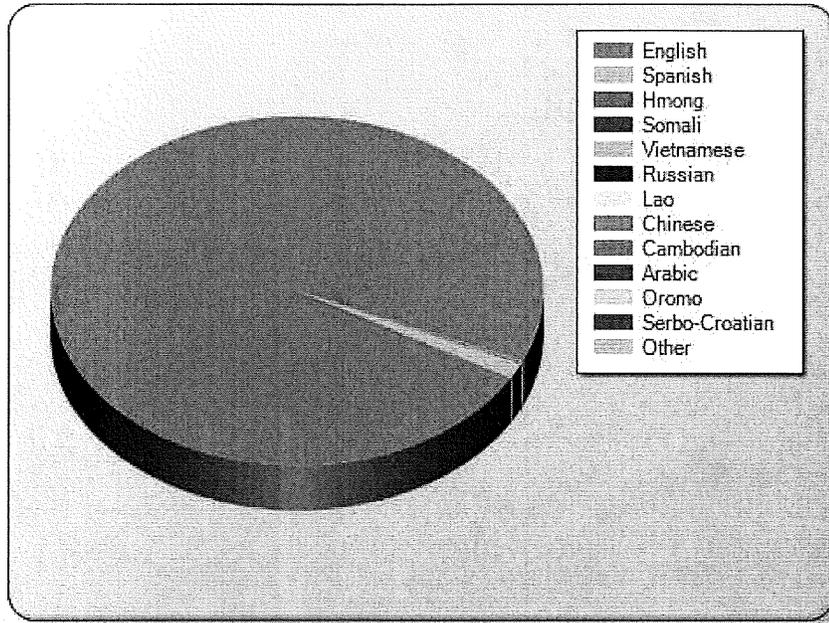
**Age**

00-19:	0%
20-29:	7%
30-39:	14%
40-49:	23%
50-59:	39%
60-69:	14%
70+ :	3 %



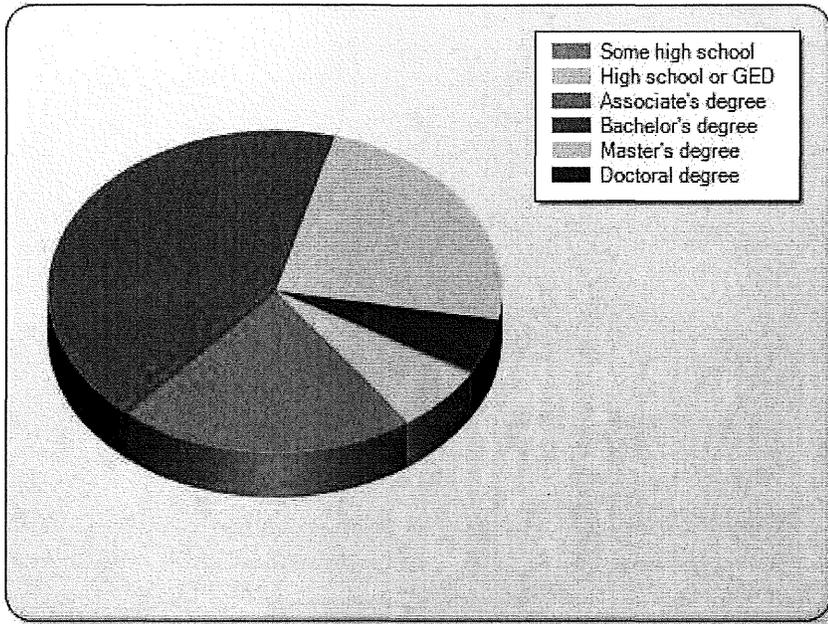
**Language**

English:	98%
Spanish:	0.1%
Oromo:	0.1%
Other:	1% (Amharic, the official language of Ethiopia)



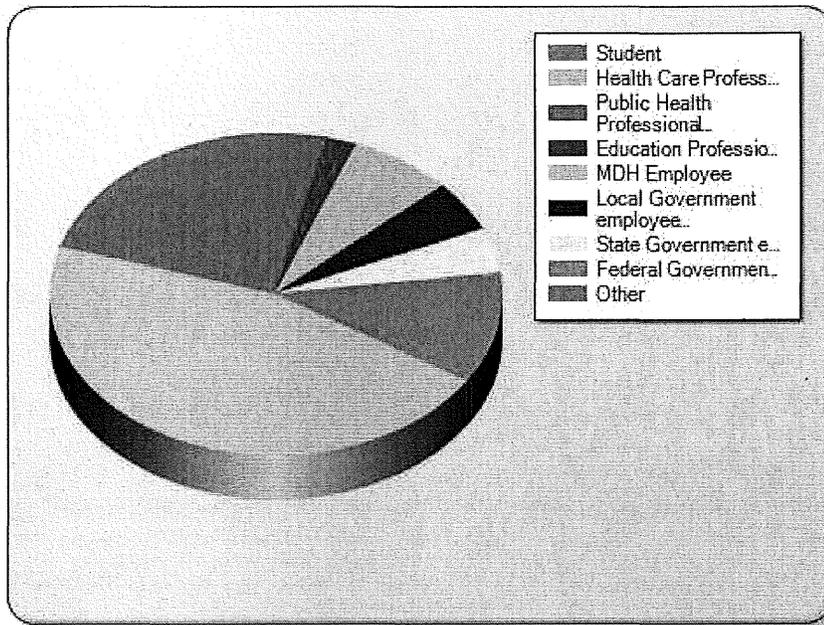
**Education**

Some high school:	0.3%
High school or GED:	6%
Associate's degree:	21%
Bachelor's degree:	43%
Master's degree:	24%
Doctoral degree:	6%



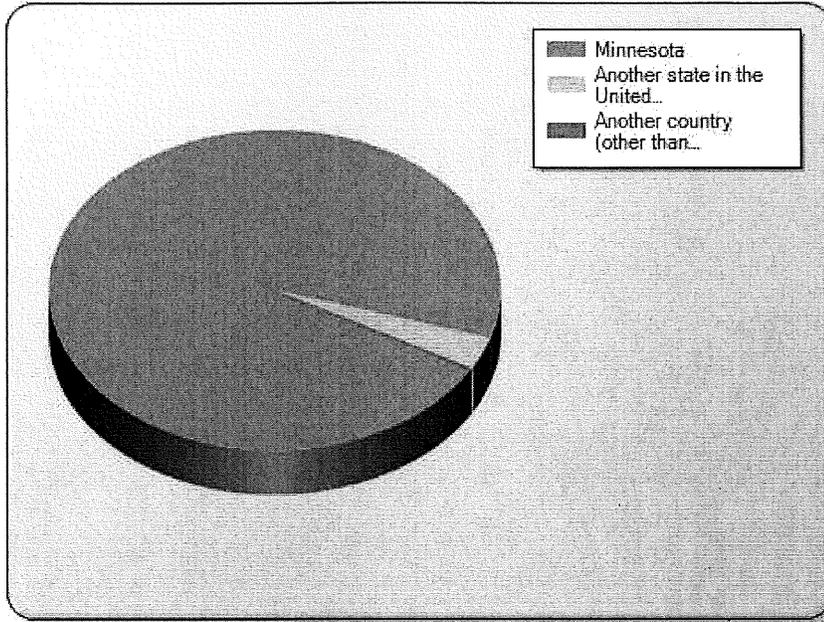
### Occupation

Student:	1%
Health care professional:	46%
Public health professional:	24%
Educational professional:	2%
Local government employee:	5 %
State government employee:	4.5%
Federal government employee:	0.4%
Other:	10%



**Location**

Minnesota: 97%  
Another state: 3% (primarily the states bordering Minnesota)  
Another country: 0.1%



**County of residence (virtually all counties were represented in the survey responses but only the top 11 are listed below)**

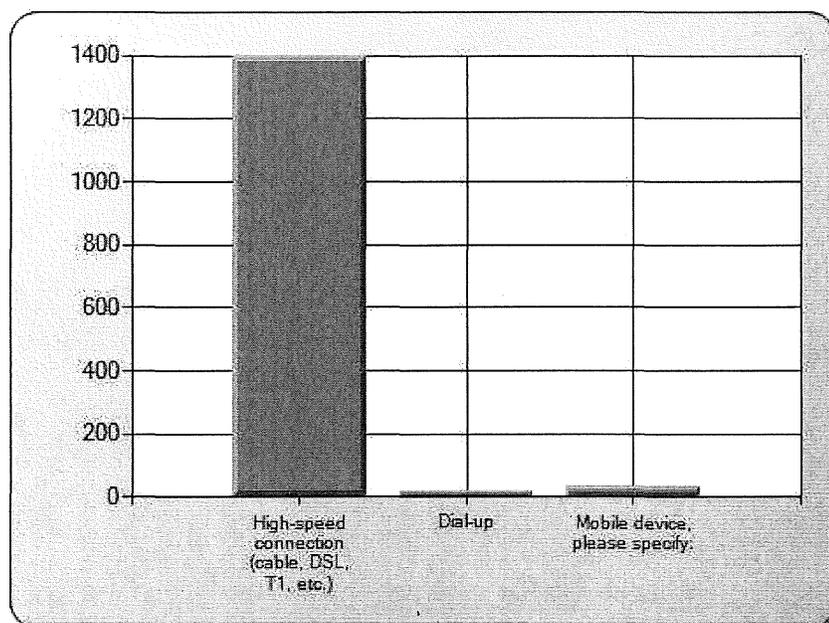
Hennepin: 21%  
Ramsey: 10%  
Dakota: 6%  
Washington: 6%  
Anoka: 5%  
St. Louis: 4%  
Stearns: 2%  
Rice: 2%  
Carver: 2%  
Otter Tail: 2%  
Wright: 2%

### Typical Internet access speed

High-speed connection: 95%

Dial-up: 1%

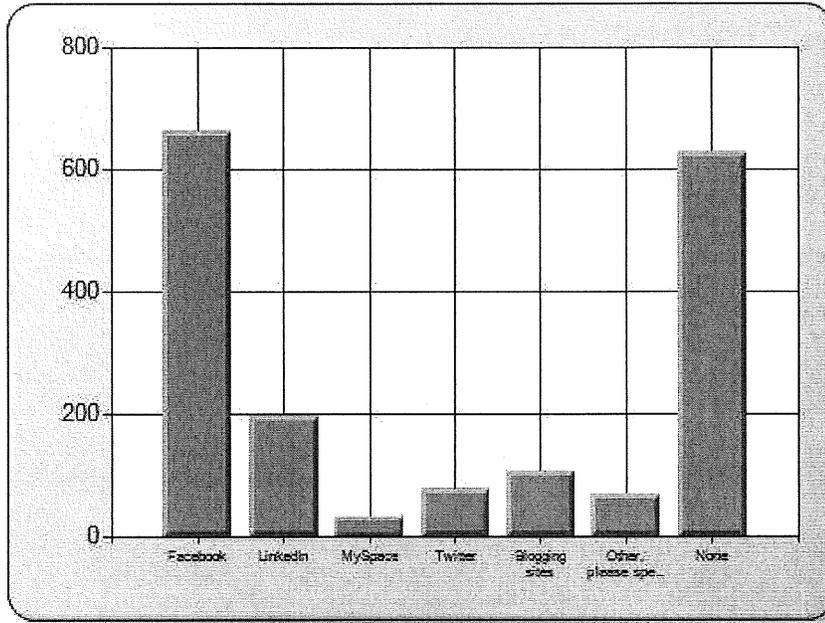
Mobile device: 3% (Blackberry was listed most often)



**Social media usage**

(Respondents could choose more than one)

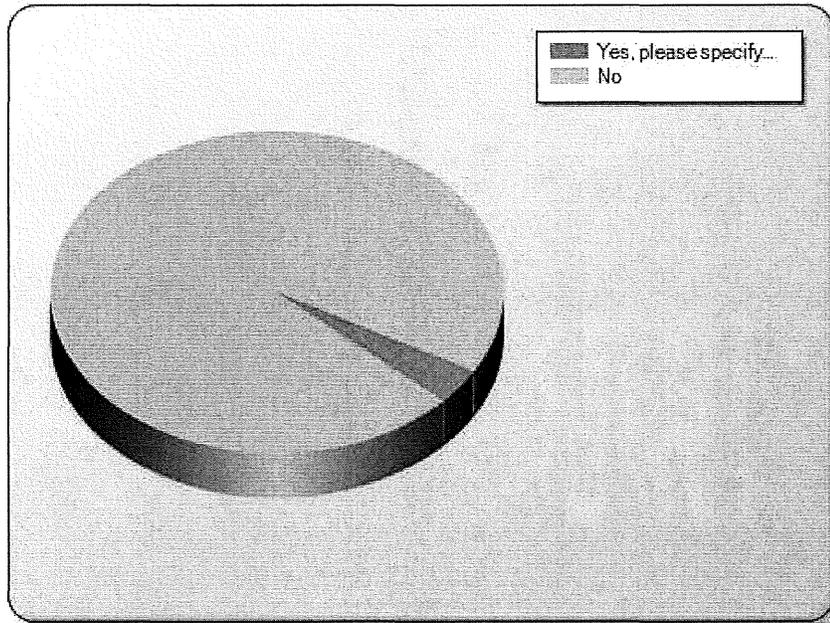
Facebook: 45%  
LinkedIn: 13%  
MySpace: 2%  
Twitter: 5%  
Blogging sites: 7%  
Other: 5%  
None: 42%



### Assistive technology usage

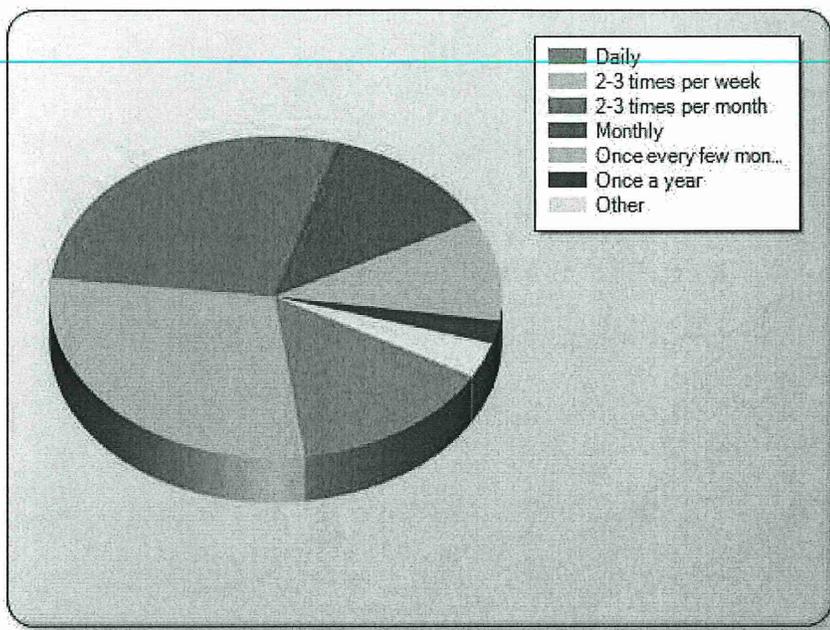
No: 96%  
Yes: 4%

**Note:** The responses indicate that this was not a well-understood term. What people listed were not examples of true assistive technology. One person wrote, “Actually, I don't know what you're talking about.” People using this technology would be familiar with the term.



**Frequency of use (MDH website)**

Daily:	15%
2-3x per week:	29%
2-3x per month:	28%
Monthly:	13%
Every few months:	10%
Once a year:	2%
Other:	4%



### Purpose for visiting the MDH site

Respondents could select more than one option.

The vast majority– 91% – indicated that they use the MDH site for work-related reasons. About 27% said they use it for personal reasons, either exclusively or in addition to work-related reasons. About 9% said they use it for school or educational projects.

When noting specific reasons for visiting the site, respondents listed a wide variety of information resources. It was difficult to determine from many of the responses the specific resources the respondent used most often, as some simply wrote descriptions such as “information,” “policies,” and “updates.” Specific items that were listed more commonly were as follows – those marked with an asterisk were listed most often.

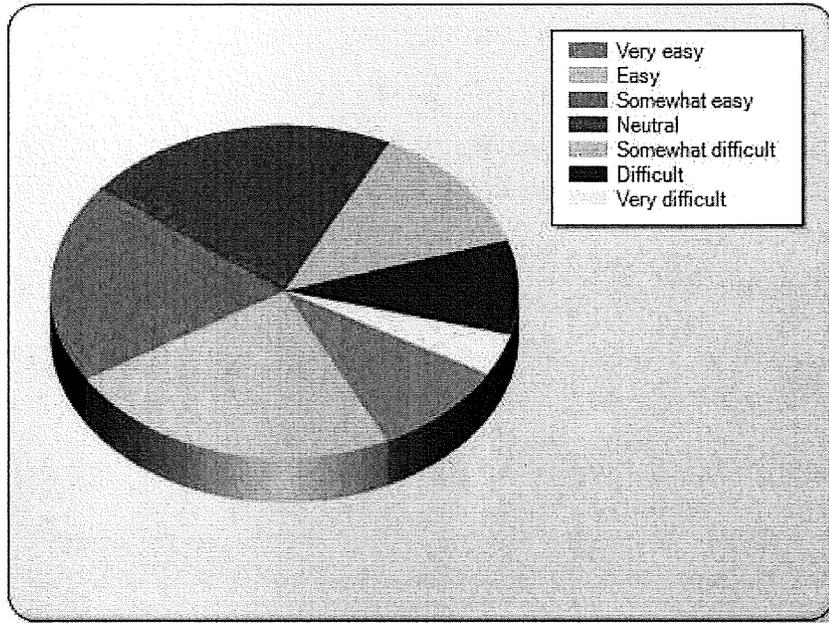
- H1N1 updates<sup>3</sup>
- Flu/influenza information\*
- Immunization/vaccination information\*
- Infection control/infections\*
- WIC\*
- Contact information\*
- Bulletins (not specified) \*
- Regulations and regulatory compliance\*
- License information\*
- Information about grants\*
- Birth records/certificates
- Diseases and conditions – treatment information
- Emergency preparedness
- Food safety
- Health reform updates
- Lead
- Newborn screening
- Nursing home information and surveys
- Drinking water standards
- PFC information
- School nurse information
- SHIP (State Health Improvement Program)
- Water contamination
- Well water information, drinking water standards

---

<sup>3</sup> The spike in interest in H1N1 information is related to a seasonal outbreak that corresponded with the timing of this study. Typically, interest in this specific topic is not as high.

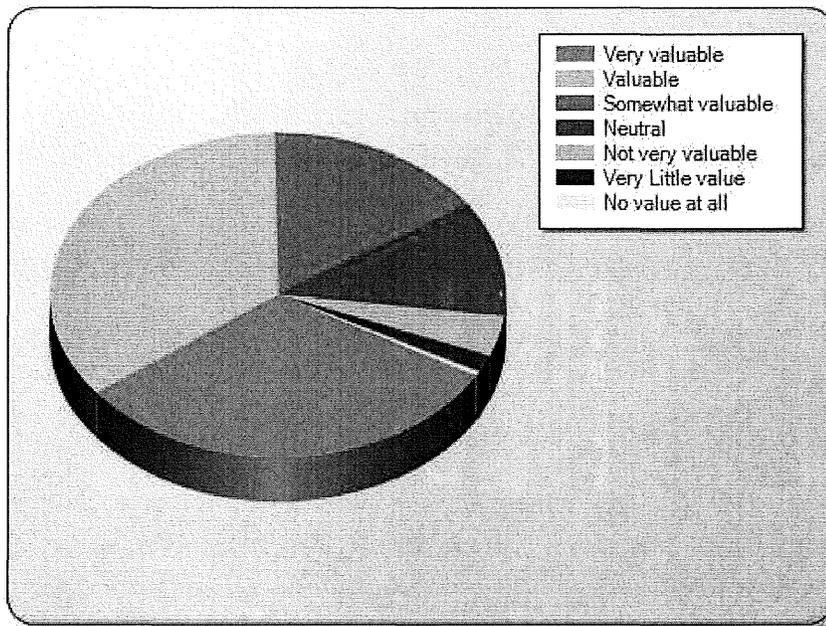
**Ease of finding content on the MDH website**

Very easy:	9%
Easy:	23%
Somewhat easy:	19%
Neither easy nor difficult:	22%
Somewhat difficult:	13%
Difficult:	9%
Very difficult:	4%



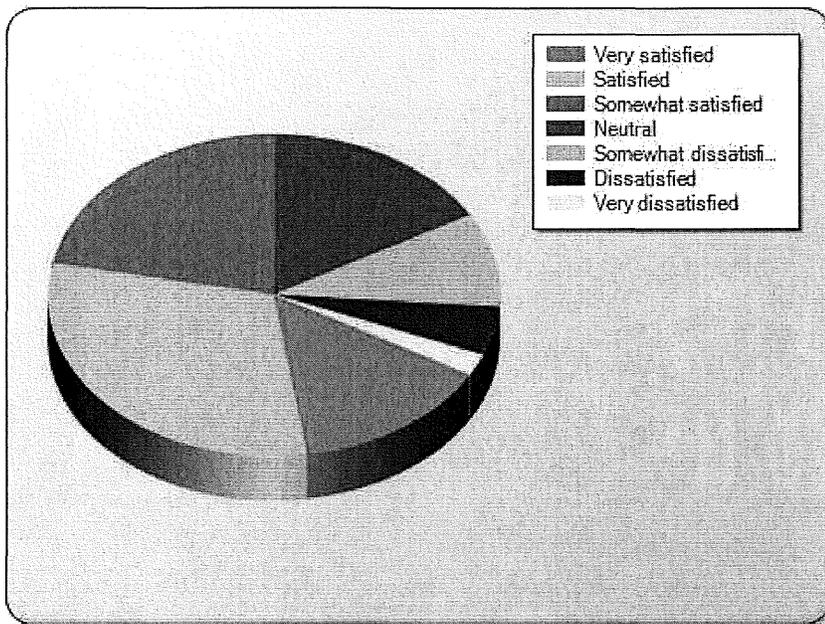
**Value of the content on the MDH Site**

Very valuable:	31%
Valuable:	35%
Somewhat valuable:	16%
Neutral:	11%
Not very valuable:	4%
Very little value:	2%
No value at all:	0.5%



**Level of satisfaction with the MDH Site**

Very satisfied:	31%
Satisfied:	35%
Somewhat satisfied:	16%
Neutral:	11%
Somewhat dissatisfied:	4%
Dissatisfied:	2%
Very dissatisfied:	0.5%



### **Main strengths of the MDH website**

Nearly all of the respondents to this open-ended question focused on the site's content – specifically, the quantity, quality, variety, and comprehensiveness of the content. Respondents also appreciated how up-to-date the content is.

- Descriptions such as “trustworthy,” “reliable,” and “credible” were common.
- Others noted that some of the content is not available anywhere else.
- Several respondents expressed their appreciation for the ability to subscribe to updates in different topic areas.
- In a number of responses, an interesting condition was added to the praise of the content, such as “if you can find it” or “if you have time to dig.”

### **Main weaknesses of the MDH website**

Nearly all of the respondents to this open-ended question focused on problems with findability, either through browsing or searching. Another common complaint, though secondary to findability, concerned the visual design of the site, with many noting a lack of images and overall aesthetic appeal.

- Descriptions such as “hard to navigate,” “hard to find,” and “confusing” were very common.
- Complaints about the search feature were frequent, with some respondents using strong descriptions, such as “horrible,” to describe it. The main concern was the lack of relevance of many of the search results.
- Several respondents described specific experiences looking for information and being unable to find it. It was common to see complaints about the number of “layers” of information. One person wrote, “Soooo many layers.” Another wrote, “Topics are hidden within other topics.”
- Just as some respondents praised the site for having up-to-date information, others noted a lack of up-to-date information as a weakness.
- Just as the amount of information was seen as a strength, others said that some pages contain “too much information.” There is an “overuse of text and not enough visuals.” Another respondent wrote, “Words, words, words, with few graphics.” Others described the presentation as “boring.”
- Several respondents said the site could be more attractive and visually pleasing. The home page was often singled out as being “cluttered.”

- Another common complaint was that the site did not provide easy access to phone numbers or other contact information.

### **Other suggestions**

The responses to the request for other suggestions were essentially variations on the strengths and weaknesses already described, with somewhat more responses in the complaint column.

Those who were complimentary tended to focus on the quality and value of the content. Those who had complaints focused on problems with findability and with the overall look and feel of the site. Many of these comments were worded sharply.

## About the Usability Test and Focus Groups

### Research Objectives

The MDH Communications team decided to conduct formal usability testing as a means of confirming ease-of-use issues that had been reported anecdotally and identifying any additional concerns they might not have been aware of.

Specifically, the team's focus was on *findability* – the experience of users looking for information on the site, primarily by browsing, but also by using the search feature.

The key objectives of the usability test were as follows:

- Assess the ease of finding commonly-used information or resources on the site.
- Assess the ease of using the redesigned home page as a starting point for finding information and determine whether testers prefer it over the existing home page.
- Assess the overall ease of understanding content on the site.
- Identify any issues with terminology, interface design, and navigation that reduce overall user satisfaction.

### Participants and Logistics

12 users participated in the usability test and focus group sessions. The same participants were involved in both research activities. All of the sessions took place in a meeting room at MDH's Snelling Office Park facility in Saint Paul. Each of the individual test sessions lasted about an hour, and both of the focus group sessions lasted about one and a half hours.

The test sessions took place on April 13, 14, and 15, 2010. 5 testers participated in person and 7 participated via WebEx and teleconference. Two focus group sessions took place on April 20, one in person and one with participants joining by WebEx and teleconference.

The usability tests were conducted using a Dell laptop with a 15-inch monitor. The main starting point for the usability tasks was the revised version of the MDH home page. Sessions were recorded using Techsmith's usability testing software suite, Morae. Testers were informed that their actions on screen would be recorded, along with their voice, provided they gave their verbal consent.

### Usability Test Metrics

Testers were asked to rate the ease of completing the assigned tasks on a 7-point scale. In addition, testers were asked to complete a System Usability Survey upon completing the test. Test staff also tracked tester success or failure with the assigned task scenarios.

## About the Participants

The participants in the usability test and focus group were drawn from among the hundreds of survey respondents who indicated that they would be willing to participate in these additional research activities. The selected participants were representative of the main demographic traits of MDH website users.

### Participant 1:

- Female
- Age range: 60-69
- User category: health care professional
- Director of Community Health/Staff Development, Mille Lacs Health System
- Has been in this role for two years; was previously Director of Nurses
- Uses the MDH site to look for information on infections, tuberculosis, regulations, educational information
- Usually finds the MDH site via a Google search
- Tested remotely

### Participant 2:

- Female
- Age range: 40-49
- User category: public health professional
- Business Manager for Inter-County Nursing Service, Pennington and Red Lake Counties
- Has been in this role for 15 years
- Uses the MDH site to look for information about public health grants, PPMRS reporting, flu shot and H1N1 information
- Finds the website home page from a bookmark in her Favorites
- Tested remotely

### Participant 3:

- Male
- Age range: 30-39
- User category: other (non-profit)
- Case Manager for the Minneapolis Urban League
- Has been in this role for two years
- Uses the MDH site to look for statistics regarding STDs, HIV, warnings concerning health risks, training events, and for billing and client reporting
- Finds the site from a bookmark in his Favorites
- Tested in person

**Participant 4:**

- Female
- Age range: 50-59
- User category: local government
- License Bureau and Vital Records Coordinator, Anoka County
- Has been in this role for 11 years
- Uses the MDH site to look up information in the Certificates and Records area. She sometimes looks up H1N1 information if she is speaking with a customer. She also checks the site for information on bills or certain legislative activity.
- Finds the website home page from a bookmark in her Favorites
- Tested remotely

**Participant 5:**

- Female
- Age range: 40-49
- User category: health care professional
- Clinic Supervisor, Northern Lights Pediatrics
- Has been in this role for 23 years
- Uses the MDH site to look up information for physicians, patients (e.g., where to get wells tested), news on outbreaks, other news.
- Finds the website home page from a bookmark in her Favorites
- Tested remotely

**Participant 6:**

- Female
- Age range: 40-49
- User category: healthcare professional
- Nurse, recently started her own business related to flu shots (ProActs), received a Mark of Excellence from MDH
- Has been in nursing for 25 years
- Uses the MDH site to look up information on the flu and H1N1
- Finds the website using Google
- Tested remotely

**Participant 7:**

- Male
- Age range: 40-49
- User category: local government
- Support staff for Aging & Disability, Childcare, and Mental Health (Children) for Hennepin County
- Has been in this role for 2 years

- Used the MDH site recently to look up information on the flu and H1N1, including vaccination sites, and who has vaccines in supply
- Finds the website using Google
- Tested in person

**Participant 8:**

- Female
- Age range: 50-59
- User category: healthcare professional
- Marriage and family counselor, alcohol/drug addiction counselor in Washington County
- Has been in this role for 10+ years
- Uses the MDH site to do research for certain clients, “might” use it for information on ethics questions, uses for licensure requirements for alcohol/drug addiction counseling
- Finds the website using Google
- Tested in person

**Participant 9:**

- Female
- Age range: 40-49
- User category: local government
- Director of Coalition for Active Living, Ramsey County – involved with the Statewide Health Improvement Program (SHIP), former State Representative in the Legislature (not a healthcare background)
- Has been in this role for 2 years
- Uses the MDH site to do research into SHIP-related information
- Finds the website using Google
- Tested in person

**Participant 10:**

- Female
- Age range: 50-59
- User category: public health professional
- Public health nurse, St. Louis County
- Has been in this role for 28 years
- Uses the MDH site to do look for information in different categories: disability services program manual, forms for doing Personal Care Attendant assessment, tuberculosis information, finding answers for people who have questions about problems such as ringworm
- Finds the website from a bookmark in her Favorites

- Tested remotely

**Participant 11:**

- Female
- Age range: 30-39
- User category: public health professional
- Public health nurse, Wright County
- Has been in this role for 8 months (recently graduated)
- Uses the MDH site to do look up information pertaining to rare genetic birth disorders, to find resources in other languages concerning the flu (for example), baby growth, lead testing, and so on.
- Finds the website using Google
- Tested remotely

**Participant 12:**

- Male
- Age range: 20-29 (24)
- User category: public health professional
- Epidemiologist at Hennepin County Medical Center, focuses on HIV – has been accepted to medical school
- Has been in this role for 4 months, was previously at Allina for 1.5 years
- Uses the MDH site to do look up information on STDs and HIV, reporting requirements for the clinic; for personal use, looks at a variety of statistics
- Finds the website using Google
- Tested in person

## Key Findings from the Usability Test

### Impressions of the revised and current home page

Before beginning any task scenarios, test participants were asked to provide their first impressions of the revised home page of the MDH website and then asked for their impressions of the current home page. (All participants were already familiar with the current home page.) They unanimously preferred the revised home page.



Figure 1: The revised MDH home page.

### Comments on the revised home page

- "It's nice having all areas right there – you don't have to look around. It looks brand new."
- "I like the break out of the topics – it narrows down where I might want to go. I like the featured sites section as well."
- "I was wondering what that house [the radon-related image in the banner] was all about – probably foreclosing. I don't see any reason why there's a picture of a house there. H1N1 and Emergency Preparedness – I'm wondering what's in there. I'd expect there to be more information on the topics within that area – maybe bubble-type displays that pop up at me. I expected a whole new page to pop up. That's not what happened."

- “Very nice. I like it. I think it looks more user-friendly, less cluttered. Your brain gets in the topic area and breaks it down easier. I like the layout better.”
- “It looks easier with the boxes and the graphics. I can see what I’m looking for. It looks less jumbled.”
- “Seems a little more concise.”
- “It’s organized much nicer. It may not keep me from having to drill down, but nice. I like having announcements up here. I like the graphics. I like the idea of the month up top. It’s a friendlier-looking page.”
- “I like it better. There are pictures, and not as much verbiage, and it’s more succinct. It’s separated out and easier to read. I like the vertical versus the [horizontal orientation]. I like the layout better. It’s more user-friendly and less intimidating – it draws you in more.”
- “You wouldn’t have to read as much to figure out more intuitively where you need to go. It seems more organized. The images are good, but the house image does not have anything to do with public health. I still wouldn’t be able to find SHIP [State Health Incentive Program] information.”
- “It’s more appealing than the other one. I like the boxes, I like the white space, and that there are fewer words. The pictures are helpful. But my mind wants to go to the one [the home page] I’m used to. Where is the Hot Topics section?”
- “Oh, that’s pretty! It’s visually attractive. The color is used well to separate the categories. The categories are still clear. I like this interface a bit better than the other one.”
- “I like this more than the other home page. But the house picture makes me think that it’s a real estate page. I like the little images – it seems neater. I like the two column layout rather than three. But it feels like a website within a website with the MDH banner across the top in that way.”

## Comments on the current home page

- “I like the way it's broken out on the other one [the revised home page]. Seems like it'd be easier to find what I need.”
- “My immediate preference is the other one – this one is a lot more texty. I like more visual stuff than this. It doesn't seem friendly to me.”
- “I think I've always been able to get to an area from this page. I see ‘Hot Topics - tick-transmitted diseases.’ I like that because it's stuff that's current. Dependable if I'm sending someone there, because the top item is what they will need to find.”

The screenshot shows the MDH website home page with a dark header. The main content is organized into several columns of text-based links and news items. The left column includes sections for 'NOT TOPICS' and 'NEWS'. The center column contains various categories such as 'Certificates and Records', 'Diseases and Conditions', 'Emergency Preparedness, Response and Recovery', 'Facilities and Professions', 'Health Care and Coverage (Insurance)', 'Health Data and Statistics', 'Local Public Health', 'People and Environment', 'Policy, Economics and Legislation', and 'Public Health Laboratory'. The right column features 'eSubscribe', 'ANNOUNCEMENTS', and 'FEATURED SITES'.

Figure 2: The current MDH home page.

- “It looks familiar. I'd be looking for a tab on the top that says ‘Providers.’ It's very busy. It takes me a long time to read; I have to scroll down to find what I want.”
- “Overwhelming. Busy. I know there's a lot of information to share, but there must be a different way to share it.”
- “It's kind of busy. There's a lot of stuff here. To get to anything specific you really have to drill down. It's not as bad as the Department of Human Services site, but close.”
- It doesn't tell me where I would want to go. There's lots of text. You can't glance at it and know where you need to go. You have to read a lot.”

- “There’s a lot of text. Usually a home page would have photos, with links and less text. I like the Search box – that’s familiar. I don’t like the blue [navigation bar with primary links] – it’s hard to read. It looks like I could find what I’m looking for pretty quickly.”
- “I like the topics listed out so they’re easy to find. I like the Hot Topics – I could find a lot of H1N1 stuff there in the fall/winter. The page is directed at the general public, so I have to plow through to get to what I need. I use it for PPMRS too.” [The analyst is not familiar with this abbreviation.]
- “The pros: I like that the topics are delineated. I like the Hot Topics. The search engine is easy to find. The cons: there’s a lot of information right on the front page and that could be a little overwhelming.”
- “I like that it's simple, but I don't like that it's so text heavy. It seems kind of intuitive, though not entirely. I'm a fan of Web 2.0 and want to see more of that.”

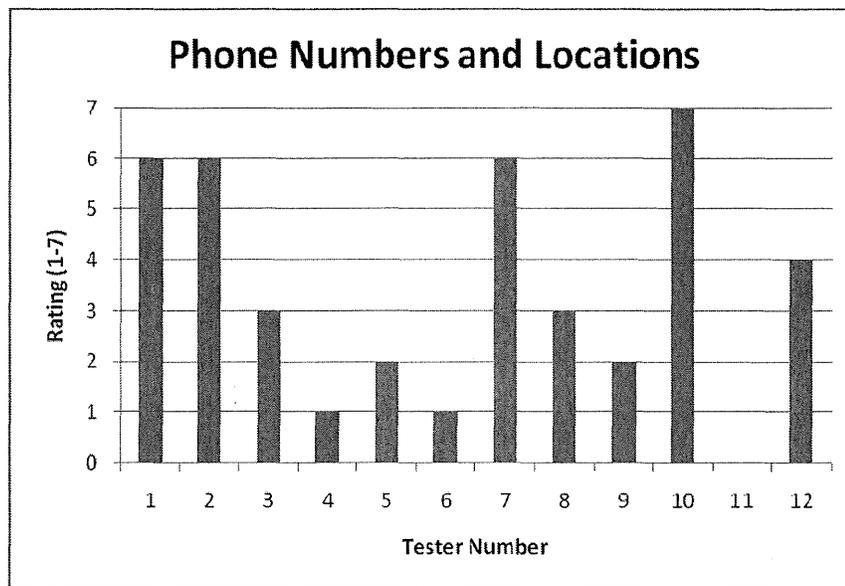
## Scenario-by-scenario test results

The following section presents a review of the results of the usability test sessions for each task scenario.

The task ratings are based on a 7-point scale in which 1 means Very Difficult and 7 means Very Easy.

When no data is provided for a particular tester, this means that the tester was not asked to complete that task. For example, for Task 1, Testers 11 and 12 were not asked to complete this task.

### 1. You would like to find the phone number and location of the closest MDH office.



**Average Rating: 3.7** ("somewhat difficult" to "neither easy nor difficult")

- The experience of the first 7 testers was different from that of the following 5. Of the first 7, 5 found directions to a facility but were not able to find related phone numbers. This was because the phone numbers were not included with the addresses and directions. Once this issue was identified, MDH staff added the phone numbers to the Addresses and Directions page. As a result, later testers had an easier time with this task.
- 4 of the first 7 testers clicked About Us and then found the Addresses and Directions link. 1 tester first looked in Facilities & Professions and then in Local Public Health. This tester was eventually prompted and then saw the appropriate link in the footer. 2 of the first 7 testers were drawn to the Local Public Health section. 1 of these testers then used the Search feature, entering "local office" first and then "MDH local office." When his search was unsuccessful, he said he would "call somebody now."

- From the Addresses and Directions page, testers could see the list of facilities and the associated addresses, maps, and directions. However, as noted above, phone numbers were not provided for the first testers. They were not sure where to find these and were therefore unable to complete the entire task.
- After the first 7 testers, the next 3 had an easier experience with this task. All 3 went to About Us, found the Addresses and Directions page, and then found the appropriate directions and phone number.
- Tester 12 was asked to try a variation on this task, looking specifically for contact information in his area of interest, which is HIV research. He navigated to the Infectious Disease Epidemiology, Prevention and Control (IDEPC) Division Organizational Chart. He noted that as presented on the HTML page, the font in this org chart is too small to be readable. However, a link to PDF version is available. Unfortunately, although names and positions are listed, no phone numbers are provided. Only one general number for IDEPC is listed on the Contact Us page.

Organizational Information and Descriptions

Home

About the Minnesota Department of Health

Phone numbers

Addresses and directions to MDH

Employment opportunities

Forms and applications

Local Public Health Act requirements

### Directions to the Minnesota Department of Health location at Snelling Office Park



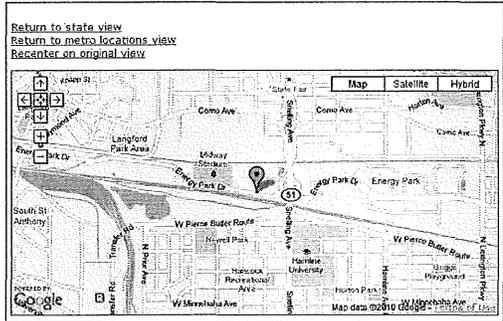
**Location**

1645 Energy Park Drive  
Saint Paul, MN 55108  
651-917-4870

[Return to state view](#)

[Return to metro locations view](#)

[Rescenter on original view](#)



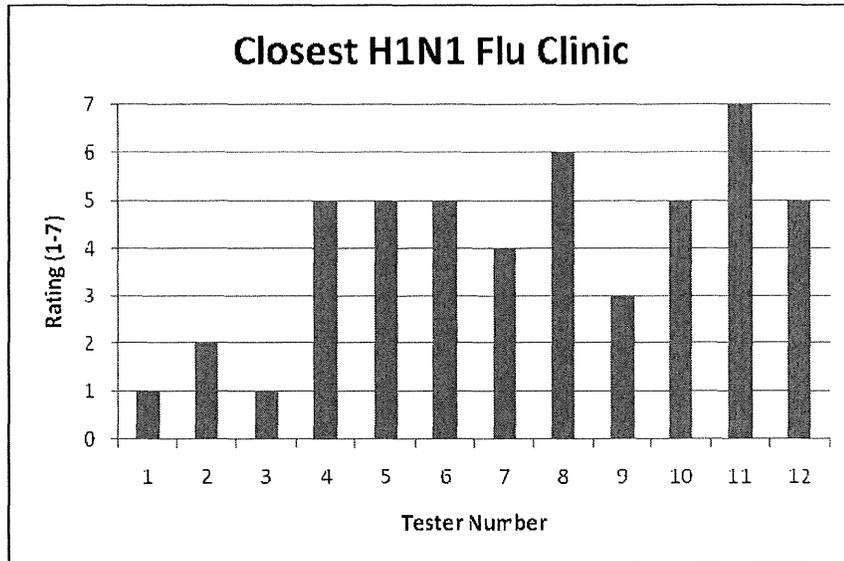
**Driving directions to Snelling Office Park**

Snelling Office Park is located off Snelling Avenue between Energy Park Drive and Como Avenue in St. Paul.

- From the north, heading south on 35W
- Take the MN-36/Cleveland Avenue exit, exit number 23B, on left
- Keep right at the fork in the ramp

**Figure 3: Phone numbers were added to the Directions pages mid-way through the test sessions. Before they were added, testers were not sure how to find the main facility phone numbers.**

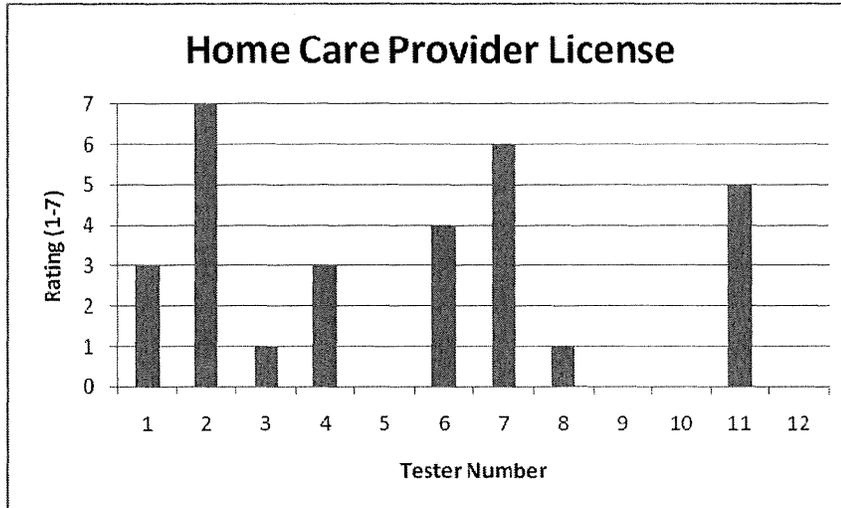
2. You would like to find the closest H1N1 flu clinic that would be open to immunize children nine years old and younger sometime this week.



Average Rating: 4.0 (“neither easy nor difficult”)

- The experience of the first 5 testers was different from that of the next 7. Part of the way through the second day of testing, the link to H1N1 in the black bar below the banner was enabled. (See Figure 1, the revised MDH home page.) This allowed testers who saw it to click more directly to the influenza page. Another addition was made as well: under Diseases and Conditions, H1N1 was added to the list when it became apparent that some testers were looking for that specific term and did not necessarily think to look for “influenza.”
- 7 of the 12 testers clicked the link to H1N1 in the black bar below the banner. The 5 testers who did this *before* this link was enabled were asked if they could find an alternative path to the information. These testers had a difficult time, because even those who looked under Diseases and Conditions did not find H1N1 listed there. 2 testers looked under Prevention and Healthy Living and then under Immunizations, but were unable to find the specific information. (A link to “Influenza (flu)” is available in the right column of the Immunization page, but this was not noticed.)
- In spite of the difficulties faced by the first 5 testers, 9 of the 12 testers were successful in finding the specified information.
- The function of the link to H1N1 in the black bar was not what testers expected. Most said they were surprised that clicking it did not take them to the H1N1 page. Instead, they had to recognize that clicking it changed the banner image, and that they then needed to click Learn More.

3. You are interested in becoming a home care provider in Minnesota and would like to find the application for a license to operate in this role.



Average: 3.8 (“somewhat difficult” to “neither easy nor difficult”)

- Of the 8 testers who attempted this task, 6 were successful. These testers found the specified information via the Facilities and Professions section, where they saw a link to Home Care Providers. Different testers selected different license classes (A, B, C, or F), but given that the task scenario was not specific, all of these selections were judged correct.
- 1 tester may not have clearly understood the task scenario. He looked at the Certificates and Records section, returned to the home page, and then looked again at the Certificates and Records section before giving up on the task.
- 1 tester did not see the link to the specific license on the license page and needed to be prompted. Other testers also took a moment to notice that the specific license name is not linked. Instead, some distance to the right, the PDF file name is linked. This is one reason why even some of the testers who were successful rated this task somewhat lower. Another reason is that some testers felt a lack of confidence as they worked on this task. For example, Tester 4 found the correct information but was not confident that she had.

### Compliance Monitoring Division

| [CM Professional Information](#) | [Licensure/Registration Index Page](#) | [Class F Survey Home Page](#) |

#### "Class F Home Care Provider" (Formerly Assisted Living Home Care)

This page contains information and forms required to make application to operate as a licensed "Class F Home Care Provider" in the State of Minnesota. These forms are intended for use as reference. They can be downloaded and completed by individuals and organizations seeking to acquire an initial license.

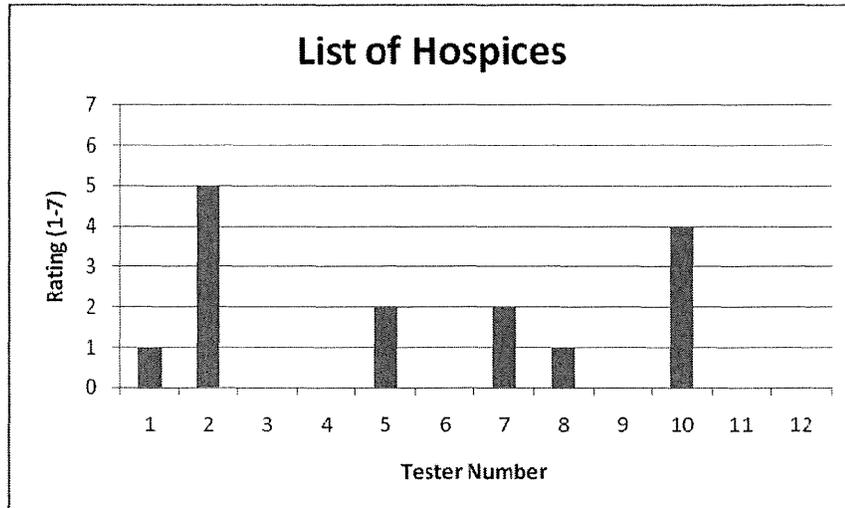
**Please do not use these forms to renew a current license.** Currently licensed providers will receive separate notification and instructions for licensure renewal from the Department of Health. If you are unsure this is the correct license for your business or have questions, please contact the Licensing and Certification Program at 651-201-4101 or e-mail [health.fpc-licensing@state.mn.us](mailto:health.fpc-licensing@state.mn.us) to obtain additional clarification.

**Required Forms and Documents.** Please read and understand all applicable documents, statutes and rules list below before making application for this license

Document Name	Required Files and Documents
License Application	<a href="#">fpc930.pdf</a>
Guide to Home Care	<a href="#">newguide.pdf</a>
Home Care Bill of Rights (Clients not Assisted Living)	<a href="#">0904MN_HCBOR_engreg.pdf</a>
Home Care Bill of Rights for Assisted Living Clients	<a href="#">MNHCBORAL_eng_reg.pdf</a>
A Guide to the Survey Process for Class F Home Care Providers	<a href="#">classfguide.pdf</a>
Background Studies for New Owners	<a href="#">hcpbgs.pdf</a>

**Figure 4: Testers expected and preferred the name of the document itself to be linked, not the PDF file name well over to the right.**

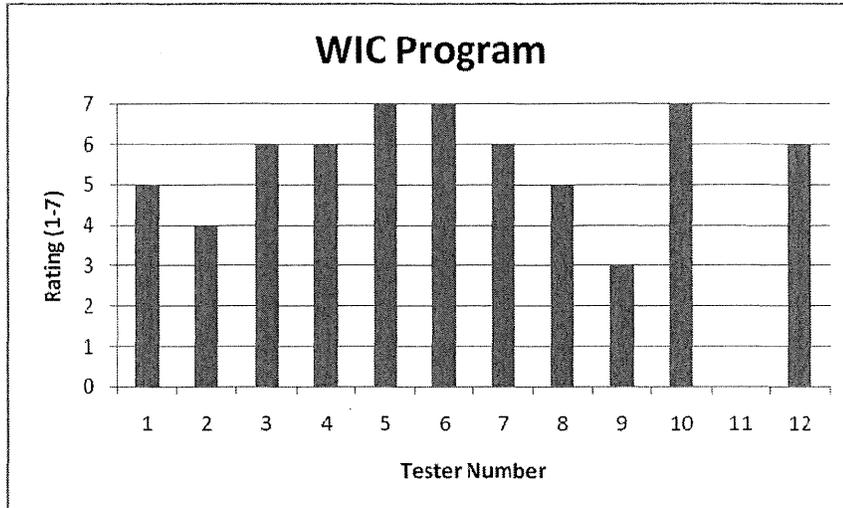
#### 4. You want to find a list of hospices in Dakota County.



Average Rating: 2.5 ("difficult")

- 2 of the 6 testers who attempted this task were successful. Those testers both first clicked Facilities and Professions, and then clicked the link to Licensed and certified healthcare facility directory. From there, they accessed the provider database and selected Hospices from the drop-down list. Another tester was successful, but only after being prompted to click the link to the database. This tester described the task as "difficult."
- Another tester first clicked Facilities and Professions, and then selected Hospice under the heading Regulations, state and federal license requirements. This tester then clicked the link to open the Guide to Hospice Care Services. This tester gave up on the task and said she wanted to see a link to Hospices under Directories on the Facilities and Professions page.
- 2 testers used the search feature to look for hospices in Dakota County but did not find what they were looking for. 1 of these testers ended up on the Guide to Hospice Care Services and then tried browsing to find the information. She then ended up on the same document. She said if she were doing this in the office, she would call. The other tester searched first, then tried looking in the Life Stages and Populations category and then in the Local Public Health category. She said she would then call the main MDH number.
- Three testers said they would use Google to find the information.

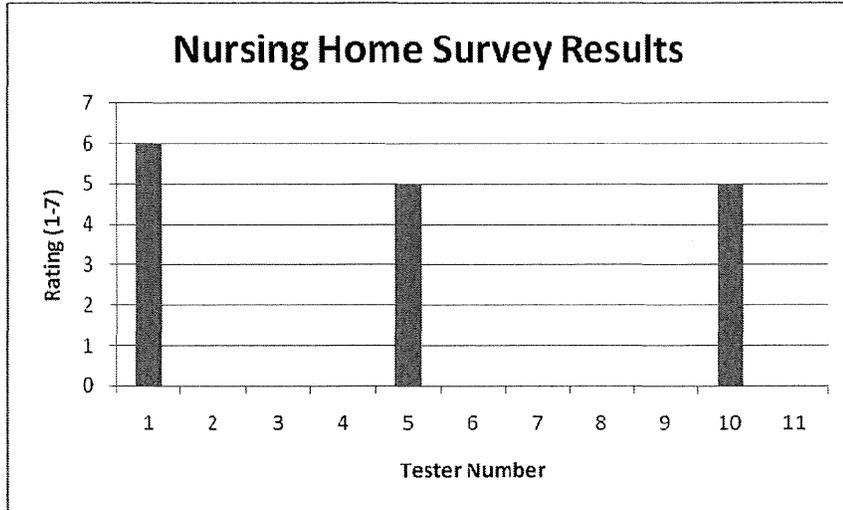
5. You want to learn more about the WIC program, specifically who is eligible to participate.



Average Rating: 5.6 ("somewhat easy" to "easy")

- Overall, this was one of the easier tasks for the testers. 11 testers attempted this task and all were successful. However, 1 tester required prompting to see and click the Am I Eligible? link.
- 8 testers clicked the WIC link in the black menu bar. Although most testers saw the black menu bar that included the link to WIC, not all did. And even those who did said that the contrast was not clear enough. In addition, the task provided more feedback on the function of the links in the black menu bar: again testers expected that clicking the WIC link would take them directly to the WIC page. 2 testers said they associated the Learn More link specifically with the food image that displayed when they clicked WIC, meaning that they thought they would be taken to a page specifically about nutrition, rather than about the WIC program in general.
- 2 of the testers who did not first click the link to WIC in the black menu bar found a link to WIC under Life Stages and Populations. 1 found a link to WIC under Prevention and Healthy Living.

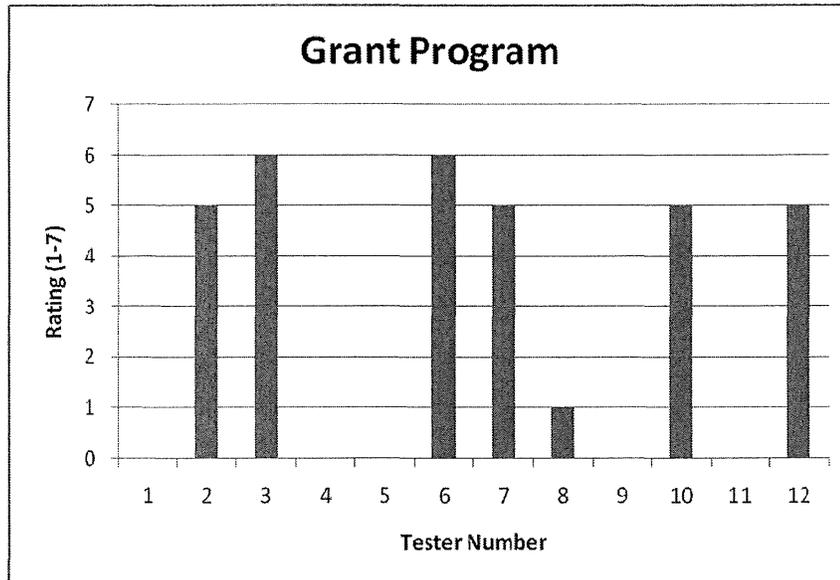
6. You would like to find the most recent nursing home survey results for the Viewcrest Health Center in Duluth.



Average Rating: 5.3 ("somewhat easy")

- The 3 testers who attempted this task were all successful. They found the link to the nursing home survey under Facilities and Professions. The main concern was the amount of text on the Nursing and Boarding Care Home Survey Inspection Findings.

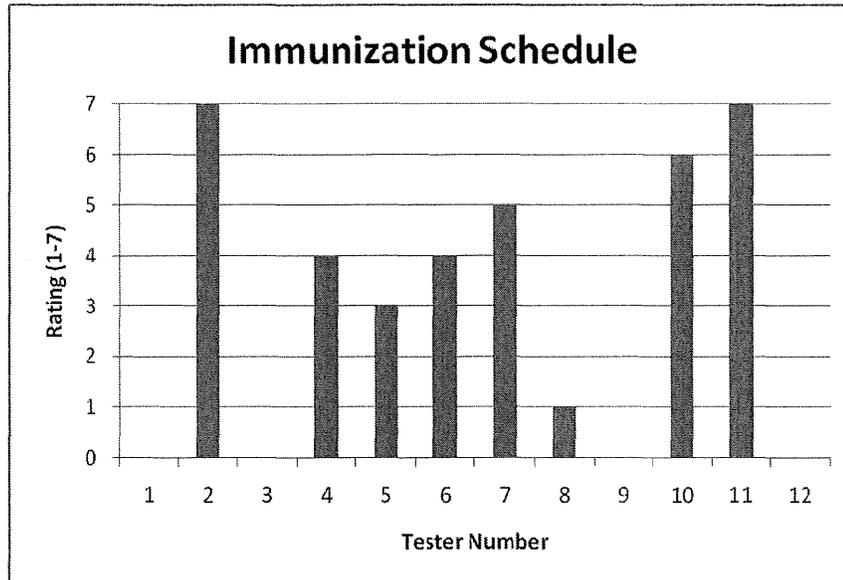
7. You are interested in learning if the MDH has a grant program related to suicide prevention and what the requirements are.



**Average Rating: 4.7 ("neither easy nor difficult" to "somewhat easy")**

- All 7 of the testers who attempted this task were successful in finding the information, although Tester 8 did not feel she had found the requirements for the grant program.
- 3 testers clicked the link to suicide prevention under Prevention and Healthy Living. This link displays a page titled Community & Family Health Division. There is a link on this page to Suicide Prevention that one tester who looked at this page did not see.
- 3 testers tried searching for this information.
- 2 testers took a path to the information through Local Public Health and then MDH Grants.
- 1 tester went to Diseases and Conditions section and did not find Suicide listed. He then did a search for suicide. He then clicked Suicide Prevention from the list of results and saw Grant Program in the local navigation menu.

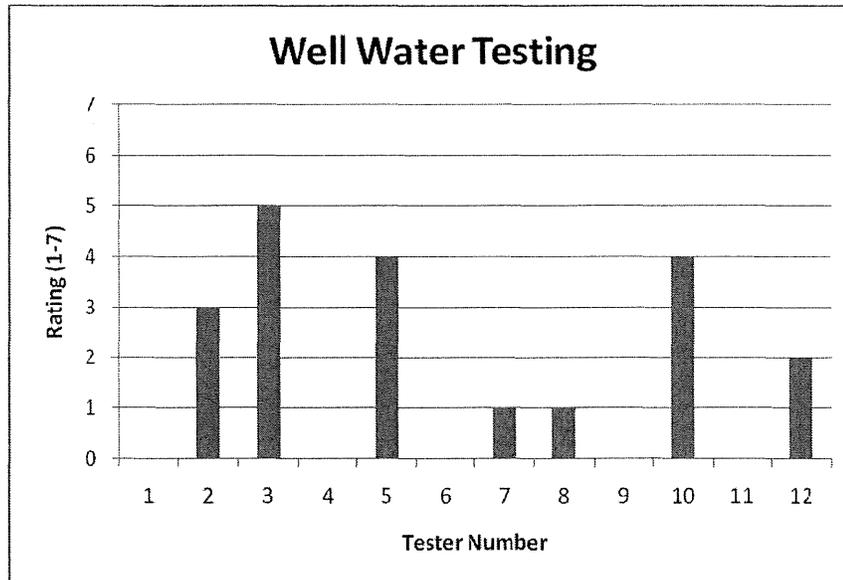
8. You would like to find the Minnesota Immunization Schedules for health care providers.



Average Rating: 4.6 ("neither easy nor difficult" to "somewhat easy")

- All 8 of the testers who attempted this task were successful. 1 tester did not like how the links to the schedules are presented and rated the task as very difficult.
- 5 of the 8 testers saw the term "immunizations" under Prevention and Healthy Living and then looked in this category. From there they were able to find the link to the specified immunization schedules with relative ease.
- Before looking in Prevention and Healthy Living, 1 tester first looked in Facilities and Professions and then in Local Public Health. She said "immunizations" was not "popping out" at her on the home page. She added, "I feel stupid." When she did see it under Prevention and Healthy Living, she said it was in the right place. Another tester also said that "immunizations" was not visible to him on the home page. She eventually looked in Life Stages and Populations and found a link to immunizations on this page.
- 2 testers tried searching for the information and were successful in finding the correct link.

9. You want to find out how to go about having your private well water tested.



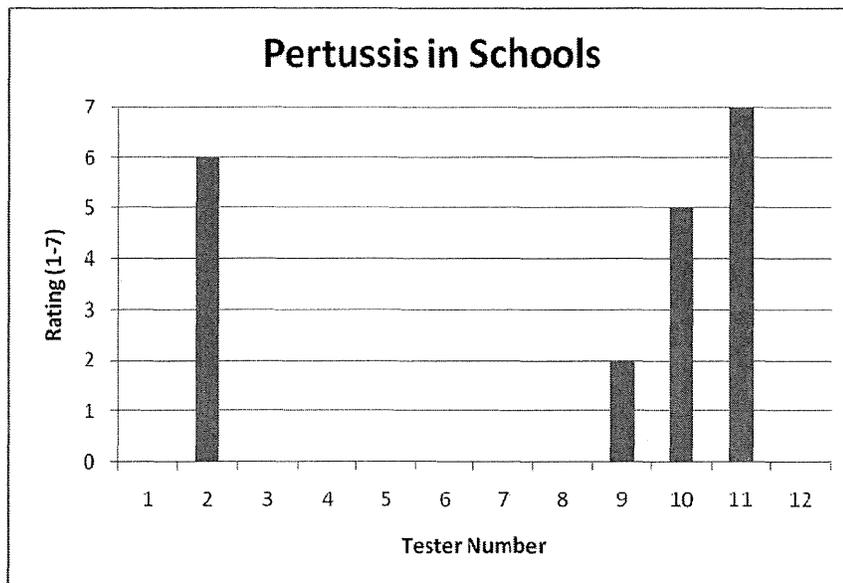
Average Rating: 2.9 ("somewhat difficult")

- Of all of the task scenarios, testers had the most difficulty with this one. None of the 7 testers who attempted this task was successful.
- 4 of the 7 testers started off by clicking the Environmental Health category, scrolling down on the Environmental Health index page, and then clicking "Testing private well water." (Note: The page that displays has been moved from this URL - <http://www.health.state.mn.us/divs/phl/cert/allcertlabs.html> - to this one <http://www.health.state.mn.us/accreditation/allcertlabs.html>.)
- 1 tester began by looking in Prevention and Healthy Living and then looking in Injury, Violence and Safety. This tester then did a search on "testing well water." After looking at a page titled Bacterial Safety of Water, he decided he would call someone.
- 1 tester first looked in Local Public Health and then did a search.
- 1 tester first looked in Public Health Laboratory and then clicked Environmental Laboratory. He clicked a link to contact information but was unhappy that it was a PDF (and not identified as such). He then did a search on Well Water Testing.
- All but 1 of the testers ended up on the Find a Laboratory page, and this is where they perceived that the "scent of information" went cold. They believed there was a lack of connection between Testing Private Well Water and Find a Laboratory.

Testers tended not to read the instructions at the top of this page. In scanning the listed procedures, they noted the references to the “Program dropdown” and said they did not know what this referred to.

- Testers had to be prompted to click the link to the search form. They were unsure what to do on the search form because they tended not to read closely the instructions on the preceding page.

#### 10. You are looking for information concerning Pertussis in schools.

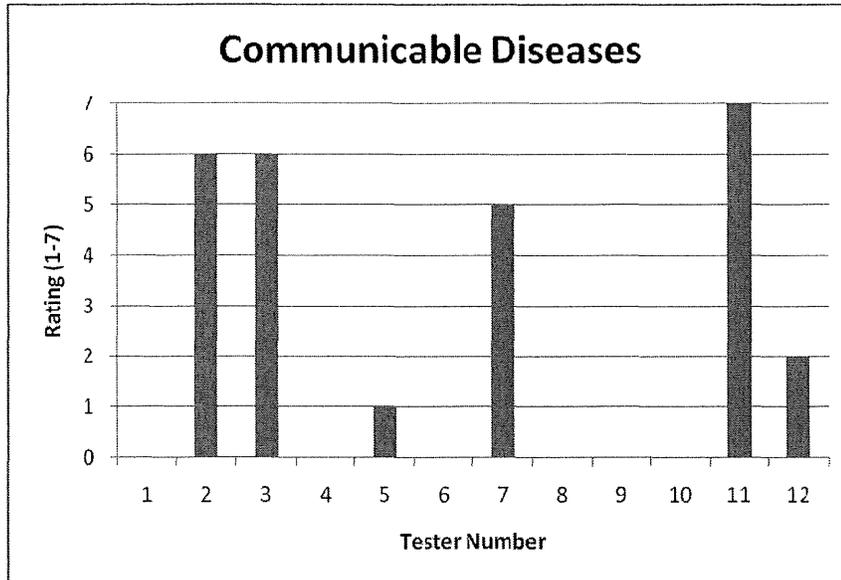


Average Rating: 5.0 (“somewhat easy”)

**Note:** The specific information on Pertussis in schools is available on this page: <http://www.health.state.mn.us/divs/idepc/diseases/pertussis/hcp/pschoolfacts.html>. However, the wording of the task scenario was general enough that 3 testers landed on different pages they felt were acceptable.

- 3 of the 4 testers who attempted this task found Pertussis in the Diseases and Conditions section. From there, 1 clicked Pertussis Information for Health Professionals and then Pertussis in Schools. 1 clicked the link to Pertussis Home and then clicked Pertussis Basics and then clicked Pertussis and School Age Children. 1 clicked Pertussis Basics and then clicked the Fact Sheet, but did not feel this is what she was looking for.
- 1 tester used the search feature to find Pertussis and then found a link to What Parents Need to Know.

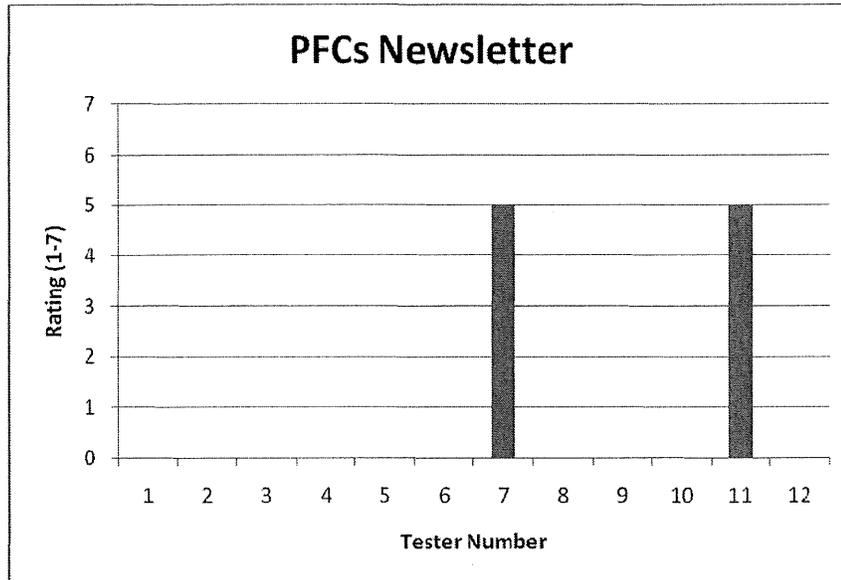
### 11. What are the communicable diseases that MDH must be notified of?



Average Rating: 4.5 ("neither easy nor difficult" to "somewhat easy")

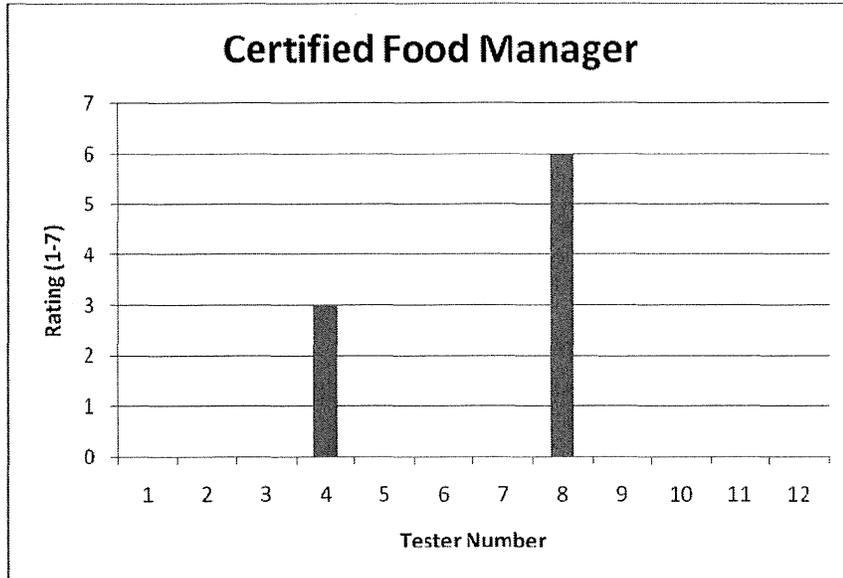
- Of the 6 testers who attempted this task, 4 were successful and 2 were not.
- Of the 4 who were successful, 3 went first to Diseases and Conditions and then found the link to Reportable Diseases.
- 1 tester first went to Data and Statistics and then decided to do a search for "what diseases must be reported to MDH." This tester was ultimately successful in finding the specified information.
- 1 tester looked in the Public Health Laboratory and then in Data and Statistics. After some additional browsing, this tester said they would call for help.
- 1 tester went to Diseases and Conditions, [ but missed the link to Reportable Diseases. He then looked in the Local Public Health section and the Public Health Laboratory section before doing a search for Communicable Diseases. He then viewed the reportable disease rule, [but never saw the list of reportable diseases until the facilitator assisted.
- 1 tester asked, "Is there a communicable section [under Reportable Diseases], or do all of these qualify?"

12. You would like to sign up for a newsletter concerning perfluorochemicals (PFCs) and health in Minnesota.



Average Ratings: 5.0 ("somewhat easy")

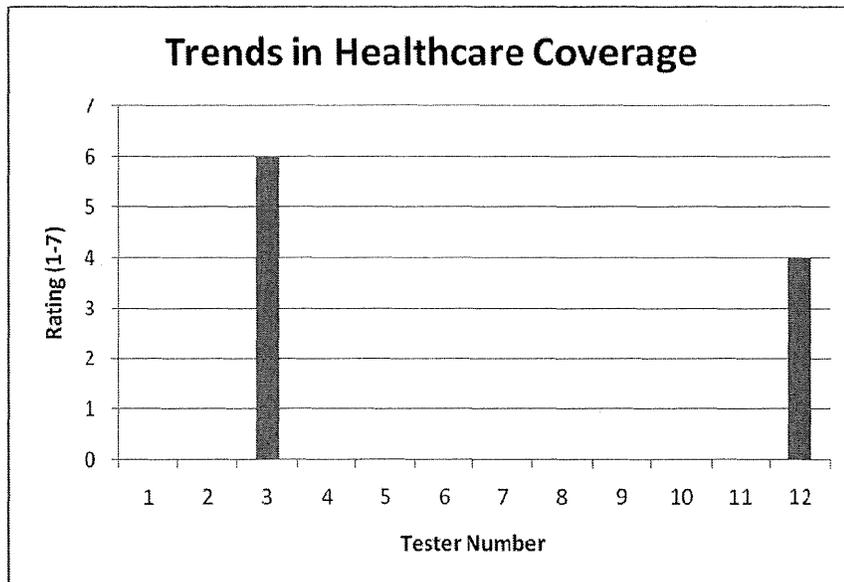
- Only 2 testers attempted this task and both were successful.
- 1 tester went first to Environmental Health, then the Chemical Hazards and Perfluorochemicals. At this point the tester was not sure where to find the newsletter. It was only after the tester had given up on the task that he noticed the link on the right to subscribe to perfluorochemicals and health in Minnesota.
- The second tester went first to e-Subscribe on the home page. This was a quick and correct path to the information, but the tester was also asked how she might otherwise browse to it. She then clicked Environmental Health and then "Water contaminants and your health." This tester then decided to search using the term PFCs. From the list of search results, the tester clicked PFCs in Minnesota and then, after a moment, saw the link to subscribe to the newsletter on perfluorochemicals and health in Minnesota.

**13. What types of food establishments are required to have a Certified Food Manager?**

Average Rating: 4.5 ("neither easy nor difficult" to "somewhat easy")

- Only 2 testers attempted this task; 1 was successful.
- 1 tester looked in the Local Public category before looking in Prevention and Healthy Living and clicking Food Safety. This tester left and then returned to this page, noting that it seemed oriented more to someone interested in food safety at home rather than someone looking for certification. This tester then went to the Diseases and Conditions page before giving up on the task.
- The other tester went to Prevention and Healthy Living and clicked Food Safety. She noticed the link on the left to Food Manager Certification and then found the specified information.
- Tester 4 commented that the "Local Public Health Trailhead" page is confusing. Several testers who had viewed this page during previous scenarios made similar comments.

14. You are looking for information on trends in health care coverage in Minnesota.



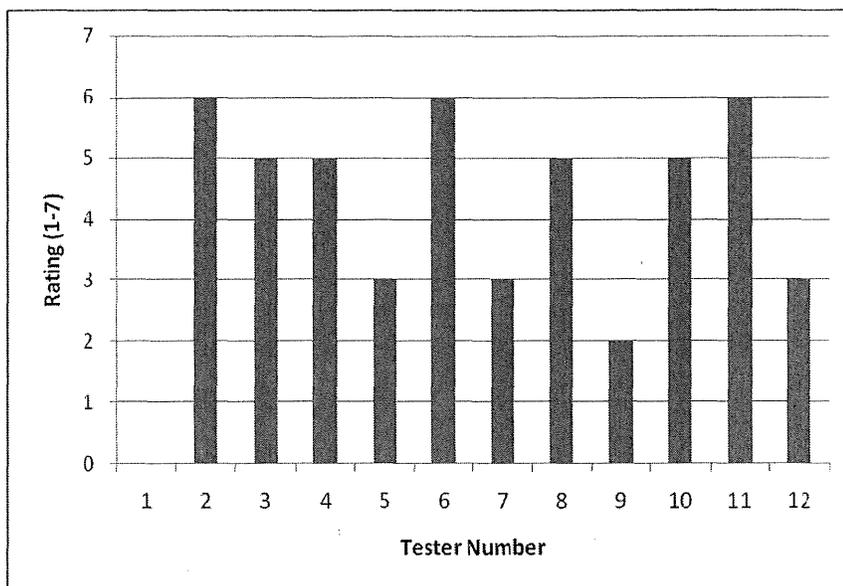
Average Rating: 5.0 ("somewhat easy")

- Only 2 participants attempted this task, and of these 1 was successful.
- Both testers looked in the Data and Statistics category; however, 1 tester was not certain where to look within this category to find the specified information. The other tester found the Minnesota Health Access Survey and was able to view different dimensions.

## Post-Test Ratings

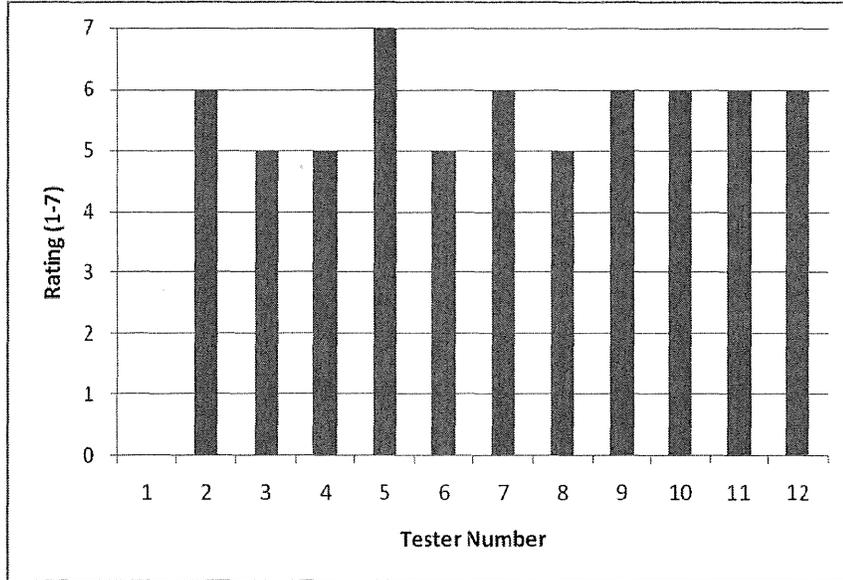
After the testers completed the task scenarios assigned to them by the facilitator, they were then asked to rate different aspects of the MDH website. The ratings are based on a 7-point scale, with 7 being the highest or best rating and 1 the lowest or worst rating.

1. Based on the experience you had today, how would you rate the overall ease of finding information on the MDH website?



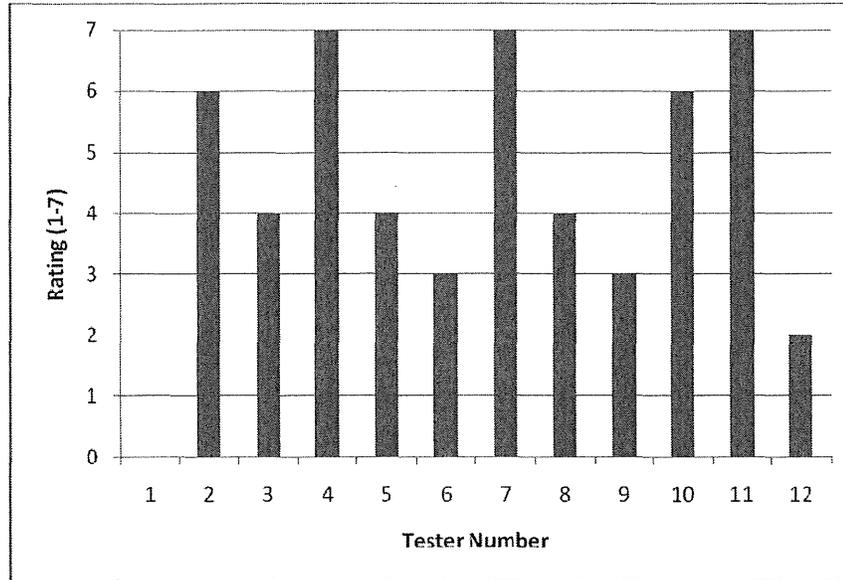
Average Rating: 4.5 ("neither easy nor difficult" to "somewhat easy")

2. How would you rate the ease of understanding content on the MDH website?



Average Rating: 5.7 ("somewhat easy" to "easy")

### 3. How would you rate the overall look and feel of the MDH website?



**Average Rating: 4.8** (“neither attractive nor unattractive” to “somewhat attractive”)

**Note:** In providing this rating, several participants focused particularly on the revised home page rather than the whole site. Those who provided ratings of 6 or 7 were pointing the revised home page specifically.

### 4. What do you think are the biggest strengths of the site?

- “I like that the newer site [home page] is neater and not so cluttered or scattered, where you feel like there's more you need to read to find where you need to go. Things are kind of pigeonholed.”
- “It’s a well-known site that provides a lot of good information.”
- “Working on improving it is a strength in and of itself.”
- “All the information is there. It’s a comprehensive website. Just finding what you need – the amount of time spent reading and figuring out where to go – that’s the main issue.”
- “I am thankful that they have a site with a lot of information. It obviously took a lot of work, and keeping it current is big task. I’m glad the information is free to use. I want people to be educated.”

- “Content, and the brain power that's behind all of the information.”
- “It’s comprehensive. There is a lot of information. It’s very good overall.”
- “The incredible breadth of the information available. It’s clear how often it's updated. The information is very current - H1N1, etc. And most things are available in a variety of languages.”
- “There’s lots of information. I want really detailed information as a provider. I also want general information as a consumer. It’s too much for some and not enough for others. I can find statistics, but it's not the stats that will really help me. If I didn't have my training, I'd come across this page and wonder ‘what the heck?’”

##### **5. What do you think are the biggest opportunities for improvement?**

- “If the links up at the top were active, and the bar wasn't black, it would be easier to spot that there are some quick links there. Also, maybe within each topic box, make those subtopics like WIC clickable. The links along the blue bar are hard to read.”
- “Making the four links across the top more prominent would be good. When hovering, something else should pop out...without clicking on it.”
- “Terminology is hard - you can't accommodate everyone's key words.”
- “A good search engine where I can type in what I want. I’m looking for a Provider point of view. I want more information about how to reach MDH easily. Things that clinics would use. Joe Public wouldn't need that. VIS [Vaccine Information Statements] sheets. I have to go to a different site for that. Maybe another category for Nursing Homes.”
- “Maybe organize it better so it’s easier to find things. I like information specific to what I want.”
- “It would be better if the links in blue at the top were more prominent. The drop-downs from there are nice [although no one used them]. Any time that you can reduce the amount of information on a page, it's better. It’s easier to get through it quickly and drill down to get what you need.”
- “There are certain parts of the site, like Disability and TB, places I go a lot, where things are too buried. I've seen them before and I know they're there but I can't find them again. The information is wonderful but accessing it is the problem.”
- “There could be a better filter on the search results – it seems to give me anything and everything. I feel a much greater ease in using the navigation rather than the search on the new page.”

## System Usability Score

The System Usability Score (SUS) yields a single number representing a composite measure of the overall usability of the system being studied. Note that scores for individual items are not meaningful on their own.<sup>4</sup> SUS scores have a range of 0 to 100.

The individual SUSs for the 11 testers who completed the scale were as follows (in ascending order): 17.5, 32.5, 35, 37.5, 40, 45, 70, 72.5, 75, 75, 77.5, and 77.5.

The average SUS was 55/100.

	Strongly Disagree				Strongly Agree
1. I think that I would like to use this site frequently.	1	2	3	4	5
2. I found this site unnecessarily complex.	1	2	3	4	5
3. I thought this site was easy to use.	1	2	3	4	5
4. I think I would need the support of a technical person to be able to use this site.	1	2	3	4	5
5. I found the various functions in this site were well integrated.	1	2	3	4	5
6. I thought there was too much inconsistency in this site.	1	2	3	4	5
7. I imagine that most people would be able to use this site very quickly.	1	2	3	4	5
8. I found this site very awkward to use.	1	2	3	4	5
9. I felt very confident using this site.	1	2	3	4	5
10. I needed to learn a lot of things before I could get going with this site.	1	2	3	4	5

The System Usability Scale

<sup>4</sup> For items 1, 3, 5, 7, and 9, the score contribution is the scale position minus 1. For items 2, 4, 6, 8, and 10, the contribution is 5 minus the scale position. The summed score is then multiplied by 2.5 to obtain the overall SUS.

Testers were also asked how they would rate the overall user-friendliness of the site on a scale from 1 to 7.

Worst imaginable	Awful	Poor	OK	Good	Excellent	Best imaginable
1	2	3	4	5	6	7

The ratings were (in ascending order): 2, 3, 3, 3, 4, 4, 5, 5, 6, and 6.

The average rating was 4.2/7, closest to “OK.”

### A closer look at the SUS

The average rating from those testing in person is significantly lower than that from the group who tested remotely: 41.5/100 for the in-person group versus 64 for the remote group. The same is true of the average rating of overall user friendliness: 3.6 (between Poor and OK) versus 4.9 (just below Good).

One reason for the overall lower averages from the in-person group is an exceptionally low SUS score from one of the participants in particular: 17.5/100 and an overall user-friendliness rating of 2/7. This participant was not only the youngest in the group, but also the most sophisticated web user, a blogger, active in social media, and an advocate for what he calls Health 2.0. He announced shortly after beginning his session that he does not like the MDH website.

Still, even though this tester’s score was the lowest, the in-person group included other low scores: a 35, 40, and 45. There was one relatively high score of 70.

In contrast, the remote group included five scores in the 70s and just one low score of 32.5.

One likely reason for this discrepancy is that the remote group included more participants in what might be termed traditional health care roles, with traditional training in health: two public health nurses, a Director of Community Health (and former Director of Nursing), a business manager for an Inter-County Nursing Service, a clinic supervisor, and a nurse with 25 years of experience. What this group tended to look for on the site was broader in scope than the in-person group, and more people in this group had the site saved as a Favorite.

In contrast, the in-person group included fewer participants with a specific and traditional background in healthcare. And often, their topic interests on the site were more specific and focused, such as STDs and HIV information, or certificates and records.

The discrepancy between the scores that these two groups of testers provided suggests that those who are not in a more traditional healthcare role, either as a provider or public health professional, and who are not using the site with some frequency to look at a broader array of topics, have a significantly more difficult time with it. In essence, the site is less friendly to those outside traditional healthcare roles and backgrounds.

## Key Findings from the Focus Groups

During the focus group sessions, participants were asked a series of open-ended questions concerning the MDH website. These questions and a summary of the participants' responses are provided below.

In their responses, most of the participants were clear that they use the site in a professional capacity. They are typically looking for specific information and want to get in and out of the site quickly. They were all pleased to hear that the current search feature will soon be replaced by the Google search appliance.

**Note:** Screen images of the websites mentioned in the comments below – from the Massachusetts Department of Health and Human Services, the Ohio Department of Health, and the Centers for Disease Control (CDC) – are presented in the Recommendations section.

### What are your thoughts about incorporating audience-based navigation into the MDH website?

- Participants initially expressed significant interest in and preference for the concept of audience-based navigation. After some discussion, the consensus view was that a hybrid of audience- and topic-based navigation would be most useful. Participants indicated that they would like to retain some version of the new MDH home page design, together with audience-based navigation.
- Participants described a hybrid approach that could take one of two forms: either users would first identify their audience group and then proceed to select a topic of interest, following the model of the Massachusetts Department of Health and Human Services website, or they would have the option to begin browsing by topic or by audience, following the model of the CDC website.
- Among the participants, there was somewhat more interest in the approach used on the Massachusetts site. One participant said, "You click the tab and the whole page is yours," meaning the whole page is dedicated to the audience group to which the user belongs. However, one participant said, "I like the options for browsing different ways on the CDC site, by topic or audience."<sup>5</sup>
- The key benefit that one participant associated with audience-based navigation was as follows: "It gives the illusion that you're narrowing the search right away. Yes, stuff [topics] will overlap, but as long as I feel like I'm in the right pew, I know I'll get there [find what I am looking for]..." Other participants agreed with this explanation. Another participant said, "I like that there's less to wade through to find what I'm looking for. It narrows things down."

---

<sup>5</sup> In the survey, several respondents noted that they would like to see a Providers section. Without calling it "audience-based navigation," that is what they were asking for.

- The audience categories that participants said they could most easily identify with were as follows: Healthcare Providers, Public Health Professionals, Researchers, and Consumers. The following secondary audience categories were also suggested: Kids, Parents, Seniors, Travelers.
- One participant wondered if an audience-based approach would allow for the opportunity to create content targeted to specific groups. For example, content on H1N1 for the general public might be more basic than that for researchers or public health professionals. However, the challenge with this approach is that it would require at least two versions of content addressing the same topic. From a content management perspective, this is likely not feasible.
- As a related comment, testers noted that the primary navigation menu, set against the textured blue background below the banner, is very difficult to see and should be presented with better contrast.

**What is your impression of the topic categories presented on the revised version of the home page? Are any unclear? Do any not belong?**

- Overall, participants approved of the categories listed on the revised home page. The one that elicited the most comment was Life Stages and Populations. Two participants said they were uncertain what this means. Another participant said, "I'm not sure what content would be under that category."
- A few participants noted that the general public might not know what Local Public Health refers to.
- A few participants thought there might be too many categories listed on the home page. One said, "It would be pretty easy to pare it down to about six. On the flipside, with fewer categories, I'd have to look more beyond the home page."
- One participant made a general comment that any category name can be "deceiving. ... I click on something, thinking I know I'll find what I need, but then it's not there. Things are known by different names, different phrases."
- One tester said that Events and Training should be called out in the right column of the home page, because it was not obvious that this information would be under Announcements.

**What do you think about linking each of the topics listed under the category headings on the home page?**

- Participants felt that if this could be done in a way that looked clean and uncluttered, then it would be helpful. One said, "If it's easy to do, then do it. It would be nice to have each of those topics go to a content page."
- Another participant said, "If what I'm looking for is there, yes, a link would be fantastic. But if I don't see specifically what I need, and I'm bopping in and out of different categories, then it doesn't matter as much."

**On the revised home page, there is no specific section labeled Hot Topics. What do you think about this?**

- Participants said that a Hot Topics area was important and that it was critical to update it frequently. They did not recognize the images and text presented below the banner on the revised home page as hot topics. After viewing the Flash-based presentation of featured information on the home pages of the Ohio Department of Health website and the CDC website, participants said this approach was worth exploring on the MDH site. Participants described the images in the presentations on the Ohio and CDC sites as attractive and appealing and that the photos and captions together made the information relevant and understandable. "You can learn things quickly just from the photos and captions." Other comments were as follows:
  - o "MDH really should have Hot Topics, even though it might be high-maintenance. MDH Hot Topics are so critical."
  - o "It's not clear that the top section [on the revised home page] is playing the role of Hot Topics."
  - o "Does that black band across the top relate to the hot topics? If it were red or yellow or something brighter, I might see it. It just looks like the header for the page."
  - o "You have to tell your audience that a Hot Topic is a Hot Topic. I thought those items in the top area were just random."
  - o "I like the way it's organized on the CDC site – it says 'Go.' If you are using the banner as navigation, it's important to have it be this clear for those who might not know otherwise."
  - o "Some of the photos [on the Ohio and CDC sites] might be a great way to communicate with consumers, especially those who are ESL."

**What are your thoughts about an A-Z index for the MDH site?**

- The response to this idea was neither strongly positive nor strongly negative. This feature was seen as something potentially useful but was not regarded by any participant as a tool they would use first when looking for information. On balance, participants thought that this feature would be a worthwhile addition as a supplement to other types of navigation. Participant comments were as follows:
  - o “I’d rather have a good search function.”
  - o “I use the A-Z index a lot on the CDC site, but that’s just because I don’t have a lot of other options.”
  - o “I like it. Sometimes I don’t have the right word for a search, but the first initial might get me there faster than just browsing. Feels like I have a fighting chance to get me what I need.”
  - o “Everybody processes things differently; it’s another way to present the information that wouldn’t take up much space.”
  - o “If you’re going to do it, it needs to be done well.”

**Another feature that is common on several other Department of Health websites is a list of links to frequently visited pages, usually called Most Popular or Most Searched. What do you think of this type of feature?**

- Participants were not interested in this concept, stating that it is “not worth the trouble,” and that it “doesn’t seem important to us.” However, three participants noted that another common feature of websites, usually labeled “How Do I ...?” would be more useful.

**The links in the navigation menu in the left column of hub pages [in the revised site] pertain to the major categories of the site. What do you think about this?**

- Participants said that it was better to reserve the left menu for local navigation – items specific to the current category – rather than listing the major categories of the site.
- Most participants also agreed that the brief annotations that display under the links on some hub pages, such as the Emergency Preparedness home, are useful.
- One participant wanted to see a collapsible menu on the left that displayed both top and secondary levels of navigation.

**What do you associate with the right column? What information should be in the right column?**

- Participant comments confirmed that the right column is usually one of the most overlooked sections of a web page. A few participants said they do not look there and did not notice the information presented there on the MDH site. One participant said she associated this section with advertising.
- A few participants agreed that this section of the page would be a useful place for contact information or links to other websites.

**What are your impressions of the look and feel of the Community & Family Health Division (CFH) section of the MDH website ?**

- Participants were somewhat divided in their responses to this question. Some liked the presentation of the CFH section and others did not. Those who liked it said it looked “like a magazine,” that there was “a better use of space,” and “easier to read.” Those who did not said it looked “too small” and that “there was a lot to filter through.” One participant said, “I’d rather have consistency site-wide than something like this, even if it is nicer.”
- There was an even split between those who preferred the use of the Arial font on the CFH section of the site and the use of the Verdana font elsewhere on the MDH site.

**How would you grade the quality and readability of the content on the MDH website?**

- Most participants rated the content in the A to A- range, with one participant rating it a B. Participants said it was written well and was understandable. One participant said, “It seems it’s written at a newspaper level, and I like that some things are further explained with information in parentheses.”
- The concern that some participants had about the content was less with how it was written and more with the sheer volume of it. One participant said, “It’s such an overwhelming amount of content. Things get buried, but I don’t know how you would fix that.”

**What do you think about MDH using social media sites such as Twitter and Facebook?**

- Most of the participants did not express much interest in the use of social media. Some expressed concerns about privacy and usage restrictions at their workplace. However, a minority of the participants were positive about the use of these tools, with one describing them as “the wave of the future.” The youngest, and most web-

savvy, participant was the strongest advocate for the use of these tools. In their attitudes toward and current use of social media, the focus group participants did not appear to be fully representative of the respondents to the survey, 60% of whom said they were using at least one social media site currently.

- o “I don’t know, or do, anything about any of them [social media sites].”
- o “I don’t have time for it.”
- o “A lot of changes would need to happen in our access policies for us to take advantage of these tools. Many of them are either blocked, or we can get fired for going to them.”
- o “My organization and I have privacy concerns. I know many people are wary of revealing too much personal information.”
- o “I have no interest, but I know it’s the wave of the future. I don’t have to use it, but I have to accept that other people are using it.”
- o “Twitter is helpful for broadcasting information to me and letting me know news about hot topics.”
- o “They are an alternate way of getting that kind of quick information – bing, bam, boom, I have it.”
- o “I can do Twitter on my Blackberry, and have it with me at all times.”
- o “The Minneapolis Snow Emergency Facebook page is cool. They keep things interesting.”
- o If you do it, it needs to be done right. Organizations and people who do it right retweet, react, and interact. They follow you back when you follow them. They ask questions to promote interaction.”

**Suppose that you are now in charge of the MDH website. Assuming you want to improve it, what are your priorities?**

- In making their recommendations, participants focused on improving the search, the ease of navigation, and the presentation of the home page (with reference to the revised home page) – specifically, the black bar, the function of the related images, and the primary navigation links set against the blue background. One participant advocated for more and better usage of social media.
  - o “Get the new search tool up right away!”
  - o “Change the navigation so that it is a hybrid of topic and audience categories.”
  - o “Be more like a dictionary, encyclopedia, or other resource in that you really focus on getting us to our destination the best and easiest way possible.”
  - o “Work on the home page: lose that black bar, put hot topics on the left, and condense the topic categories.”

- o “Changing that black bar area will have the most immediate, big impact.”
- o “Fix and then implement the new home page.”
- o “Fix that header!”
- o “Get rid of the dark colors and the tiny fonts. Especially the tiny fonts in the navigation across the top [the white on blue]. You really can’t even see them!”
- o “Add a share section with the social media icons to the home page.”
- o “Add a blog to the home page. Use all those smart people you have to put something new out every few days. Use the Hot Topics areas as your first blogs.”

## Recommendations

**Note:** The main purpose of the following recommendations is not to outline a specific new design for the MDH website, but rather to provide a series of inputs into a revised and updated design.

The recommendations focus on three key areas: navigation, search, and visual design. Many of the changes can be made iteratively, and content owners or managers can and should be enlisted to help make these changes. Recommendations specifically for content owners has been excerpted from this list and presented in a separate document.

In addition, we believe it would be beneficial for MDH to engage with a visual designer to assist with updates to the look and feel of the site, even if that resource simply provides a “second opinion” on a consulting basis.

### Primary navigation

1. Replace the current home page with a new home page based on the design shown to test participants. This design is a distinct improvement over the current design, making it easier to find information overall, and it was preferred by all of the test participants. However, this new design would be further improved by the additions and revisions listed in the recommendations below.
2. Offer both topic- and audience-based navigation options on the home page. For example, the Centers for Disease Control (CDC) website presents Health & Safety Topics as well as a section called CDC for You, though the latter is in a much less prominent position, as shown in Figures 5 and 6 below. If an audience-based navigation option is provided on a revised MDH website, it should be placed in a clearly visible position.

A different hybrid option – though one that would require more work to implement – is to present a series of audience-based tabs, similar to the approach used by the Massachusetts Department of Health and Human Services, as shown in Figure 7. For example, the tabs could include the following options: For Consumers, For Providers, For Government, For Researchers. When the user selects a tab option, a range of topic choices would display in the main body of the page in the same format as on the revised home page. The main difference would be that not all of the same options would need to display for each of the audience selections. For example, Consumers would be unlikely to need the type of information currently available in the Local Public Health section. Researchers would likely want access to fewer sections, such as Data and Statistics and Diseases and Conditions. The default selection (what users see when they first land on the home page) should be For Consumers, as is the case on the Massachusetts site. Try to limit the number of topic

categories listed for any one audience group to no more than 12. Currently, 14 categories are listed.

3. Ensure that primary navigation options are clearly visible. On the current and revised home pages, the links set against the blue background are not easily visible. The risk of placing primary navigation options *above* the kind of presentation used on the revised home page is that users will overlook them. For this reason, primary navigation options (such as audience tabs) should go *below* a Flash or other strongly visual presentation. However, utility links (such as the link to MDH Home, Northstar, and the Library) could be placed to the left of the search area, and an A to Z menu, for example, could be placed between the home page banner and the Flash presentation.
4. Provide links to the individual items listed below the category headings. For many users, this would provide a more direct path to the information they are looking for. Of course, this would mean that each item listed below the category heading would have to correspond to a specific page. In addition, a link to “More ...” should be provided to indicate that the options listed are only a sample. (“More” would link to the same hub page as the category heading.) If this approach were used, it would be preferable to list the items vertically, rather than horizontally. Again, the approach used on the Massachusetts site provides an example to follow. Links selected to be included on the home page should be those that are popular, important, and representative of the diversity of content in that category.

**CDC** Centers for Disease Control and Prevention  
Your Online Source for Credible Health Information

A-Z Index [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#) <#>

**Prevent Lyme Disease**  
Springtime Means Time to Prevent Lyme Disease **GO >>**

Detect Autism Early  
Springtime Safety  
Global Road Safety  
Lyme Disease >>  
Asthma Awareness

Text size: [S](#) [N](#) [L](#) [XL](#)  
[Email page](#)  
[Print page](#)  
[Bookmark and share](#)  
[Get email updates](#)  
[Subscribe to RSS](#)  
[Listen to audio/podcast](#)  
[CDC en Español](#)

**FLU.gov**  
Know what to do about the flu.  
[VISIT FLU.GOV](#)  
[SHARE THIS WEBSITE](#)

08:22 AM 03/23/09  
4 CDC Info  
Txt: HEALTH  
To: 87000  
[LEARN MORE](#)

**News & Events**  
H1N1 Press Briefings  
[Heart Disease](#)

**Press room: CDC Releases First-Ever County-Level Report on Heart Disease Hospitalizations**  
New maps chart wide disparities based on race/ethnicity and

**Health & Safety Topics**

- Diseases & Conditions**  
ADHD, Birth Defects, Cancer, Diabetes, Fetal Alcohol Syndrome, Flu, Hepatitis, HIV/AIDS, STDs...
- Healthy Living**  
Bone Health, Physical Activity, Immunizations, Genetics, Sexual Health, Smoking Prevention...
- Emergency Preparedness & Response**  
Bioterrorism, Chemical & Radiation Emergencies, Severe Weather...
- Injury, Violence & Safety**  
Brain Injury, Child Abuse, Falls, Fires, Food Safety, Poisoning, Suicide, Youth Violence...
- Environmental Health**  
Air Pollution, Carbon Monoxide, Lead, Mold, Water Quality, Climate Change...
- Travelers' Health**  
Destinations, Outbreaks, Travel Vaccinations, Yellow Book...
- Life Stages & Populations**  
Infant & Child, Men, Minorities, Pregnancy, Seniors, Women...
- Workplace Safety & Health**  
Asbestos, Chemical Safety, Construction, Mining, Office Environments, Respirators...

**H1N1 flu (Swine Flu)**

- Updates
- CDC H1N1 Estimates
- What to do if you **get** sick
- Vaccination
- Antiviral Drugs/Treatment

**2009 H1N1 (Swine Flu)**  
2009 H1N1 is still spreading and causing illness. [Learn more.](#)

**Data & Statistics**  
Chlamydia: United States, 2008

population	600	500	400
			585.6

**Featured Multimedia & Tools**

[KNOW THE SIGNS OF MRSA](#)

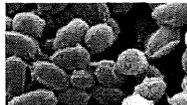
[HEALTHY MENTOR](#)

Figure 5: The CDC website home page. This served as a model for the presentation of topic categories on the revised MDH home page.

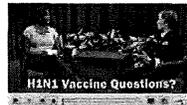
### Featured Multimedia & Tools



**Buttons & Badges**  
Add a button or badge to your Web site to promote healthy behaviors and awareness of important health information.



**Photos**  
CDC's Public Health Image Library has collections of photographs to document numerous health issues including H1N1 Flu.



**CDC-TV**  
Watch, listen, and learn with CDC-TV on many popular health topics.

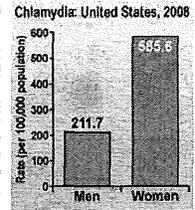
**More Multimedia & Tools**

- Buttons & Badges
- eCards
- Podcasts
- BMI Calculator
- Mobile Web site
- RSS Feeds
- CDC-TV
- Photos
- Widgets & Gadgets

[More »](#)

### Data & Statistics

**Chlamydia: United States, 2008**



Gender	Rate per 100,000 population
Men	211.7
Women	396.6

[More Data & Statistics »](#)

### Publications

Emerging Infectious Diseases (EID)  
Morbidity and Mortality Weekly Report (MMWR)  
Preventing Chronic Disease (PCD)

[More Publications »](#)

**Press room: CDC Releases First-Ever County-Level Report on Heart Disease Hospitalizations**  
New maps chart wide disparities based on race/ethnicity and geographic location

[All CDC In The News »](#)

[Press Room »](#)

[Events »](#)

[All CDC.gov Features »](#)

### CDC.gov Top 10

- Haiti earthquake.
- 2009 H1N1 Flu (Swine Flu)
- Vaccines and Immunizations
- Rabies
- CDC Radio
- Methicillin-resistant *Staphylococcus aureus* (MRSA)
- Smoking & Tobacco Use
- Autism
- STDs
- Cancer

### About CDC

- [CDC's Organization](#)
- [Budget](#)
- [Funding](#)
- [Employment](#)

[More About CDC »](#)

### CDC for You



- Individuals
- Public Health Professionals
- Healthcare Providers
- Students and Educators
- Researchers
- Media
- Partners
- Policy Makers
- Businesses

Email

Print

Share

Updates

Subscribe

Listen

Page last reviewed: April 26, 2010  
Page last updated: April 23, 2010  
Content source: Centers for Disease Control and Prevention  
Page maintained by: National Center for Health Marketing

Home
A-Z Index
Site Map
Policies
FOIA
Accessibility
Privacy
No FEAR Act
About CDC.gov
Link to Us
All Languages
Contact CDC

Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA 30333, USA  
800-CDC-INFO (800-232-4636) TTY: (888) 232-6348, 24 Hours/Every Day - [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)




Figure 6: The lower portion of the CDC home page. Note the CDC for You section, which provides audience-based navigation categories. These are clearly subordinate to the topic-based categories and might be easily overlooked.

Updated June 7, 2010

Page 64

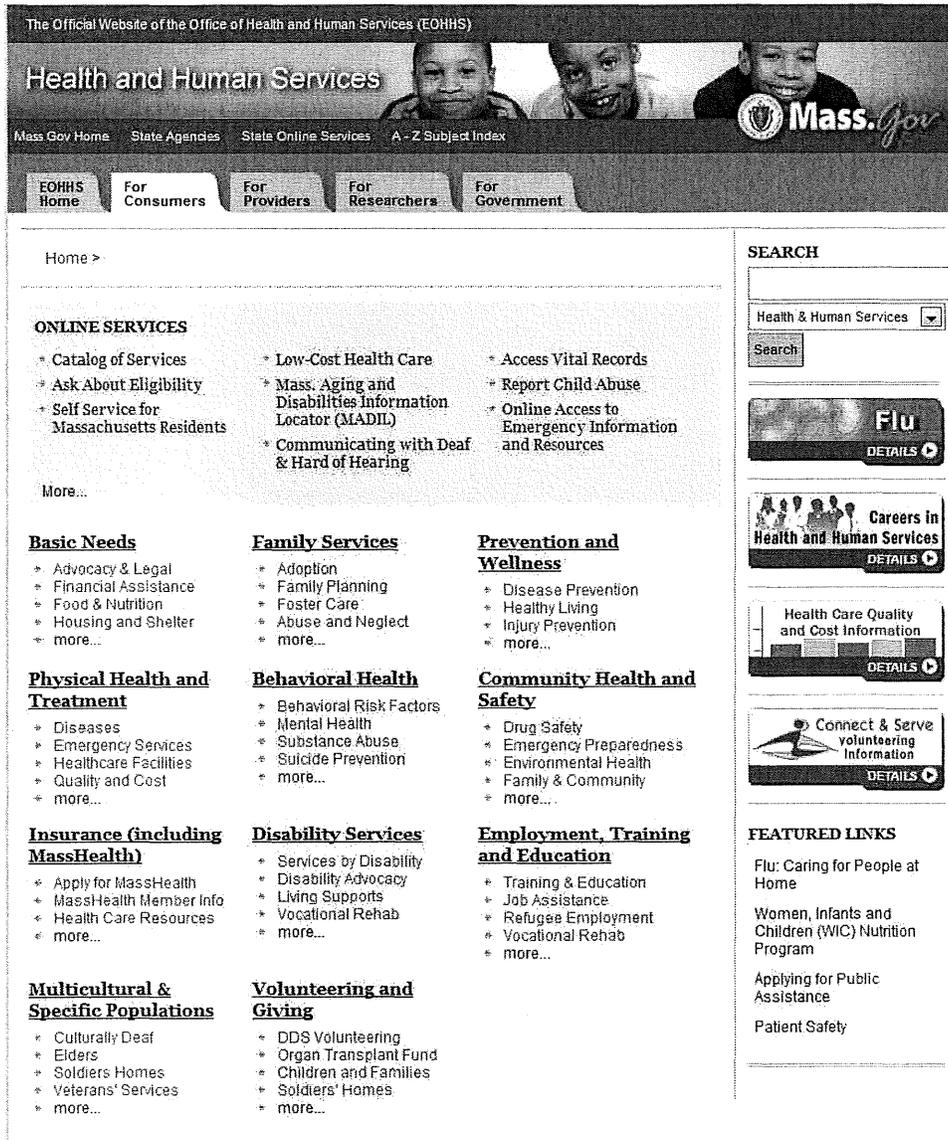


Figure 7: The Massachusetts Department of Health and Human Services home page. The tabs across the top provide audience-based navigation options, which each display a set of related topics. Note also the use of graphics in the right column – this is an example of what *not* to do, as recommended in #4 below. These graphics remind users of ads and are usually ignored.

## Secondary navigation, links, and navigation supplements

1. On category hub pages, do not provide a separate navigation menu in the left column. Instead, merge the left and center columns and use the space to present topics and links for that category. (See the CDC and Massachusetts sites for different methods of handling this.) On the hub pages of the current MDH site (such as Facilities and Professions), items listed in the left navigation menu are same-page links. This is very unconventional and therefore unexpected. The expected behavior is that these links would display a new page.
2. Initiate an effort to simplify, clarify, and standardize the presentation of local navigation in the left column throughout the site. This issue is substantial enough to require a distinct information architecture (IA) project. This does not mean that the site's entire IA needs to be reworked. Instead, an effort needs to be made to define and then consistently apply a set of standards for the menus that display in the left column across the site. For example:
  - o On topic pages within a category, consistently use the left column to present the local navigation for that topic, but also use it to show relationships to one or more higher-level categories, such as a section home page.
  - o Clearly separate local navigation topics – those *under* or *within* a particular category – from those that are *related*, but that are part of a different category or section.
  - o Establish a standard for determining when a topic is large enough to warrant its own local navigation (for example, it must have more than five pages).
  - o Avoid presenting more than one local navigation menu in the left column.

### Explanation and examples

Some sections of the current MDH site do a better job than others of using the left navigation menu consistently and conventionally. For example, in the Certificates and Records section, the left navigation menu remains consistent across the main topic pages. (One exception is the Father's Adoption Registry page, which does not include a left menu, though it should.) The Emergency Preparedness section also has a consistent left navigation menu, with one exception: the link to For Labs displays a page with an entirely different left navigation menu, and in fact this topic appears to belong to a different section – the Minnesota Laboratory System (MLS). This is a case where the For Labs link should be called out separately as a "Related Link" rather than listed together with the Emergency Preparedness local navigation. (Similarly, a Related Link to the Emergency Preparedness home should be provided on the MLS home page.)

The Environmental Health section does a good job of consistently providing links back up to the main Environmental Health Home, as well as to a Topic

Index and to Contacts. This is helpful because this is a section where a user may find the left navigation menu changing frequently – perhaps a little too frequently. For example, in the Air Quality section (accessible by clicking Air on the EH home page), carbon dioxide and carbon monoxide each have their own left navigation menus. More consistency and simplicity could be maintained in the left navigation by not having distinct local navigation menus for smaller sub-topics such as these. Environmental Health is not the only section where this is an issue. It is also evident in the Compliance Monitoring Division.

Another issue also reduces simplicity: it is common on the site to see more than one local navigation menu presented in the left column. The intention is clearly to help users by providing an array of links to related topics, but the impression created is often one of complexity. For example, on the Rubella Information for Health Professionals page, there are three local navigation menus presented: one for Rubella, one for Health Care Provider Resources, and one for Immunization, with a total of 23 links. It would be preferable to call out Related Links below the Rubella menu and simply include a link to the Health Care Provider Resources Home and to the Immunization Home. In addition, it would be helpful to include a link back to the Diseases and Conditions Home. On the Cover Your Cough page, there are no fewer than five menus in the left column, and the Cover Your Cough menu is not even the first one listed.

3. Ensure that the local navigation menu in all sections of the site identifies the *specific* name of the section home page – for example, “Radon Home” instead of simply “Home.” A user could easily interpret the latter as the main MDH home page. Currently, labels in some sections are specific, such as Emergency Preparedness Home, and some are not.
4. Use the right column to provide contact information wherever appropriate. The same contact information may even be repeated on multiple pages. An inability to find contact information easily was an issue that several testers cited. Although the Department may be hesitant to make contact information easier to find, not doing so simply frustrates some users. Ideally, if information is easier to find on the site overall, this may result in fewer support calls.

The right column may also be used to highlight specific supplementary information that is less important than the information in the center column. The right column is not viewed as frequently as the center column, so this information may be overlooked. Not everything can be featured with equal prominence.

5. When featuring information in the right column, avoid using square or rectangular graphics that may remind some users of ads, and therefore cause them to avoid looking at or interacting with them. (For examples, see Figure 7 and also the home

page of the State of Minnesota portal at  
[www.state.mn.us/portal/mn/jsp/home.do?agency=NorthStar.](http://www.state.mn.us/portal/mn/jsp/home.do?agency=NorthStar.))

Using a photo of a person's face is typically helpful in drawing attention to the right, provided the presentation does not remind users of an advertisement.

- Ensure that a style is provided for both visited and currently-selected links. At present, these links look no different from any other. (There is, however, a distinct hover state style.) In Figure 8, for example, the currently selected page is Nutrition in the WIC section. Yet the link to this page looks no different from the other links in the left navigation menu. Similarly, none of the other links that were visited in this section look different either. Having these visual cues to what links have been and are selected will help users feel more oriented.

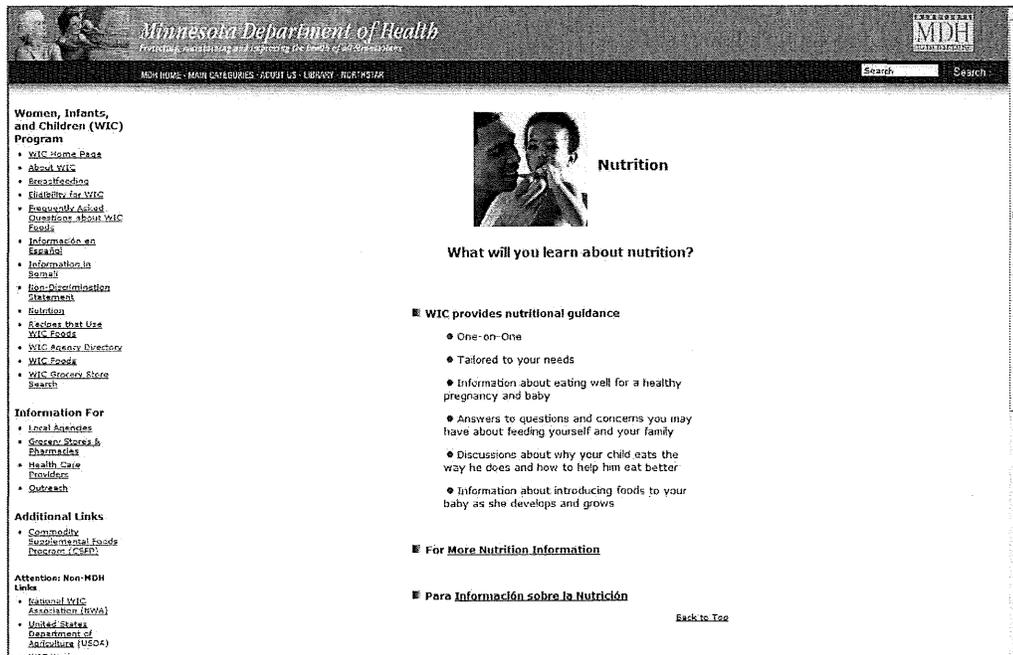


Figure 8: The WIC Nutrition page. Note that the link to this page does not look different from the other links in the left menu. (The Nutrition link is fifth from the bottom in the first set.)

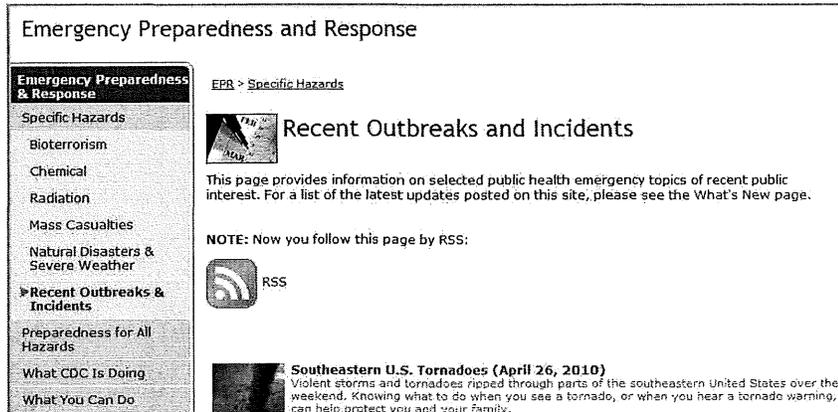


Figure 9: Note that on the CDC menu, the link to the currently selected page has a distinct style in the left menu. Similarly, a visited page (Bioterrorism) also looks distinct.

7. Provide a navigation breadcrumb – this has become a standard supplementary form of navigation that also serves to help orient users. In a site as large as MDH’s, a breadcrumb would be very useful. In the example shown from the CDC site in Figure 10, the breadcrumb is in the conventional location, just below the section title and above the page title.
8. Provide an A to Z topic index menu, similar to the one available on the CDC website, as shown in Figure 10. Several state Department of Health websites offer this feature, and it would be useful when users are unsure about how the topic they are looking for is labeled, or under what category it might be found.

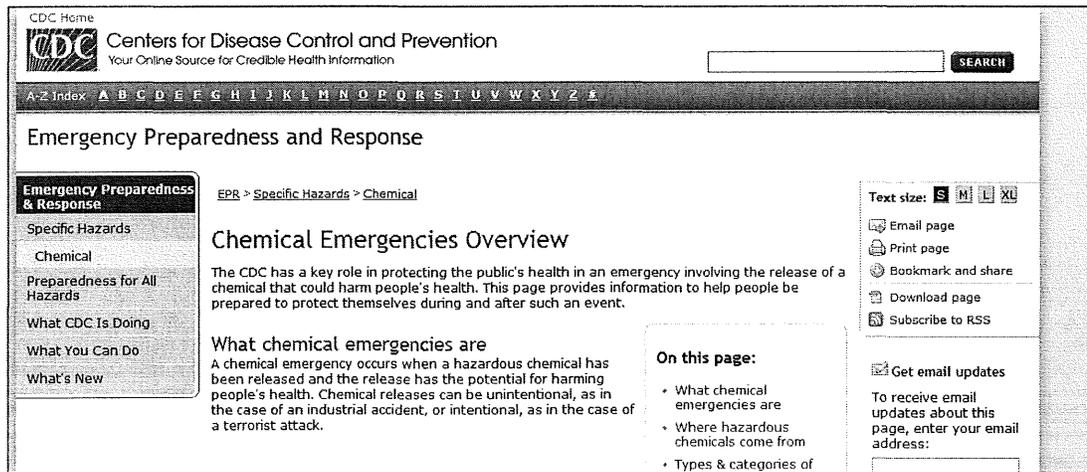
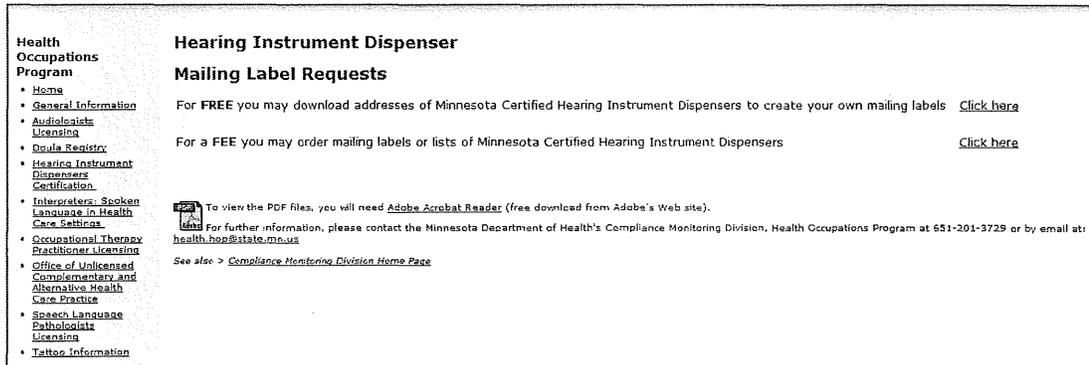


Figure 10: Note the breadcrumb used on the CDC website

9. Ensure that page titles match their corresponding link labels. When there are noticeable discrepancies between these, users may pause and wonder if they are in the place they intended to be. For example, the link to Suicide Prevention on the Injury, Violence, and Safety page currently displays a page titled Community and Family Health Division. Suicide Prevention is simply a link – and not an especially prominent one – on this page.
10. Link the logo to the home page on all pages of the site except for the home page.
11. Do a regular check for broken links. For example, on the Facilities and Professions page, under “Nursing, public health,” four of the five links listed display Page Not Found errors. (As of 13 May at 5:30 p.m.) Either the site manager or content owners should have this responsibility. Automated link checkers are available.
12. Avoid using “click here” to draw attention to links, such as on this page: [www.health.state.mn.us/divs/hpsc/hop/hid/maillinglabels.html](http://www.health.state.mn.us/divs/hpsc/hop/hid/maillinglabels.html). Instead, the key words themselves should be linked. In the example shown in Figure 11, the linked text should be “[Download addresses of Minnesota Certified Hearing Instrument Dispensers. Free!](#)” The use of “click here” adds unnecessary words and draws attention away from the key words.



**Figure 11:** Note the use of “Click here” on this page. There are numerous instances of Click here on the site and all should be removed. Note also the tiny font used to provide contact information. The issue of font size is addressed in the section below on Visual Presentation.

13. Avoid publishing a page until it has content. Do not include pages with messages such as “New information for this page will be provided soon.” Users are interested only in content that is available *now*. See Figure 12 for an example.

**Health Occupations Program  
Occupational Therapist and  
Occupational Therapy Assistant  
Consumer Information**

**Frequently Asked Questions**

New information for this page will be provided shortly.

For further information, please contact the Minnesota Department of Health's Division of Compliance Monitoring, Health Occupations Program at 651-201-3725, or by e-mail at [health\\_hop@state.mn.us](mailto:health_hop@state.mn.us)

See also > [Compliance Monitoring Division Home Page](#)

**Figure 12: Pages that are not yet complete or that have no content should not be published. The URL for this page is [www.health.state.mn.us/divs/hpsc/hop/otp/otpcnsfaq.html](http://www.health.state.mn.us/divs/hpsc/hop/otp/otpcnsfaq.html). Note also that the same heading level is used for both the section title and the page title.**

### Flash presentation on the home page

1. Use a different format for featured information and hot topics. Although users liked the color and welcoming quality of the images on the revised home page, the function of the related links listed in white against the black background (Radon, H1NI, Emergency Preparedness, WIC), together with the link to Learn More in the banner, was not well-received overall. As an alternative, consider following the example of the CDC, in which there is a closer and clearer relationship between the images and their corresponding labels and links, as shown in Figure 5. In addition, it is immediately clear how to move through the selection of images in the Flash presentation. Another example to consider following is the one used on the Ohio Department of Health website, as shown in Figure 13. In one respect, this is even better than the CDC's presentation, because the labels are on the left (we read left to right), and are in a part of the screen – the upper left – that users are most likely to notice.



Figure 13: The Ohio Department of Health website home page. Note the presentation of the Flash banner. Having the labels on the left is preferable to having them on the right, as on the CDC website, because we read left to right.

## Search

1. Proceed with the project to replace the current search engine with the Google enterprise search appliance. Search was a major source of frustration to respondents to the survey and to the participants in the usability test and focus groups. Several testers commented that they had not typically been successful using the current MDH search. What follows are more specific recommendations concerning the search. Many if not all of these recommendations may be addressed simply by using the Google search appliance.
2. Ensure that the search field is wide enough to accommodate about 30 visible characters. Currently, it is wide enough to accommodate only about 12 visible characters.

3. Precede the search field with the label Search, followed by a colon. Provide a Go button to the right of the search field. Leave the search field empty. Currently, it is populated by default with the word Search.
4. Simplify the presentation of the search results page. Users focus primarily on the link labels listed in the search results, followed by the descriptions. Many users are confused by, or simply ignore, relevancy indicators. Users assume that the results that are listed first are the most relevant and are frustrated when this proves not to be the case. The purpose of the dates listed is not clear. These were not used or commented on by the testers.

## PDFs

1. As part of the search engine replacement and optimization project, focus on optimizing the searchability of the many PDFs available on the site. This would help to ensure that they are listed in search results only when relevant. For example:
  - o Convert PDFs and other non-Web file types (such as Word documents) to HTML *unless the document is clearly intended to be printed*. HTML documents with good HTML descriptions and metatags are usually more easily searchable, and more usable when found, than PDFs. If a PDF is only one to three pages, strongly consider converting it to HTML.
  - o Use keywords for titles, and ensure these keywords are used regularly in the document.
  - o Make sure that document properties are specified in PDFs. To specify document properties in Acrobat, go to File > Document Properties. In optimizing PDFs for search, the most important property is the Title. The Title of the PDF can only be specified in the document properties, and it is invisible when viewing the PDF. The Title property is the equivalent of an HTML title tag. It represents the words that will usually be displayed as the heading of a search result. If the Title property is not specified, the search engine will use the PDF content to create a search result heading. This sometimes results in seemingly irrelevant items ending up in the search results.
  - o Make sure that the anchor text on the HTML page that points to the PDF contains relevant keywords so the search engine knows what the PDF is about. For example, do not link to the PDF with anchor text that says, "Click here" or "Download the PDF".
  - o Specify the reading order of PDFs (every PDF has a reading order). To determine the reading order of a PDF, select Advanced > Accessibility > Touch Up Reading Order. The reading order of the PDF will then be displayed. Note that Google displays what it reads first.

- o Tag PDF contents – select Advanced > Accessibility > Add Tags to Document. Acrobat will provide a document report and recommend possible changes. Then select Advanced > Accessibility > TouchUp Reading Order. This provides the ability to tag text, headings, and alternate text for images, etc.
  - o Take advantage of the Fast Web View option. Fast Web View is an Adobe Acrobat option that allows a PDF to be rendered more quickly. Instead of waiting until the entire PDF's data is downloaded before rendering the PDF on screen, Fast Web View allows the PDF to be rendered a page at a time. So as soon as the first page is processed, the first page is rendered. Check whether a PDF is enabled for Fast Web View by checking the document properties. This is less about search optimization and more about helping impatient users.
2. Ensure that links that display PDF documents are identified. Many links on the site are properly identified as displaying PDF documents, but not all are. For example, the Occupational Therapy Brochure on this page is not identified as a PDF: [www.health.state.mn.us/divs/hpsc/hop/otp/index.html](http://www.health.state.mn.us/divs/hpsc/hop/otp/index.html). The same is true of the link to Military Exemptions Information. In some cases, the file size is provided, but it is not indicated that the file is a PDF, as on this page: [www.health.state.mn.us/divs/hpsc/hop/otp/feesched.html](http://www.health.state.mn.us/divs/hpsc/hop/otp/feesched.html).
3. Link document titles rather than file names. For example, on the pages in the Compliance Monitoring Division section of the site where users can download license applications, the file names are linked, but not the document names themselves, as shown in Figure 14. This caused some testers to initially miss seeing where they could download the application. So instead of linking [fpc930.pdf](#), for example, link License Application, and in parentheses next to it, put "(PDF)."

## Browser compatibility

1. Ensure that the site is compatible with recent versions of major browsers, including (in order of popularity) Internet Explorer, Firefox, Chrome, Safari, and Opera. Note that currently the MDH site does not render properly in Chrome or Safari, as shown in Figure 15. (The site was not checked in Opera.)

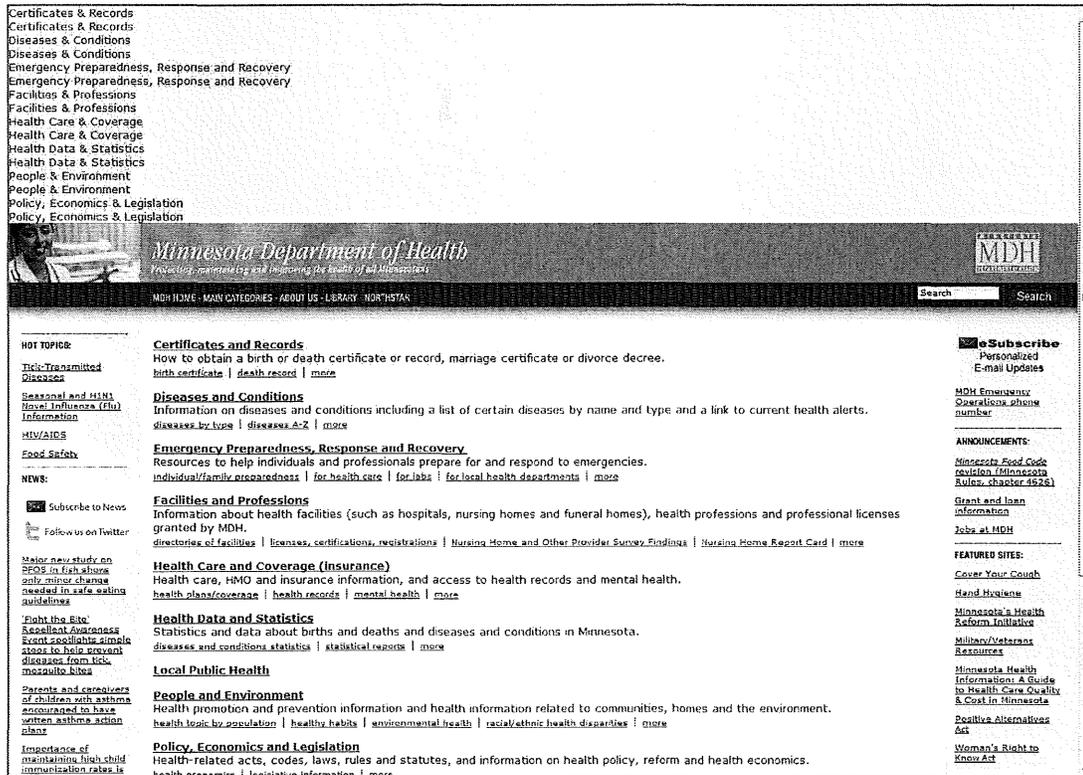


Figure 15: The MDH site as rendered by the Chrome browser. The same issue is evident in the Safari browser. The Main Categories drop-down menu does not function. Instead, the items in this menu display above the banner, and each item is duplicated, with the exception of Public Health Laboratory, which does not appear in the list.

## Visual Presentation

1. Revise the presentation of the links directly below the banner and set against the blue, textured background; currently, they are difficult to see and testers did not use them. The contrast should be improved and the size of the links increased. (See also #4 under Primary Navigation.)
2. Ensure consistency in the styles and formats used across different sections of the site.  
**\*Site managers need to be consistent in using the same page templates and styles.**  
Although most of the site is consistent in look and feel, numerous inconsistencies are evident in various sections across the site – enough to categorize visual inconsistency as a serious issue. The following are only a few examples.
  - o An obvious example is the Community & Family Health Division (CFH) section. Its visual presentation is based on another template entirely different from the one used across much of the MDH site, with a different layout and font (Arial rather than Verdana). The differences between this section and the rest of the site are also evident in the local navigation labels. Overall, because this section is organized around a particular division, the labeling is more division-centered than user-centered. For example, users are interested primarily in achieving specific tasks and goals, and not in topics such as Values and Operating Principles. The look and feel of the CFH sub-site needs to match that of the rest of the MDH site. Moreover, it should become more user-focused in its labeling and organization.
  - o The Local Public Health (LPH) Trailhead is another section of the site that stands out as different. Although it does not appear to be based on a different template in the way that the CFH section is, the LPH section is different enough to be noticeable. For example, it is based on a metaphor, that of a trailhead, which is an approach not used elsewhere on the site. All of the pages in this section feature the same photograph intended to support the trailhead metaphor. And similar to the CFH section, the LPH Trailhead features local navigation items that are not as topic- and task-based as they could be. When test participants landed on this page, they tended to leave quickly; all but one expressed puzzlement and dissatisfaction with the Trailhead metaphor. Only one tester quickly recognized it as a metaphor. (She said she was a hiker.) Note also that the “Lost?” page is not especially helpful. It is not clear that the links at the top of this page are same-page links – users clicking MDH Home, Search, or Contact Us would not expect to simply be shifted down slightly on the same page. (Same-page links are unnecessary on such a short page.) The link to Go! after the description of the search feature takes the user to the home page, but there is no reason to expect this action based on the label Go!. Essentially, the Lost? page should be deleted, and contact information should be added as a persistent element in the right column.

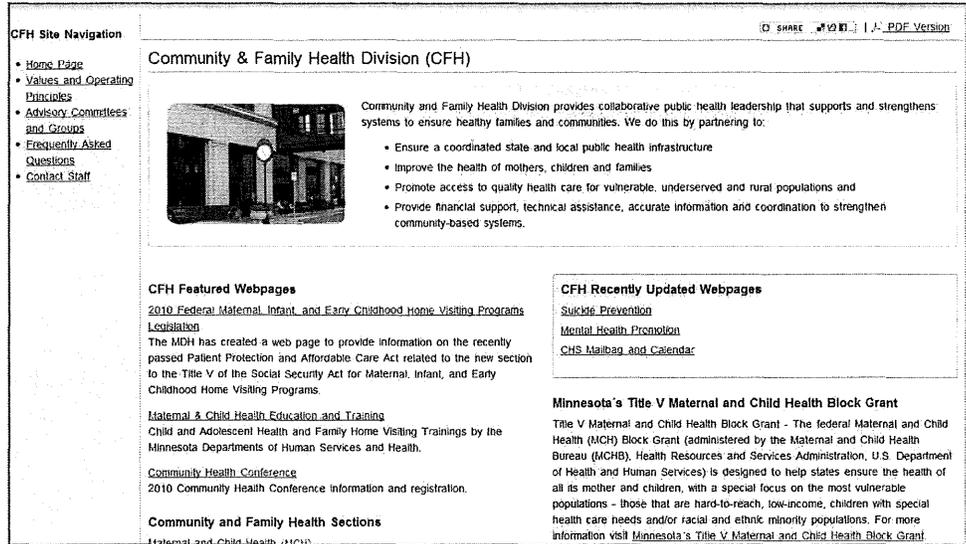


Figure 16: The CFH Division section of the MDH website is based on a different template. The entire MDH site should have a consistent look and feel. In addition, the CFH local navigation labels are more department-centered than user-centered.

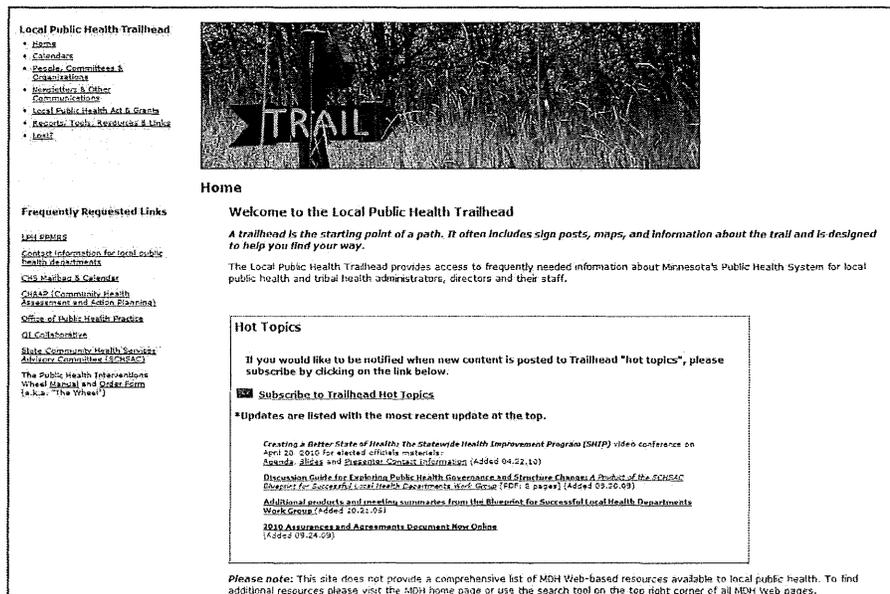
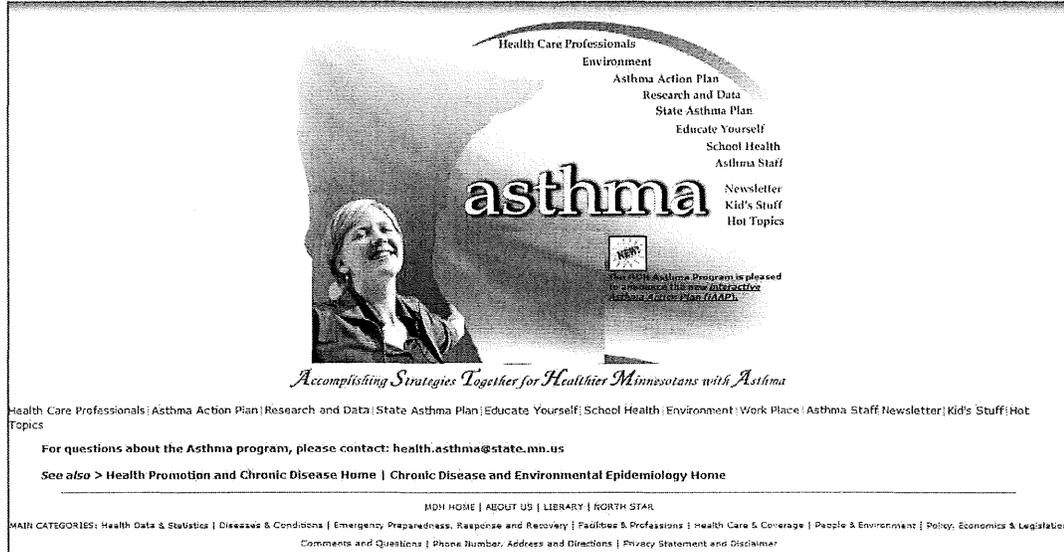


Figure 17: The Local Public Health Trailhead home page. Test participants were puzzled by this section. Only 1 tester clearly understood and appreciated the metaphor.

- o The Asthma section is another example of a different presentation. See Figure 18.



**Figure 18:** The Asthma section is another example of a different presentation format. Note that there are a few issues with the use of links on this section home page. For example, part of the text under “New!” is underlined and part is not, yet both parts are linked, although to different pages. This is confusing. Overall, links are presented in several different ways on this page – there are too many cues as to what is clickable. Also, as shown in the example below, the local navigation for the Asthma section looks different from other sections of the MDH site.

- Asthma Program**
- Home
  - Health Care Professionals
  - Minnesota Asthma Events
  - Asthma Action Plan
  - Research and Data
  - State Asthma Plan
  - Educate Yourself
  - School Health
  - Environment
  - Work Place
  - Asthma Staff
  - Newsletter
  - Kid's Stuff
  - Hot Topics

- o Several instances of inconsistency are evident in the use of headings across the site. See the examples presented on the following pages.

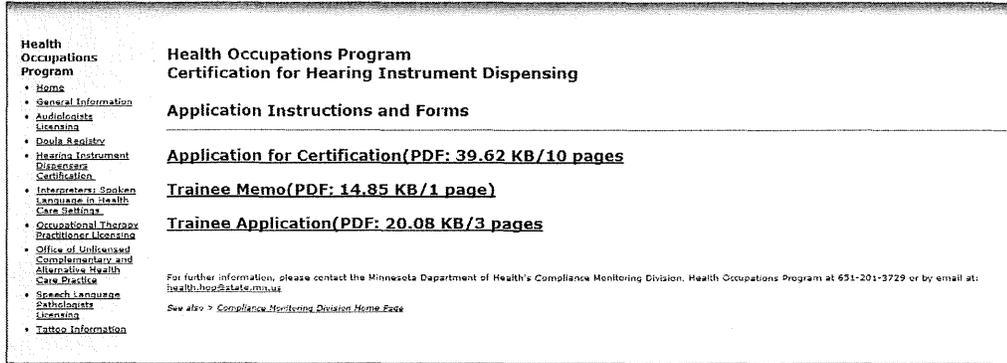


Figure 19: On this page, text that should be in a regular body style is presented in the same size font as the heading – Verdana 18 pixels, or 13.5 points. Note also the contrast between this large font and the very small font (12 pixels, or 9 points) used to present contact information at the bottom. This marked contrast makes the page look unprofessional.

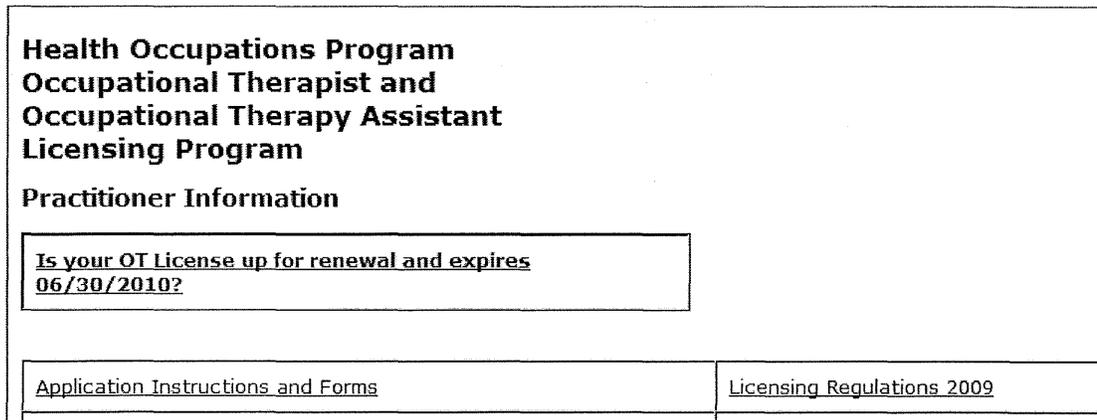


Figure 20: In this example, it is difficult to tell what the section title is versus the specific page title. Should all 11 words be in the same H1 font? Note: On this page, the category headings used in the left navigation menu are presented inconsistently. Two are center-aligned and two are left-aligned. They should all be left-aligned.

**About the Injury and Violence Prevention Unit**  
 The Minnesota Department of Health's Injury and Violence Prevention Unit (IVPU) supports comprehensive programs that help reduce the risk of injury and violence. Its staff includes epidemiologists, research scientists, programmers, prevention specialists, and administrative support.

**Mission**  
 The mission of the IVPU is to strengthen Minnesota's communities in injury and violence prevention. To do this, the Unit:

- Collects and interprets data on injury and violence,
- Develops and evaluates prevention programs and policies, and
- Provides tools, technical assistance, and information to others.

[Injury and Violence Prevention Fact Sheet \(PDF: 59KB/2 pages\)](#)

**Toward An Injury-Free, Violence-Free Minnesota: A Plan for 2010**  
[PDF Version](#) (With charts - PDF, 2.3MB)  
[Microsoft Word Version](#) (DOC, 1.0MB)  
[Appendix B Charts](#) (XLS, 250KB)

This plan, developed by a broad array of partners in injury and violence prevention, outlines data and prevention strategies for bicycle injuries, child maltreatment, drowning, falls, firearm injuries, home fires, intimate partner violence, motor vehicle crashes, sexual violence, sports and recreation injuries, suicide, traumatic brain injuries, unintentional poisoning, and youth violence. The plan includes priorities for action.

**Topics and Programs**

- [Alcohol and Violence](#)
- [Bicycle Injuries](#)
- [Crash Outcome Data Evaluation System \(CODES\)](#)
- [Disability Health Project](#)
- [Fire and Fall Prevention](#)
- [Firearm-related Injuries](#)
- [Home Safety Checklist](#)
- [Intimate Partner Violence](#)
- [Sexual Violence Prevention](#)
- [Smoke Alarm Installation and Education](#)
- [Trauma Data Bank](#)
- [Traumatic Brain and Spinal Cord Injury](#)
- [Violence Against Women](#)
- [Violence Prevention - General](#)

**CDC child prevention fact sheets for parents**

- [Burns \(PDF: 1.2 MB/2 pages\)](#)
- [Drowning \(PDF: 1.4 MB/2 pages\)](#)
- [Falls \(PDF: 1.2 MB/2 pages\)](#)
- [Motor Vehicle \(PDF: 2.5 MB/2 pages\)](#)
- [Poisoning \(PDF: 1.9 MB/2 pages\)](#)
- [Sports Injuries \(PDF: 739 KB/2 pages\)](#)

Figure 21: Compare this page with the examples directly above in Figures 19 and 20. It appears they are all using different styles for page headings, and/or are following different guidelines concerning what styles should be used for headings.

**Minnesota Department of Health**  
 Promote, protect, and improve the health of all Minnesotans

**Minnesota Health Access Survey**

Welcome to the Minnesota Health Access Survey interactive data reporting system. This system provides easy access to detailed results from the Minnesota Health Access Survey, which is a large-scale health insurance survey conducted jointly by the Minnesota Department of Health and the University of Minnesota. Users can create customized tables of survey results, and save the results in pdf or excel format.

**Years available:** Currently, the system includes data from the 2001, 2004, and 2007, and 2009 surveys, with the 2009 data reflecting early survey results. Users can create tables comparing any two years of data.

**Types of information available:** This system can be used to generate a variety of detailed statistics and comparisons. These include:

- **Uninsurance Rates:** Percent of Minnesotans who are uninsured by age, race/ethnicity, income and other population characteristics.
- **Sources of Health Insurance Coverage:** Percent of Minnesotans with employer coverage, individually purchased coverage, public coverage or who are uninsured.
- **Access to Employer Coverage for the Non-Elderly:** For example, the percent of non-elderly who work for or have a family member who works for an employer that offers health insurance benefits.
- **Demographic Characteristics of the Uninsured:** Age, race/ethnicity, income and other demographic characteristics of the uninsured.
- **Employment Characteristics of the Uninsured:** Employment status, employment type, firm size and other employment characteristics of the uninsured.
- **Potential Sources of Health Insurance Coverage:** Percent of uninsured Minnesotans who have potential access to employer or public health insurance coverage.

[Click here](#) for additional technical information on the Minnesota Health Access Survey and how to use these statistics. For other questions about the survey data, please contact Brett Fried at 651-201-3552 or [brett.fried@state.mn.us](mailto:brett.fried@state.mn.us).

**Start using the Survey Data**

To view the PDF files, you will need [Adobe Acrobat Reader](#) (free download from Adobe's Web site).

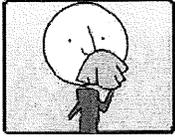
Figure 22: Note that on this page the primary navigation menu is not accessible. Interestingly, this page is also different from most others on the site in that the logo is clickable and returns the user to the home page. In addition, the font used for the left navigation menu is different from the one used on most other pages on the site.

**Influenza (Flu)**

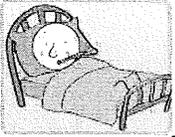
H1N1 flu is still out there. It's not too late to get vaccinated right through the summer.

**Call Line**  
 Call with questions about flu,  
 1-800-CDC-INFO (800-232-4636)  
 TTY: 1-888-232-6348  
 Centers for Disease Control

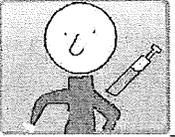
**Find your flu shots:**  
[Find a seasonal flu shot](#)  
[Find an H1N1 flu shot](#)



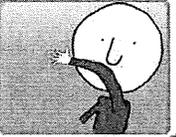
**All About the Flu**  
 Seasonal and 2009 H1N1 influenza: Signs and symptoms, people at high risk of developing complications.



**If You Get Sick**  
 How to care for an ill person at home, when to seek help, and how long a sick person should stay home.



**Vaccine**  
 Protect yourself from the flu - get vaccinated!



**Cover Your Cough!**  
 Cover your nose and mouth with your sleeve when you cough or sneeze.



**Wash Your Hands**  
 Clean your hands frequently and thoroughly, with soap and water or an alcohol-based hand rub solution.

- [Statistics](#)
- [Print Materials](#)
- [Resources in Other Languages](#)
- [Flu News](#)

---

**Information for specific groups**

- [For Health Professionals](#)  
 Information specific to health care providers regarding specimen collection, submission, and treatment for all Influenza-like illness (2009 H1N1 and seasonal influenza).  
[Case Definitions](#) | [Testing](#) | [Rapid Testing](#) | [Vaccine](#) | [Treatment and Antivirals](#) | [Assess Catches](#) | [Infection Control](#) | [Other Resources and Guidance](#) | [Reporting](#) | [Surveillance Programs](#)
- [For EMS, First Responders, Fire, and Law Enforcement](#)  
 Influenza (seasonal and H1N1 novel) infection control information for public safety personnel.
- [For Long-Term Care](#)  
 Information regarding influenza (seasonal and H1N1 novel) specific to long-term care facilities.
- [For Childcare](#)  
 Information specific to childcare staff about influenza (seasonal and H1N1 novel).
- [For K-12 School Professionals](#)  
 Information for K-12 schools about influenza (seasonal and H1N1 novel).

Figure 22: Should “Information for specific groups” be a heading? If so, what heading style has been applied? Why is it different from the headings in the examples shown above?

- o Just as there are inconsistencies in the presentation of headings, there are various inconsistencies in the presentation of the local navigation on the left, from the size of the font used to the color of headings (some are blue, some are red). In some instances, no local navigation is provided (for example, on this page: [www.health.state.mn.us/divs/fh/csfp/index.html](http://www.health.state.mn.us/divs/fh/csfp/index.html)). The Sexual Violence section of the site (<http://www.health.state.mn.us/svp/>) is the only one that uses a dynamic menu that expands on rollover. This is not only inconsistent with the rest of the site, it is also an unconventional method of handling a dynamic menu.

3. Increase the font size used in navigation menus in the left column. Currently, the font size is 10 pixels, or 7.5 points. Although larger font sizes may be difficult to fit in this space, the recommended minimum font size is 10 points, or 13 pixels.
4. Increase the font size used for featured information in the right column.

**Note:** Content owners or managers should be charged with a review of their content to ensure that no text is smaller than 10 points, or 13 pixels. For example, the font size needs to be increased on the MDH Grants page. The text in the “grant matrix” is too small to read comfortably. It is 9 pixels, or 7 points. Similarly, on the Which Soap is Best? page, the list of references at the bottom of the page is presented in a font size that is much too small. (See [www.health.state.mn.us/handhygiene/how/bestsoap.html](http://www.health.state.mn.us/handhygiene/how/bestsoap.html).) And as noted in the caption for Figure 19, many pages on the site feature contact and other information at the bottom of the page in a very small font. The survey indicated clearly that a significant percentage of the MDH audience is older than 40 years – eyestrain will undoubtedly result from the small font.

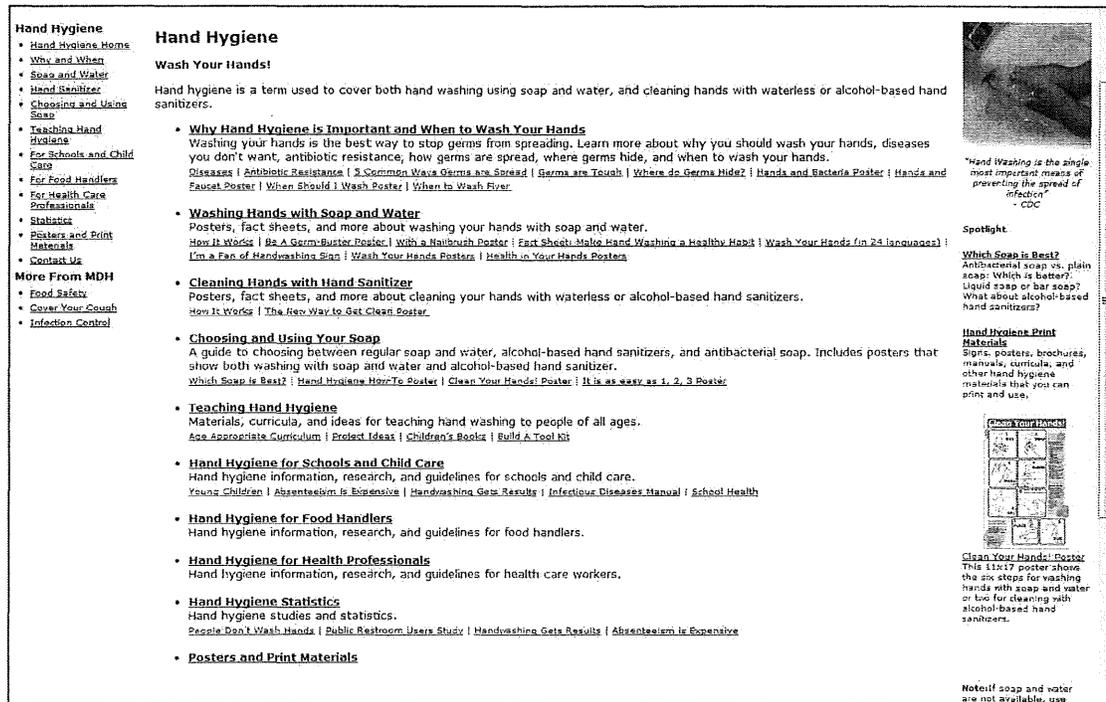


Figure 23: Just as the font size of the text in the left column is very small, so too is the font size of the text in the right column.

5. Do not underline text unless it is linked. See Figures 24 and 25 for examples.
6. On hub pages, do not underline the listed sets of links. On these pages, the repeated underlining of text can contribute to a perception of clutter. The underlining is not

necessary to indicate to the user that the terms are linked. The combination of color (blue) and context is a strong enough cue to indicate that the terms are linked. This is also true of the left navigation menu. (The Asthma section does not underline left navigation links.)

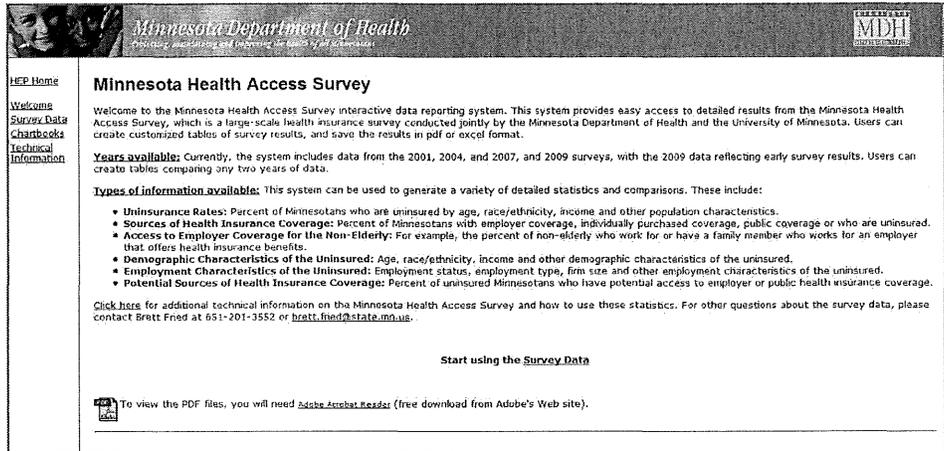


Figure 24: On this page, “Years available” and “Types of information available” are both underlined but neither is linked. The underlines are therefore misleading cues.

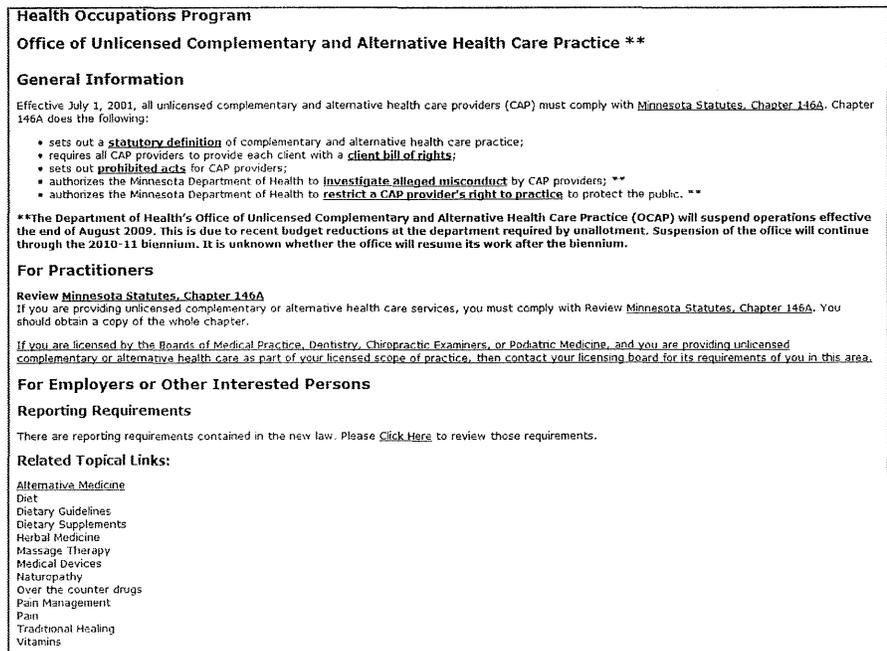


Figure 25: Note that the underlined sentence that begins “If you are licensed ...” is not linked. This page has other issues too. In addition to the use of Click Here, only one Related Topical Link is actually linked. Why are the others listed?

7. Revise the use of color on the safe eating table at [www.health.state.mn.us/divs/eh/fish/eating/safeeating.html](http://www.health.state.mn.us/divs/eh/fish/eating/safeeating.html). There a number of points where the contrast failed an automated color contrast test and where color blind users would experience some difficulty. In addition, the table that displays when the user clicks the link to How often can you eat it? has similar problems with contrast.

**Fish Consumption**

- Home
- Safe Eating Guidelines
- What is a meal?
- FAQ
- Contact Materials
- Non-English Info
- Links
- Contact us

**Food Safety**

**Center**

- Assessing Food Safety at Home
- Safe & Healthy

**More from MDH**

- Mercury
- Children's Environmental Health
- Environmental Health Issues
- Toxic Index
- Emerging Issues
- Get Contacts

**Safe Eating Guidelines**

**Safe Eating Guidelines\* for Pregnant Women, Women who may become pregnant, and Children under age 15**

Kind of fish	How often can you eat it?
<b>EAT</b> Catfish (farm-raised), cod, crab, flatfish, herring, oysters, pollock, salmon**, sardines, scallops, shrimp, tilapia, and other purchased fish low in mercury.	2 meals per week
<b>OK</b> Canned "light" tuna Minnesota caught: Sunfish, crappie, yellow perch, bullheads **salmon- farm-raised or wild, Pacific and Atlantic - not Great Lakes	1 meal per week (see exceptions)*
<b>AND</b> Canned "white" tuna, Chilean seabass, grouper, halibut, marlin, orange roughy, tuna steak Minnesota caught: bass, catfish, walleye shorter than 20 inches, northern pike shorter than 30 inches, and other MW gamefish	1 meal per month (see exceptions)*
<b>DO NOT EAT</b> Shark, swordfish, tile fish, long nackerel Minnesota caught: walleye longer than 20 inches, northern pike longer than 30 inches, muskellunge	Do not eat

\*Fish from some Minnesota Lakes and rivers have been found to have higher levels of mercury or PCBs. If you eat certain fish from these waters, you should eat it less often than these guidelines. See exceptions tables (above) for further information on restrictions for eating fish from the specific Minnesota lakes

Figure 26: The chart on the Safe Eating Guidelines page suffers from poor contrast.

8. Reduce line lengths on many pages across the site by consistently including a right column for supplementary information and navigation, even if the information provided is simply basic contact information. Currently on many pages on the site, the text extends all the way across the page, creating a longer reading line than many users are comfortable with.

To cite the Web Style Guide:

"The ideal line length for text layout is based on the physiology of the human eye... At normal reading distance the arc of the visual field is only a few inches – about the width of a well-designed column of text, or about 12 words per line. Research shows that reading slows and retention rates fall as line length begins to exceed the ideal width, because the reader then needs to use the muscles of the eye and neck to track from the end of one line to the beginning of the next line. If the eye must traverse great distances on the page, the reader is easily lost and must hunt for the beginning

of the next line. Quantitative studies show that moderate line lengths significantly increase the legibility of text.”<sup>6</sup>

The screenshot shows a webpage titled "Advisory committees at MDH" under the heading "CURRENTLY FUNCTIONING UNDER STATUTORY AUTHORITY:". The page lists several committees, each with a detailed description. The text is formatted in a single column with very long lines, making it difficult to read. The committees listed are:

- Advisory Council on Wells and Borings:** The Advisory Council on Wells and Borings is authorized in Minnesota Statutes, section 1031.105 and consists of 18 voting members. The membership includes six well contractors, four limited or specialized well and boring contractors, two public members, and six representatives of various state agencies. The council advises the Minnesota Department of Health on technical matters related to the construction, repair, and sealing of wells and borings and the licensure of well and boring contractors. The council also administers the oral examination of well contractor license applicants. Council meetings are held quarterly, usually the first Wednesday of March, June, September, and December, in St. Paul, Minnesota.
- Environmental Health Specialist/Sanitarian Council:** The council advises the Commissioner of Health regarding environmental health specialist/sanitarian registration standards and enforcement of the environmental health specialist/sanitarian rules; provides for the dissemination of information regarding environmental health specialist/sanitarian registration standards; and reviews applications and recommends applicants for registration or registration renewal. Two meetings a year, 4-6 hours, varied locations. Appointing Authority: Commissioner of Health. Compensation: Expenses: Minnesota Statutes 214.13, subd. 1,3. Minnesota Department of Health, Environmental Health Services Section, P.O. Box 64975, St. Paul, MN 55164-0975. (651) 201-4500.
- Environmental Health Tracking & Biomonitoring Advisory Panel:** The advisory provides advice and recommendations to the Commissioner of Health regarding the design, implementation and evaluation of the environmental health tracking and biomonitoring program, including recommendations for specific environmental hazards, exposures and diseases to track and specific chemicals for biomonitoring. Membership includes two scientists representing nongovernmental organizations; two scientists representing statewide business organizations; one scientist representing the University of Minnesota; one representative each to be appointed by the speaker of the house and the senate majority leader; one other representative meeting the scientific qualifications specified in statute. Meetings held quarterly, at a minimum. Appointing Authority: Commissioner of Health. Compensation: Expenses: Minnesota Statutes 144.999. Minnesota Department of Health, Health Promotion and Chronic Disease Division, P.O. Box 64882, St. Paul, MN 55164-0882.
- Hearing Instrument Dispenser Advisory Council:** The council advises the Commissioner of Health on matters relating to certification and regulation of hearing instrument dispensers including certification standards, enforcement of certification laws and rules, and examination services. The nine members include three public members as defined by Minnesota Statutes 214.02, one to be a hearing instrument user and or an advocate of a hearing instrument user; three certified hearing instrument dispensers who are currently, and have been for the five years preceding appointment, engaged in hearing instrument dispensing in Minnesota and who are not audiologists; and three audiologists who are certified hearing instrument dispensers, are licensed as audiologists under Minnesota Statutes 149.511 et seq. Meetings are held quarterly, with additional meetings scheduled as necessary. Meetings are held at the Minnesota Department of Health, Snelling Office Park for two hours. The council does not expire. Appointing Authority: Commissioner of Health. Compensation: \$55 per diem plus expenses. Minnesota Statutes 153A.20. Minnesota Dept. of Health, Compliance Monitoring Division, P.O. Box 64882, St. Paul, MN 55164-0882. (651) 201-3724.
- Maternal and Child Health Advisory Task Force:** The task force meets to review and report on the health status and health care needs of mothers and children throughout the state of Minnesota. The fifteen members should provide equal representation from professions with expertise in maternal and child health services, representatives of local community health boards as defined in Minnesota Statutes 145A.02, subdivision 5, and consumer representatives interested in the health of mothers and children. Meetings are mandated to be held four times per year, the group meets more often as needed for five hours at 1645 Energy Park Dr., St. Paul. The task force expires on June 30, 2007. Appointing Authority: Commissioner of Health. Compensation: Expenses: Minnesota Statutes 145.881 and 15.059, Subd. 2. Minnesota Dept. of Health, Family and Community Health Division, Box 64882, St. Paul, MN 55164-0882.

Figure 27: On pages such as this one, line lengths are too long for most users to read comfortably from the web – more than twice as long as the recommended length in some instances.

- Add more images to the site, such as in the right column. Although the focus of the MDH site is clearly, and correctly, on useful information, users respond positively to attractive graphics. And considering that the focus of the site is on healthy people, there are relatively few photos of people on the site. The use of more images would also provide a break from the overwhelming dominance of blue across the site.

<sup>6</sup> Patrick J. Lynch and Sarah Horton, Web Style Guide – Basic Design Principles for Creating Websites, 2nd edition, page 97.

## **Content – Writing for the Web**

In the survey, focus groups, and testing, participants commented favorably on the quality of the content on the site.

However, some participants did remark on the length of some topic pages. This was in some instances related to the long line lengths noted above, and to the absence of a right column and visuals on many pages, also noted above.

In addition, it is useful for those writing for the MDH website to keep their focus on what matters *most*, to move from answering the key questions first and quickly, to the more general and less important information. The style of writing to imitate is that of a newspaper, not a scientific journal, because even those users with a scientific background want to find information quickly.

Those creating content should ask themselves a few essential questions:

- What is my primary message?
- Is that message understandable within 10 seconds of being on the page?
- Are all the details in the content supporting that main message?

Think of each visit to your site as a conversation initiated by your site visitor and ask whether you are responding quickly and concisely to the conversation the visitor wants to have.

## **Social Media**

1. Given that about 60% of your audience is using social media, and most of the people in that group are on Facebook, with a much smaller percentage using Twitter, consider creating a social media committee and developing a strategy or approach for using social media.

### **Ideas for discussion:**

2. Create an MDH Facebook page and focusing on it in addition to Twitter. Facebook would provide an opportunity to create communities of interest or peer groups connected to the MDH, such as public health nurses, those involved in SHIP, those wanting to learn more about PFCs, and so on.
3. Add a Share feature for the home page that identifies MDH's social media presence using the standard icons.
4. Create a blogging team and developing an MDH blog, following an approach similar to the one used on the Transportation Safety Administration blog.  
<http://blog.tsa.gov/>

## User Feedback – Rate this Page

1. Implement a Rate this Page feature, accessible via a utility link, which would provide users with the opportunity to provide feedback from a specific page. See the example shown in Figure 28. By using the “I am a” drop-down list, the MDH web team can track feedback by audience group.
2. In addition to using the Rate this Page feature, consider identifying a sub-set of the most interested respondents to the web survey – those who indicated their willingness to participate in a usability test and focus group – and conduct periodic, short surveys of their experience with the site as changes are made. The same basic usability questions that were included on the survey could be included in this suggested survey.
3. After implementing changes to the home page, navigation, and visual design, conduct additional usability testing.

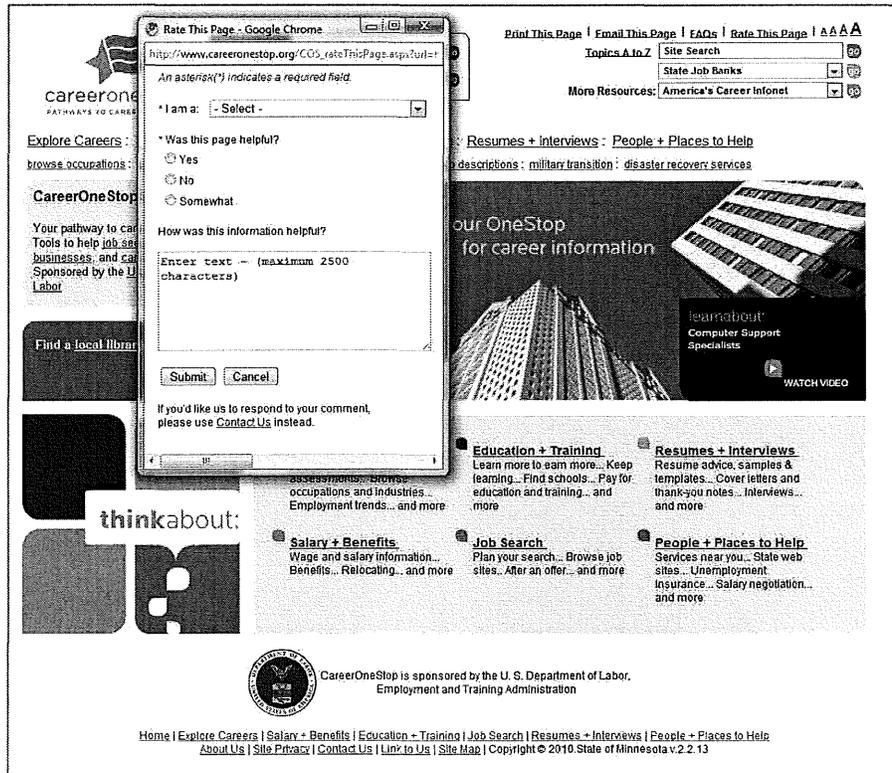


Figure 28: The Rate this Page feature on the CareerOneStop website. This allows users to provide feedback on any page on the site by clicking the utility link to Rate this Page in the upper right of the page. The “I am a” drop-down list allows users to identify their audience type.

## Content management system

Strongly consider implementing a content management system (CMS). With a site as large as MDH's, with different content owners and manager, a CMS together with a clear system of content governance would allow more consistency and control across the site.

Although a proprietary CMS comes with a cost, there are open source options such as Drupal. Still, implementing any CMS involves extended effort and a careful change management operation.

Form a CMS discussion group or exploratory committee to evaluate the costs and benefits of using a CMS.

## Additional issues

1. Include a link to Events and Training on the home page. The term Announcements was not seen as clearly indicating that it would lead to training information.
2. Ensure that whenever addresses and directions are provided, phone numbers are provided as well. For example, note that phone numbers have yet to be added to this page listing MDH's Twin Cities facilities:  
<http://www.health.state.mn.us/about/metro.html>.
3. Simplify access to the well water testing information. Testers had a great deal of difficulty with this task once they reached the page on which they were expected to search for accredited laboratories. This process was confusing to the testers and in fact most never got far enough to even use the search form.

As an alternative for homeowners, consider presenting a table on an HTML page that lists the same information that the user sees once they do a search without any filters. However, consider listing the Minnesota labs first and then separately listing labs outside the state. Essentially, then, this would eliminate the need for homeowners to use the search form.

The page on which users look for accredited labs needs to clearly provide information to indicate that users looking for well water testing resources are in the correct place. Some information needs to be provided to explain that if a user would like to have their private well water tested, they need to use one of the following accredited labs. Currently, when users click Testing Private Well Water on the Environmental Health page, they are taken first to a page indicating that the page they are looking for has moved (strike one), and then to a page that does not explicitly discuss private well water testing (strike two). If they make it as far as the search form, most find it difficult to use (strike three).

4. Link to the PDF of the IDEPC organization chart but do not present an image of it on the HTML page (<http://www.health.state.mn.us/divs/idepc/idepcorg.html>). Many users will find the text in the image presented on this page too small to read comfortably. In addition, consider providing phone numbers and email addresses. For most of the public, providing only names and positions will not be very useful.
5. On the Facilities and Professions main page, either list Hospices separately under Directories, or after Licensed and certified health care facilities directory, list in parentheses all of the facility types included in the directory.
6. On the Nursing Home Survey Reports page, consider creating a sortable table, so that users can sort by the name of the home and by the location.  
<http://www.health.state.mn.us/divs/fpc/nhoutput/nhsurveypost.html>

## Appendix A: Personas

A persona is a character who is representative of a larger website user group. By understanding and aiming to meet the needs of a particular persona, a web team will more effectively meet the needs of a large segment of its audience.

### Nancy, Business Manager for Inter-County Nursing

Nancy is 43 and works for Inter-County Nursing, a long-term care facility in Thief River Falls that provides 24-hour medical care as well as room, meals, activities, and some personal care. She has been in this role for just over 15 years.

She lives in Grand Forks, North Dakota, with her husband and their four young sons. She is a big Twins fan, loves Bon Jovi, and really needs a vacation.

Between work and her family, Nancy has very little down time; she needs to be efficient with everything she does. Apart from Facebook and LinkedIn, she does not spend much time using the Web casually. When she is looking for information for her work, she is all business and laser-focused.

Nancy has bookmarked the MDH website in her Favorites – one of the signs of her efficiency. When she uses the site, she is typically looking for information about public health grants, PPMRS reporting (the Local Public Health Planning and Performance Measurement Reporting System), and information about flu shots and H1N1.

She often uses search on the MDH website, especially to look for PPMRS information because she can never remember how to navigate to it. But one of her complaints about the site is that the search does not always present relevant results. Another issue is that it is sometimes easy to get lost while navigating. If you happen to find what you are looking for, it is not always easy to remember *how* you found it.

Nancy does not typically complain about websites, and she appreciates all of the great information on the MDH site, but she thinks there are “a whole bunch of little things the site could do better” to make it faster for her to find what she is looking for.



### **Jan, Pediatric Clinic Supervisor,**

Jan is 45 and works for a busy pediatric clinic in White Bear Lake. She first began working in the clinic soon after she became a Certified Medical Assistant in 1987. She was promoted to Clinic Supervisor 8 years ago. Jan says, "Working at this clinic since 1987, I have seen many children grow into young adults. I have also witnessed, first hand, this clinic evolve into the wonderful practice it is today."

Jan is married, has two children and three dogs. She and her family love to go camping together and have taken several trips to the Boundary Waters Canoe Area. She uses the web to check out news and weather and do some shopping, but she has not yet entered the world of social networking.

An important part of Jan's job involves answering questions from physicians and patients, and the questions can be varied. She has the MDH website bookmarked, and when she uses it, it is usually to help to answer one of those questions, and so she needs to find the requested information quickly.

For example, a patient recently asked her where to get well water tested. "I spent 5 minutes helping, which is about as long as I could take because of other things I had to do. I could help the person find some general information, but that was about all." She adds, "I also tried to find information about the VFC [Vaccines for Children] program and didn't have any luck. And I have a hard time finding department contact information."

Jan says that one of her frustrations with the site is search. "When I search, I get articles. It's a very busy site, and it takes me a long time to read and find what I want. What I sometimes do is just use Google instead of using the search on the MDH site."

One of the biggest items on Jan's wish list for the site is a way of looking at categories of information on the site from a "provider point of view - things that clinics would use and that Joe Public wouldn't need, like VIS sheets [Vaccine Information Sheets]. I have to go to a different site for those."



### **Matt, Epidemiologist, Hennepin County Medical Center**

Matt is 25, with a Masters in Public Health, specializing in epidemiology. He has been working at Hennepin County Medical Center as a data reporting analyst for the past two years and is starting medical school at the University of Minnesota in 2011.

The focus of Matt's research is sexually transmitted diseases, specifically HIV-AIDS. But he has wide interests in health care and health policy, and he describes himself as a "political junkie." He is a strong advocate of Health 2.0, which he describes this way: "It isn't just about implementing some clunky EMR [Electronic Medical Records system] in every clinic across the country (that should have been done a decade ago) – it's about figuring out ways to use social networking, web apps, or smartphones to the benefit of patients."

Matt is a very active and sophisticated web user. He has his own blog and Twitter feed and uses Facebook to keep up with friends and colleagues. He comes to websites with high expectations, and he does not make an exception for the MDH website, which he uses primarily for research into HIV-AIDs issues as well as research into other statistics for personal interest.

"I don't like the Department of Health website very much." He finds the site's look and feel very "old school," and he does not like the lack of engagement with social media, apart from the introduction of a Twitter feed.

Matt adds, "The main strength of the site is the volume of information. But sometimes there 's too much information for general health care consumers and not enough for professionals, or you really have to drill down to find it."

