Accessibility Inspection

Michigan Hemophilia Foundation
http://www.hfmich.org/

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Executive Summary

An accessibility inspection was conducted of the Michigan Hemophilia website. The inspection focused on identifying widespread accessibility issues, while also pointing out strengths of the website that should be maintained.

The most significant accessibility issues identified in this evaluation are:

- **Using JavaScript technology for section navigation.** The section navigation that is generated by JavaScript is read out loud by screen readers. When it is read it is completely out of context, and the links do not function. No option to 'skip to content' exists, so users with screen readers are forced to listen to very long list that comes across as fairly meaningless. This is probably the biggest barrier for disabled users accessing the site.

- **Insufficient 'alt' text for images.** Although the site technically provides 'alt' text for its images, sometimes the text is empty. Providing a written description for every image on the site would help visually impaired users experience the site more fully.

- **Navigation that does not degrade gracefully.** With CSS and/or images disabled, the utility navigation becomes white text on a white background, and therefore invisible. The utility and local navigation also become difficult to read if the text is resized too large.

- **None of the pages evaluated validate for HTML or CSS.**

- **Missing <label> tags that should be associated with form elements.** Having a label for each form element will help users who have motor disabilities who may not have precise control of the use of a mouse.

- **Data tables that do not follow accessibility practices**. Table headers are not used, and the content of each cell is not associated with the name of its respective column.

- **Difficulties in playing videos.** Videos require a download, and even when the download is acquired, they still don't play. The videos do not appear to be close-captioned or scripted.

- **Links indicated by color only.** Links in the content area are not underlined. Low-vision or color-blind users may have difficulty determining what is clickable and what is not.

These issues are among the most pressing accessibility concerns for the Michigan Hemophilia Foundation website. Other issues and recommended resolutions are detailed in the full inspection.

Terminology & Conventions Used

Different terms are often used when referring to the same part of the web page. To facilitate understanding of this inspection, one term was used consistently for each browser/web page element. The terms are:

Global navigation: Links and/or buttons that are available from every page, and lead to major sections of the website and/or significant pages.

Section navigation: Links/buttons for moving between pages in a section of the website (sub-pages to global navigation).

Utility Navigation: HTML links in the upper right hand of every page that link to support pages of the website, such as the site map and contact form. Although this is technically 'global navigation', a distinction is made because it serves a different function for the site, is treated differently visually, and is a separate section of code.

Content area: The main body of the web page. This area is dedicated to displaying text, graphics or tables that contain information relevant to the page.

Link label: The label in this case is the word or words that are linked. These words can be in graphical form or HTML text that is linked.

Page name: The primary heading for the page, often shown in larger text and located between the global navigation buttons at the top of the window and the text content of the page.

Priority Levels

The issues identified in the accessibility inspection are grouped into three levels of priority:

High priority: These issues are likely to impact a large number of users significantly. They should be resolved as quickly as resources allow.

Medium priority: Issues at this priority level are also likely to affect a large number of users but generally are less disruptive to the user experience, relative to the high priority issues. If resources are available to address these issues, they should be addressed.

Low priority: Low priority issues typically impact a small subset of the overall user base, although they may impact a larger group. Regardless of the number of users affected, these issues carry only a minor negative impact. Low priority issues are generally easy to resolve. There is less time pressure to fix low priority issues, compared to medium priority issues and especially high priority issues.

Accessibility Guidelines

Simplicity and Clarity

Simplicity and clarity refers to the page layout and visual presentation. The layout should be easy to understand and follow, without extraneous or distracting elements.

Practices to Continue

- **Overall, the site is quite clean with few extraneous elements.**

- **Forms are grouped with the appropriate fieldsets and legends.** This breaks up the forms to make them easier to comprehend.

Suggested Changes

High Priority:

- **None of the pages have <h1> headings to let the user know the name of the page he or she is on.**

- **On the 'Regional Data' page, the content extends under the section navigation, making the content impossible to read.**

- **The difference between each fieldset in the 'Donate Form' is not immediately clear.** Three types of donations exist on the page: 'Membership', 'Donations', and 'Other'. The 'Other' category should be eliminated. Some explanatory text should inform users about the difference between 'Membership' and 'Donations'. This text may either be on the same page, or on a landing page that would direct users to the specific desired form.

Medium priority:

- **No 'welcome text' is provided on many of the pages**. Many pages could benefit from an explanatory paragraph at the beginning of the page to let users know the nature of the content of the page.

- **Some pages contain duplicate section navigation – in content area and on right.** Not only is this unnecessary, it may be confusing to users.

Low priority:

- **Half-circle swirl image is probably not needed, and uses space that could put more content above the fold.**

- **Content area is generally small; a lot of information appears below the fold.** This is especially true of pages that have section navigation on the right side of the page. One possible solution would be to move this navigation to the left column.

- **Many issues with layout and spacing exist.** For example, within-page navigation, breadcrumbs and separator bars are spaced oddly on the pages that have them. Often in the content area, graphics and text are spaced too close together, necessitating more white space.

Visual and Non-visual Navigation

Visual and non-visual navigation refers to the quality of the navigation design for both average and disabled users. Navigation should be clear and efficient and accessible to adaptive technologies. Links to skip the navigation should also be considered for efficiency when using a screen reader.

Practices to Continue

- **Screen readers read global navigation effectively.**

- **HTML generated section navigation on the sub-pages.** Although the section navigation generated by JavaScript does not work for users with JavaScript disabled or not using a mouse, these users can still access the section navigation on related sub-pages.

- **Content linearizes well.**

Suggested Changes

High Priority:

- **Screen readers read all of the JavaScript section navigation for the entire site at the start of each page.** This navigation is all read in one long list, rather than in context with the respective global navigation. Furthermore, the links in the section navigation are not functional for users using screen readers.

- **No option to 'skip navigation' exists**. This is especially problematic, because all of the section navigation is read even though it is non-functional and completely out of context.

- **Section navigation uses "drop-down/fly-out" effect.** The drop-down and fly-out navigation generated by JavaScript may be very frustrating for users with motor disabilities who have difficulty controlling a mouse.

- **Utility navigation is formatted poorly.** When the images and/or CSS are turned off, the utility navigation disappears, because it is white text on a white background, rather than white text on a blue background image.

- **With CSS disabled, the JavaScript section navigation is very problematic.** It appears on the screen as text, not as clickable links. The categories are not associated in any way with their respective pieces of global navigation. Furthermore, when this navigation is rolled over when CSS is disabled, large sections of it disappear.

Medium priority:

- **Section navigation on subpages is not given proper context when using screen readers.** The entire list of non-functional local navigation is read first, and no heading is given to provide a cue to users with screen readers that this is a key way to navigate throughout the site.

- **Content area links are not underlined, and may not always look like links**. This is especially important for low-vision or color-blind users who may not recognize that the clickable text is a different color from the rest of the text.

- **Section navigation is blue text on a blue background.** This may be difficult for many users to read.

- **No option to skip data tables exists.**

Low priority:

- **Spatial relationship references are used ("see below", etc.).** These references are meaningless for visually impaired users using screen readers.

- **Section navigation extends below the fold on some pages.**

- **All the navigation is in tables, so it is confusing as to what is an actual data table versus what is navigation.**

Proper Text Markup and Phrasing

Much of what makes content accessible is how things are said and what markup is applied to that content. Link labels should be descriptive, content within an appropriate reading level and markup that promotes accessibility should be used.

Practices to Continue

- **Most link labels are descriptive.**
- **The "lang" attribute for English included in the meta-data.**
- **The reading level seems appropriate for the site.**
- **PDF links are labeled.**

Suggested Changes

High Priority:

- **The link label and title (in the <title> tag) of the 'Map to HRM' page are not accurate.** This page contains *directions* to HFM. The page does not have a heading tag, but the phrase 'Directions to HFM' is marked up with the tag and appears to be the name of the page. This would be more appropriate for the page's <title> and link label.

Medium priority:

- **No <acronym> tags are applied, even though the acronym HFM is used widely throughout the site.** Other acronyms are present on various pages, such as HIV/AIDS, VWD, and HTC without <acronym> tags as well.

Low priority:

- **Link labels on the 'Videos' page could be more specific.** While the images for each video clip have 'alt' text, the links associated with each one read 'View the video'. Providing more link labels more specific to each video would make navigation through the videos more clear.

Proper Structural Markup

Proper structural markup refers to the manner in which the website content is coded for display. Logical document structure and (X)HTML tags assists adaptive technology in interpreting a document and conveying its structure to the user. Headings should be used to denote logical sequence, images and data tables should be richly described and (X)HTML markup should validate without errors.

Suggested Changes

High Priority:

- **None of the pages evaluated validate for CSS or HTML.**
- **Many form elements, such as drop-down menus and text input boxes do not have <label> tags associated with them.** Having a label for each form element will help users who have motor disabilities who may not have precise control of the use of a mouse.
- **No table accessibility has been used for data tables.** No table header, no association w/ headers & content, etc.

Medium priority:

- **None of the pages have an <h1> heading titling the page.** It is important that users arrive on pages clearly titled with the same phrase as the link label that they have just clicked. This is equally important for users with screen readers, because the <h1> tag provides the name of the page.
- **Few other heading tags are used throughout the page.** Many instances exist throughout the site where text is made to visually look like a heading through use of the tag rather than through a heading tag. Using appropriate headings in the mark-up provides a better structure for users with screen readers who cannot get the structure through the visual cues.

Low priority:

- **The deprecated 'border' attribute is used with an <img> tag in the logo on all pages.**
- **The deprecated <font> tag is used.**

Providing Content and Context

Providing content and context enables non-visual users to interpret information properly. Page titles and frames should use long descriptions, video and audio content should be supplemented with transcripts and close captioning and summaries provided for data tables.

Practices to Continue

- **Forms are grouped with the appropriate fieldsets and legends.** This breaks up the forms to make them easier to comprehend.

- **All <img> tags use the 'alt' atttribute.** Providing visually impaired users with text descriptions of the images helps them to use and experience the site more fully.

Suggested Changes

High Priority:

- **No summaries are provided for data tables.** Data table summaries enable users to understand the context in which the table is presented, and to anticipate the type of data in the table. This is especially important for data tables experienced using a screen reader.

- **To play the videos, the site requires users to download the latest Flash player.** Requiring downloads to experience site content can affect all users, but especially those with disabilities.

- **Although there are links for the various videos, they appear to be missing and will not play, even with the Flash player download.** This may be very frustrating for users who might believe that there is content that they are unable to access.

- **If the videos were to play, they do not appear to be transcripted or closed-captioned.** Both transcription and close-captioning open video content to users who choose to experience the site without viewing or hearing the audio for the video.

- **Clicking 'Video' link from the 'Camping Programs' page takes users to another section of the website.** When this happens, users lose the Camping Programs section navigation, which may create navigation problems and confusion.

Medium priority:

- **Although the 'alt' attribute is technically used, alt text is sometimes lacking.**
  - For example, the image of the boy and Santa Claus on the index page does not use the 'alt' attribute. (The markup reads alt=""). The image has a caption that reads "Holiday Party Fun at Troy High School". The caption seems rather out of context and would make more sense if the image had appropriate 'alt' text.
  - The tagline on the index page 'Building for our community' is placed in a background image, so not 'alt' text is available.
  - The 'alt' text for the logo is 'Go back to the home page', even when you are on the home page. More appropriately, it should read 'H F M – Hemophilia Foundation of Michigan – 50 years of service' to reflect the text that is in the logo. On pages other than the home page it should read 'H F M – Hemophilia Foundation of Michigan Home Page'.

Low priority:

- **Page <title> tags are labeled well, but could be more descriptive.** Rich descriptions of the pages assist those using a screen reader by orienting them to the content on the page.

- **The 'About Bleeding Disorders' page contains duplicate navigation.** There is very little actual content on this page. The content area contains the same links found in the section navigation, which may be confusing.

Device Independence

Device independence refers to the level of support the web pages provide for accessing the information using alternate input devices. Content should be accessible using the keyboard only, and accommodate using alternate devices for interpreting content. Functionality should never depend on a single device for accessibility.

Practices to Continue

- **A mouse is not required to navigate through the site.** This is because section navigation is provided on related sub-pages to accommodate users who cannot use the JavaScript section navigation that is on all of the pages.

- **Tabbing through navigation follows a logical order.** Global navigation first, then utility navigation, then links within the content area, then footer navigation.

Suggested Changes

High Priority:

- **Section navigation may be challenging to use.** For those who have a mouse, but may have difficulty controlling it, the fly-out menus in the section navigation may be challenging to use. Although more accessible section navigation is on the related sub-pages, users who see the JavaScript section navigation may not realize that the more accessible version of the same navigation is there.

- **Videos depend on a download and audio output**. No transcripts are provided for the videos, nor do they appear to be closed-captioned.

Medium priority:

- **In order to tab through the forms, the user must first tab through the navigation.** Form elements should be given a tab index attribute to allow users to access them first, without having to tab through the navigation.

Graceful Degradation

Graceful degradation concerns how a user experience of the website holds up when technologies are disabled or if an adaptive technology is used. The website should degrade gracefully when CSS styling, Java/JavaScript and images are turned off, when text size is altered and when using a screen reader to access content.

Practices to Continue

- **HTML-based section navigation is provided on related sub-pages**. This practice accommodates users who cannot use the JavaScript section navigation that is on all of the pages. Users with JavaScript disabled are provided with a more accessible version of the same navigation on the site's sub-pages.

Suggested Changes

High Priority:

- **Screen readers needlessly read the entire section navigation.** Because JavaScript is used, the links are not functional and the link labels are completely out of context when using a screen reader. The site can be extremely difficult for visually impaired users to use, because there is no way for users with screen readers skip this navigation.

- **Utility navigation formatted poorly.** When the images and/or CSS are turned off, the utility navigation disappears, because it is white text on a white background, rather than white text on a blue background image.

- **With CSS disabled, the JavaScript section navigation is very problematic.** Section navigation appears on the screen as text, not as clickable links. The categories are not associated in any way with their respective pieces of global navigation. Furthermore, when this navigation is rolled over when CSS is disabled, large sections of it disappear.

- **Viewing with images turned off removes a great deal of content (maps) on the 'Regional Data' page.** The images should be richly described in either the text content or image tags to accommodate those experiencing the site without images.

Medium priority:

- **Lack of 'alt" text creates problems when images are turned off.** Without adequate 'alt' text, there is no description or context for the images that are hidden from view.

- **With JavaScript disabled, the ‘clear membership options’ and the ‘clear donation options’ functionality do not work in the ‘Donate’ form.** Efforts should so that the users do not make the wrong selection.

Low priority:

- **Screen reader experience can be poor.** For example, phone numbers are read as “two thousand fifty five…” and all navigation is read on every page.

- **Increasing text size breaks global and utility navigation.** At large text sizes, the navigation wraps behind banner images and becomes unreadable on the white background.

Allowing User Control

Allowing user control over the website interface can be crucial to disabled users. Users should have the control to stop page animations and sound. Users should be notified when links will take them to another site or open a program. Page text should respond well to re-sizing.

Practices to Continue

- **The text sizes are given in pixels and therefore can be resized in most modern browsers.**

- **No animations are used on the site.**

Suggested Changes

High Priority:

- **Each time a new date, month or year is selected with a drop-down menu, the entire 'Events Calendar' page refreshes.** This will become very frustrating for users with screen readers.

Low priority:

- **Increasing text size breaks global and utility navigation.** At large text sizes, the navigation wraps behind banner images and becomes unreadable on the white background.

- **PDFs open in a new window**. However, links *are* marked as PDFs, a good practice to follow.

Respecting the User

Design practices should be respectful to all users who visit the website. Users who encounter disrespectful practices are likely to abandon the site and not return. Respectful design eliminates timed processes, uses a comfortable color contrast for page elements, maintains the users' browser settings and notifies the user of pertinent information and changes regarding the website design.

Practices to Continue

- **Providing users with section navigation on related sub-pages.** This is a good solution to accommodate users who cannot access the JavaScript sub-pages.

- **The text in the main content area is formatted well for low-vision users.** Dark text color and a sans serif font that can be resized displays well on the white background.

Suggested Changes

High Priority:

- **The JavaScript section navigation found on all pages makes it very difficult for users with screen readers to use this website.** The long list of navigation is read in its entirety, out of context, and is completely non-functional. There is no option to skip this navigation. The current approach does not consider the needs of the users who depend on screen readers. These users are very likely to abandon the site, rather than listen to a large amount of seemingly meaningless text every time they make a click.

Accessibility Issues by Page Element

Accessibility issues specific to page elements are indicated below. Repetition may occur with issues noted in the general analysis, if the page element in question requires significant and/or specialized assistance with that issue.

Global Navigation

Links and/or buttons that are available from every page, and lead to major sections of the website and/or significant pages.

Practices to Continue

- **Screen readers read global navigation effectively.**

Suggested Changes

High Priority:

- **Utility navigation is formatted poorly.** When the images and/or CSS are turned off, the utility navigation disappears, because it is white text on a white background, rather than white text on a blue background image.

- **No option to 'skip navigation' exists**.

Low priority:

- **All the navigation is in tables, so it is confusing as to what is an actual data table versus what is navigation.**

- **Increasing text size breaks global and utility navigation.** At large text sizes, the navigation wraps behind banner images and becomes unreadable on the white background.

Section Navigation

Links/buttons for moving between pages in a section of the website (sub-pages to global navigation).

Practices to Continue

- **HTML generated section navigation on the sub-pages.** Although the section navigation generated by JavaScript does not work for users with JavaScript disabled or not using a mouse, these users can still access the section navigation on related sub-pages.

Suggested Changes

High Priority:

- **Screen readers read all of the JavaScript section navigation for the entire site at the start of each page.** This navigation is all read in one long list, rather than in context with the respective global navigation. Furthermore, the links in the section navigation are not functional for users using screen readers.

- **No option to 'skip navigation' exists**. This is especially problematic, because all of the JavaScript section navigation is read even though it is non-functional and completely out of context.

- **Section navigation uses "drop-down/fly-out" effect.** The drop-down and fly-out navigation generated by JavaScript may be very frustrating for users with motor disabilities who have difficulty controlling a mouse.

- **With CSS disabled, the JavaScript section navigation is very problematic.** It appears on the screen as text, not as clickable links. The categories are not associated in any way with their respective pieces of global navigation. Furthermore, when this navigation is rolled over when CSS is disabled, large sections of it disappear.

Medium priority:

- **Section navigation on subpages is not given proper context when using screen readers.** The entire list of non-functional local navigation is read first, and no heading is given to provide a cue to users with screen readers that this is a key way to navigate throughout the site.

- **Section navigation is blue text on a blue background.** This may be difficult for many users to read.

- **Some pages contain duplicate section navigation – in content area and on right.** Not only is this unnecessary, it may be confusing to users.

Low priority:

- **Section navigation extends below the fold on some pages.**
- **All the navigation is in tables, so it is confusing as to what is an actual data table versus what is navigation.**

Content Areas

The main body of the web page. This area is dedicated to displaying text, graphics or tables that contain information relevant to the page.

Practices to Continue

- **The text in the main content area is formatted well for low-vision users.** Dark text color and a sans serif font that can be resized displays well on the white background.

- **Content linearizes well.**

Suggested Changes

High Priority:

- **On the 'Regional Data' page, the content extends under the section navigation, making the content impossible to read.**

Medium priority:

- **Content area links are not underlined, and may not always look like links**. This is especially important for low-vision or color-blind users who may not recognize that the clickable text is a different color from the rest of the text.

- **No <acronym> tags are applied, even though the acronym HFM is used widely throughout the site.** Other acronyms are present on various pages, such as HIV/AIDS, VWD, and HTC without <acronym> tags as well.

Low priority:

- **Content area is generally small; a lot of information appears below the fold.** This is especially true of pages that have section navigation on the right side of the page. One possible solution would be to move this navigation to the left column.

- **Half-circle swirl image is probably not needed, and uses space that could put more content above the fold.**

- **Many issues with layout and spacing exist.** For example, within-page navigation, breadcrumbs and separator bars are spaced oddly on the pages that have them. Often in the content area, graphics and text are spaced too close together, necessitating more white space.

- **The ‘About Bleeding Disorders’ page contains duplicate navigation.** There is very little actual content on this page. The content area contains the same links found in the section navigation, which may be confusing.

Link Labeling

The link label in this case is the word or words that are linked. These words can be in graphical form or HTML text that is linked.

Practices to Continue

- **Most link labels are descriptive.**

Suggested Changes

High Priority:

- **The link label and title (in the <title> tag) of the 'Map to HRM' page are not accurate.** This page contains *directions* to HFM. The page does not have a heading tag, but the phrase 'Directions to HFM' is marked up with the tag and appears to be the name of the page. This would be more appropriate for the page's <title> and link label.

Low priority:

- **Link labels on the 'Videos' page could be more specific.** While the images for each video clip have 'alt' text, the links associated with each one read 'View the video'. Providing more link labels more specific to each video would make navigation through the videos more clear.

Data Tables

Tables that contain data information that is relevant to the page or topic (does not include tables used for layout).

Suggested Changes

High Priority:

- **No summaries are provided for data tables.** Data table summaries enable users to understand the context in which the table is presented, and to anticipate the type of data in the table. This is especially important for data tables experienced using a screen reader.

- **No table accessibility has been used for data tables.** No table header, no association w/ headers & content, etc.

- **No option to skip data tables exists.**

Multimedia

Video and audio content used on the website.

Suggested Changes

High Priority:

- **To play the videos, the site requires users to download the latest Flash player.** Requiring downloads to experience site content can affect all users, but especially those with disabilities.

- **Although there are links for the various videos, they appear to be missing and will not play, even with the Flash player download.** This may be very frustrating for users who might believe that there is content that they are unable to access.

- **If the videos were to play, they do not appear to be transcripted or closed-captioned.** Both transcription and close-captioning open video content to users who choose to experience the site without viewing or hearing the audio for the video.

- **Clicking 'Video' link from the 'Camping Programs' page takes users to another section of the website.** When this happens, users lose the Camping Programs section navigation, which may create navigation problems and confusion.

Low priority:

- **Link labels on the 'Videos' page could be more specific.** While the images for each video clip have 'alt' text, the links associated with each one read 'View the video'. Providing more link labels more specific to each video would make navigation through the videos more clear.

Forms

Areas the website that require user input, through drop-down menus, radio buttons, text input areas and other elements.

Practices to Continue

- **Forms are grouped with the appropriate fieldsets and legends.** This breaks up the forms to make them easier to comprehend.

Suggested Changes

High Priority:

- **Many form elements, such as drop-down menus and text input boxes do not have <label> tags associated with them.** Having a label for each form element will help users who have motor disabilities who may not have precise control of the use of a mouse.

- **The difference between each fieldset in the 'Donate Form' is not immediately clear.** Three types of donations exist on the page: 'Membership', 'Donations', and 'Other'. The 'Other' category should be eliminated. Some explanatory text should inform users about the difference between 'Membership' and 'Donations'. This text may either be on the same page, or on a landing page that would direct users to the specific desired form.

Medium priority:

- **In order to tab through the forms, the user must first tab through the navigation.** Form elements should be given a tab index attribute to allow users to access them first, without having to tab through the navigation.

- **With JavaScript disabled, the 'clear membership options' and the 'clear donation options' functionality do not work in the 'Donate' form.** Efforts should so that the users do not make the wrong selection.

- **Each time a new date, month or year is selected with a drop-down menu, the entire 'Events Calendar' page refreshes.** This will become very frustrating for users with screen readers.