

Early Hearing Detection & Intervention

Website Resource Guide

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Introduction

State Early Hearing Detection and Intervention (EHDI) programs play an important role in ensuring the availability of accurate and user-friendly information pertaining to hearing screening, diagnosis, and early intervention services. Recognizing the importance of user-friendly and informative websites, NCHAM has created this EHDI Website Resource Guide, which is designed to provide information and examples of critical components of a high-quality website that meets the mission of EHDI.

The EHDI Website Resource Guide is written with the intent to strengthen the knowledge base of state EHDI administrators in understanding key elements of effective websites. It also serves to guide EHDI administrators in working with needed partners, particularly to communicate their needs with the people who design, develop, and market their websites. The content was created with the help from a panel of EHDI partners, including those that have been recognized for their websites by receiving the “EHDI website of the year” award. This resource guide is not exhaustive in its coverage of the “ideal website.” Rather, it is a list of guidelines that can help in deciding content for stakeholders and making the information more accessible to everyone.

A critical aspect of this guide is to help EHDI administrators understand the importance of having a standards-compliant website that is accessible for persons with disabilities. Since EHDI programs receive federal funding, all EHDI websites must comply with Section 508 of the U.S. Rehabilitation Act Standards.



Federal agencies are required to make their electronic and information technology (EIT) accessible to people with disabilities. This includes web-based intranet and internet information and applications.

It is vital to be aware of laws and standards which are created for the web to ensure that people who have visual, hearing, motor, or cognitive disabilities are not restricted from access to information. Other critical components in this guide have been identified using the Web Content Accessibility Guidelines (WCAG) developed by the World Wide Web Consortium (W3C), an international community that develops open standards to ensure the long-term growth of the Web through standardization of Web technologies. An accessible website benefits everyone whether they have a disability or not.

There are five sections included in this resource guide. The first three deal with identifying critical components in the areas of Content, Design and Layout, and Accessibility, which can be used to guide improvements. A description of each critical component is given, followed by examples that best reflect the ideas presented, and some resources that can be used to help improve the site. The fourth section is a checklist of all critical components that can be used as a tool to assist in analyzing your EHDI website. The final section Management and Marketing, is a compilation of important considerations that can effect the success of your state’s EHDI website.

Introduction

Website Resource Guide Sections

Content

- Overview of State's EHDI Program
- Information for various stakeholders
- Information about the EHDI process

Design & Layout

- Organization
- Style of presentation
- Navigation
- Visual Media
- Browser Compatibility

Accessibility

- Keyboard Accessible
- Links
- Health Literacy

Key Components Checklist

Marketing & Management

- Website Marketing
- Continuous Quality Improvement (CQI)

Glossary

- Web Basic Terms
- Technical Terms

*Updated information
can be found at
[www.infanthearing.org/
webguide](http://www.infanthearing.org/webguide)
along with examples
from state
EHDI websites*

Updated information can be found at www.infanthearing.org/webguide along with examples from state EHDI websites. These examples are used to display different aspects about the criteria and no single site is being suggested as the best or correct way to present information or how to design an EHDI website.

NCHAM recognizes that EHDI state administrators have their own needs and constraints that must be considered prior to making adjustments to their website. Therefore, it is important to emphasize that this guide serves as a support, offering suggestions that we hope can be applied in a pragmatic manner.

Content

Content is an important aspect of any website, whether you are starting a new site or updating a current site. Target audiences for EHDI sites include families, healthcare providers, and interventionists. It is important that information addresses the following aspects of EHDI: screening, diagnosis, early intervention (including the importance of early language development and audiological management), family support, and surveillance. Periodically evaluating audiences and content helps to determine what content is beneficial. All content should have the following characteristics:

- **Easy to Find:** Important information is accessible within three clicks from main page
- **No spelling or grammatical errors:** Content has been reviewed by several partners
- **Up to date and current:** Information is regularly checked to ensure it reflects current information and technology
- **Clear and easy to understand:** Reading level is appropriate and free of unnecessary jargon while providing desired information
- **Organized:** The most important information should appear first on the page, with the option to get more detail if needed
- **Validated:** Key stakeholders have reviewed and verified content. Stakeholders include subject matter experts such as representatives from the state chapter office of the American Academy of Pediatrics, the state Academy of Audiology, Early Intervention staff, or schools for the deaf and hard of hearing

Critical Content of an EHDI website falls into the following main areas:

1. Overview of State's EHDI program
2. Information for various stakeholders
 - ◇ Families
 - ◇ Health Care Providers
 - ◇ Interventionist
3. The EHDI process
 - ◇ Screening
 - ◇ Diagnosis
 - ◇ Early Intervention
 - ◇ Audiological Intervention
 - ◇ Family Support
 - ◇ Surveillance

Content Resources

Following these guidelines will give your site a robust amount of content. Other resources you can use to determine appropriate content include:

- Talking with stakeholders in your area to determine their needs
- Using focus groups
- Looking at EHDI websites to get ideas of what other programs are doing

1. Overview of State's EHDI program

EHDI websites are important in creating a relationship with stakeholders and getting information to the people who need it. An overview of the State's EHDI program quickly provides the reader with a sense of how the EHDI program is relevant to them. This is particularly important for people who are researching why newborn hearing screening is necessary and for helping them to identify the next steps in the process. There are many websites about hearing screening on the web, and people need to know they can trust your site. Establish credibility of your organization by providing:

1. A description of your State's EHDI Program which includes:
 - ◇ A mission statement that defines "EHDI" (Early Hearing Detection and Intervention)
 - ◇ A description of "1-3-6 milestones" in association with the EHDI process
2. Information pertaining to the history of EHDI in your state, including legislative history
3. An explanation of why infant hearing screening is important
4. Contact information for your State's EHDI program which should include:
 - ◇ How to contact your state's program coordinator
 - ◇ TTY information
 - ◇ A contact for families who speak a language other than English

Viewer confidence in the site's content is also increased when associations and partners are stated on your website. Include associations or use the logos (with permission) of well known groups such as the American Association of Pediatrics on your site. Also consider prominently stating the purpose of your website so that readers can quickly assess the site's content and determine whether or not it pertains to them.

*Know
your target
audience for
each part of
your website*

2. Information for various stakeholders

EHDI websites are important for a wide array of users—physicians, audiologists, families, and early interventionists. Content should be written and formatted for the specific target audience. Content geared towards professionals can be more technically oriented, while content for families should be written for people with basic literacy skills. If possible, content should be provided in multiple languages to ensure that families whose first language is not English can also benefit from the information. Review demographics in your state to determine which languages are appropriate to include on your site.

Content

Likely information that is relevant for these various stakeholder groups are identified below:

Families

Include relevant information for parents, guardians, and/or caregivers:

1. Importance of having a child's hearing screening completed before 1 month of age
2. What to do if a parent or caregiver doesn't know his/her child's newborn hearing screening results
3. A definition and explanation of terms found in a screening result, such as "pass," "fail," "refer," or "incomplete"
4. What to do if a parent or caregiver has concerns about their child's hearing
5. Importance of continued hearing screenings for a child, throughout their childhood
6. Way to email questions and/or provide links to access resources, pay for services, find or locate parent support groups, learn more about assistive technology
7. Information on where to find a pediatric audiologist
8. Information and resources such as PDF's, brochures, and web content are provided in other languages

Healthcare providers

Include relevant information for hospital workers/midwives, medical homes/primary care doctors, and audiologists/ENTs:

1. The role of providers in conducting a hearing screening and following up on hearing screenings that have been completed
2. The role of providers in reporting screening results to EHDI and reporting procedures
3. How to deliver and explain hearing screening/diagnostic results to families
4. Referral sites for rescreening, diagnostic evaluations, and early intervention, including contact information for these services

Early Intervention Providers

Include relevant information for Part C Programs, Schools for the Deaf, private therapists, and audiologists:

1. The role of EI providers in early screening and diagnostic evaluations (how to partner with Part C)
2. The role of EI providers in reporting results to EHDI (how to do it)
3. The importance of audiological follow-up (how to partner with audiologists)
4. Contact information/links of various agencies and pediatric audiologists in the community for families
5. Information about EI resources for children who are deaf/hard of hearing: family organizations, resource guides to help families learn about communication options, etc.

3. Information about the EHDI process

Screening, diagnosis, intervention, family support, and surveillance information are vital components of the EHDI process. Content needs to be written in clear, simple language because all stakeholders are considered part of the target audience. Essential information should be provided to answer “who, what, where, when, and why” questions.

Key pieces of information that sufficiently describe each process of EHDI:

Screening

1. Explain why screening is important for children
2. Define screening and rescreening
3. Describe when hearing should be screened and rescreened
4. Describe who conducts screenings
5. Provide information on where to obtain a screening

Diagnosis

1. Define diagnostic evaluation
2. Describe when diagnostic evaluation is needed
3. Describe who should conduct diagnostic evaluations
4. Provide information on where to obtain diagnostic evaluation
5. Provide information about financial support for families in need of diagnostic evaluation (insurance, public programs)

Early intervention

1. Define early intervention
2. Identify who to contact (i.e. early intervention services)
3. Provide information on a variety of communication options

Audiological Intervention

1. Describe hearing devices (hearing aids, cochlear implants)
2. Importance of consistent, routine monitoring of hearing devices

Family Support

1. Define family support
2. Discuss why it's important
3. Provide information on family support organizations and other resources

Surveillance

1. Discuss the role of the state EHDI program in surveillance to ensure children are screened
2. Discuss the role of health care providers in reporting to the EHDI program

Design & Layout

The design and layout of a site is important for marketing, usability, and accessibility. A modern, user-friendly design encourages people to use and return to your site. Clear navigation assists users in locating specific webpages, while the organization of content allows audiences to scan a page and quickly find what they're searching for. Images and graphics enhance the visual appeal of a website and can convey information to viewers. It is important to consider how people view your web pages, which web browsers are being used, and if information is accessible through screen readers.

Critical Design & Layout components of an EHDI website fall into the following main areas:

1. **Organized information**
 - ◇ Layout
 - ◇ Structure
2. **Style of presentation**
3. **Navigation**
4. **Visual Media**
 - ◇ Images/Graphics
 - ◇ Video/Audio
5. **Browser Compatibility**

EHDI Administrators should work with website technicians to implement changes needed in the Design and Layout of their website. Criteria for website improvement in this section are not limited to this resource guide. The selected critical components are based on what EHDI administrators can easily evaluate. Information in this section involves technical detail that is needed in reviewing the criteria and communicating needed changes with the website technicians.

1. Organization

Layout and structure are critical components to ensure that audiences can quickly find the content they're searching for. Layout deals with the location of information on the webpage, while structure involves the order in which the content is presented.

Layout

The layout of content plays a key role in the design and accessibility of a website. It takes into account the location of the prime space, navigating mechanisms, and content areas. Prime space is where the audience looks first, usually the top left corner of a webpage. This is due to our habit of reading left to right, unless our focus shifts to an area with an element (e.g. image

Design & Layout

or color) that stands out. Usability increases when it is clear how to navigate the website to find needed information. Generally, navigation menus are located around the content area because that is what audiences expect. Layout of the content area should be consistent across all pages. Examples of clean, easy-to-use layouts are provided below.

Visitors to a website access the information either visually or by using a screen reader. Both the visual design (created through the use of style sheets) and the order of information must be considered when organizing content on a webpage.



Documents shall be organized so they are readable without requiring an associated style sheet.

This means that when all styles are removed from the page, the content must remain in its intended order. This is critical for people who use screen readers or who navigate with disabled styles. By using standards-compliant HTML and CSS, information will remain in its intended order, regardless of whether styles are enabled or disabled. Meanwhile, sites that use table layouts for design are generally read from left to right (like spreadsheet cells) and content order can get mixed up.

Tech Notes: Disabling Style Sheets

EHDI administrators can verify that website content is ordered correctly when viewed without styles or read by a screen reader. After styles are disabled read the content like you would a book. This is the structure order that a screen reader will read the information. If a picture is shown the reader will read the alt text associated with the image.

To disable styles of a web page using

- **Firefox** (Win and Mac): Via the menu toolbar, choose: “View” > “Page Style” > “No Style”
- **Safari** (Mac): Via the menu toolbar, choose “Develop” > “Disable Styles”
- **Opera** (Win): Via the menu, choose “Page” > “Style” > “User Mode”
- **Chrome** (Win): Via the gear icon, choose the “CSS” tab > “Disable All Styles”
- **Internet Explorer 8**: Via the menu toolbar, choose “View” > “Style” > “No Style”
- **Internet Explorer 7**: via the IE Developer Toolbar menu: Disable > All CSS
- **Internet Explorer 6**: Via the Web Accessibility Toolbar, choose “CSS” > “Disable CSS”
- Option no longer available for Chrome or newer versions of Internet Explorer without addons.

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Structure

Think of the web as an interactive book. You can click on the table of contents (navigation) to go straight to the chapter (section) you want. The question that remains is “How do I find what I am looking for?” There should be a consistent structure for the content whether it is all on one page or across several pages. Having a good structure benefits the organization of information and marketing of the site.

Information appears organized and is easy to find when it is broken up into sections. Labeling each section with appropriate headings increases the visibility of the content, and also boosts the site’s ranking with popular search engines like Google. Headings are stylized text on a webpage and are used for page titles and for identifying sections and subsections. Stakeholders use headings to quickly scan content and find specific information. Persons who use screen readers or navigate by keyboard are able to search content by skipping through the headings.

Tech Notes: Using True Headings

It is vital to use true headings, defined as h1 to h6 tags in HTML. Each page should include an h1 tag that is used for the most important information (usually page titles). h2 tags are usually used for major section headings, while h3 tags are used for subsections of the h2, and so on.

*Do not style paragraph text to give the visual appearance of a true heading (e.g. by increasing the paragraph’s font size or making it bold so that it looks like a heading). Screen readers cannot differentiate these visually-styled “headings” from regular paragraph text.

*Many content management systems (CMS) allow users to select a heading style, which is coded with the correct tags.

Another important aspect to consider is how someone may go about finding your EHDI website if they don’t have the exact web address. You want your EHDI site to be ranked high when keywords such as your state, “EHDI,” and “newborn hearing screening” are used in search engines such as Google. Words in true headings and page content are considered in the algorithm that determines the site’s search ranking. The higher your site’s ranking, the easier your site is to find.

2. Style of presentation

A site that is well maintained, organized, and user friendly will encourage audiences to continue to use and rely on your information. When the page design, layout of content, colors, navigation, font of text, and feel for each page is consistent, viewers can focus on the content. To emphasize the identity of a State’s EHDI program, select a style that can be used for other products as well - newsletters, letterhead, other presentations, etc. This brand identity helps users to recognize an organization.

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Color is a key aspect to consider when choosing a style of presentation. Color is important to the design of web content, enhancing its aesthetic appeal, usability, and accessibility. When content uses or relies on color alone, users who have difficulty perceiving color will have difficult time gathering information. There needs to be sufficient color contrast between text and background. Use light colored text on a dark colored background and vice versa for dark text.



Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.

This standard means that information conveyed by color differences is also available in the text or is provided with other visual cues. For example, someone may not find useful “click red box for more info” if they are color blind.

It is important that the content has a consistent “style” for each of its text elements--headings, body text, links, captioning, etc. Each style on the website should be used for a specific purpose. Heading styles are only used for introducing topics and not for body text. Fonts set the tone for a site, from serious to playful. The larger the text size the more visible the content, but text that is too large can appear unattractive and unprofessional. The format and consistency of text styles emphasizes the organization of a website.

3. Navigation

Navigation mechanisms—typically the main links provided on your website--are vital components as they allow users to quickly access information on other pages and can be used to organize content. The types of navigation methods used will vary depending on the amount of content on the website. Generally there should be at least two ways available to access pages.

Listed are some common navigation mechanisms:

- **Universal navigation bars** (primary navigation) are consistent throughout the entire website and are provided on every page. These are typically the links that appear at the top of the page or in a sidebar.
- **Local navigation bars** (secondary navigation) are a list of links for pages within subsections of the website.
- **Breadcrumb trails** are used to list pages that you have visited; these help you return to pages that you’ve already been to.
- **Site maps** are one page list that organizes all page links on your site
- **Table of Contents** are used for a quick reference and jump to different sections on a single page.
- **Search function** is used to locate pages within a site by using keywords.

Efficiency of users searching a website depends on the sites navigation

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Navigation methods should be consistent and located at the same spot on every page. This helps an audience's efficiency in searching the site. If the EHDI website is on a larger site, e.g., within the health department's site, it is beneficial to have a link available to return users to the main page of the EHDI site. This allows users to find the beginning of your section if they become lost by clicking on too many links.

Navigation links can become overwhelming and time consuming for audiences that use screen readers. The reader reads all information – including links and content—linearly instead of scanning the site visually to find the content. Also, it can be tedious for keyboard users to tab through all the navigation links to get to the main content. Every time a screen-reader user visits a new page, the screen reader begins reading from the top of the page down, and all the navigation links are repeated.



A method shall be provided that permits users to skip repetitive navigation links.

Providing a link at the top of a page that allows users to skip navigation links and go straight to the main content speeds up the reading process for screen reader and keyboard users. Many websites hide this link from the visual design of a page, but the link can be seen when styles are disabled. The link should appear near the top of the page and usually reads “skip navigation,” “go to main content,” or something similar.

4. Visual Media

Many concepts are communicated more effectively with the addition of illustrations, graphics, videos, and photos. They can be used to convey important information or provide visual enhancement on a site. Choose visual media that shows racial and cultural diversity of children, families, and healthcare providers to reflect an inclusive EHDI program. There are many resources that can be used to obtain visual media. You might consider hiring professionals to take photos or design graphics, or finding your own media on the web. You should also ensure that you make all visual and audio media accessible to everyone.

Images & Graphics

The largest accessibility issue on the web is the lack of alternative text for graphics and images, which allow assistive devices to identify what the image is. Whether you are using an image for aesthetics, showing a process, or as a link to other areas of the site, it is critical to make the image accessible.



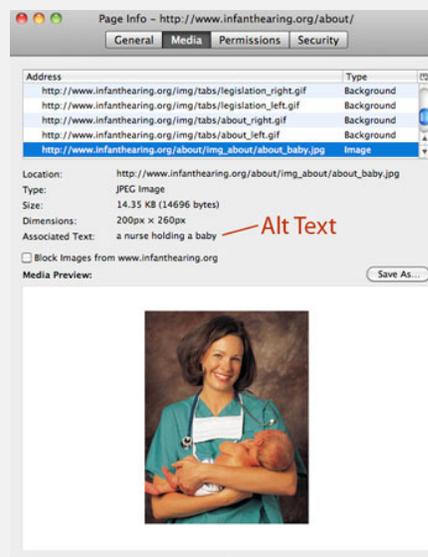
A text equivalent for every non-text element shall be provided (e.g., via “alt”, “longdesc”, or in element content).

Without alternative text, the meaning of an image cannot be ascertained by people who use screen readers or have other disabilities. Alt text should communicate the purpose of the graphic and not just its appearance. It is important to note that screen readers cannot read text that is part of an image. If the text is information that is needed by the viewer is must be available in the alt text.

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Tech Notes: Checking “alt text”

All images/ graphics should be tested for alternative text. Depending on your computer and its setting the following methods may vary. Using the Firefox browser right click an image and select “view image info.” If there is alternative text available it will be next to the associated text marker. Macs and Internet Explorer show the alternative text when you hover over the image with your mouse. If there is no alternative text appropriate text should be provided. Many Content Management Systems (CMS) have the option to add alt text in the menu where you add or format your images. If the website is hand coded, contact the webmaster to implement the alt-text code in the image tag.



Methods to verify alternative text will vary based on browser and computer settings. Some browsers will display the alt text (if available) when the mouse is hovering over the image. Using the Firefox browser: Select an image by right clicking on the image → select view Image Info from menu → if the image has alt text, it is described under associated text.

Finding Appropriate Images and Graphics

Finding appropriate images and graphics can be a challenge. To obtain quality photos, images, and graphics for use on your website you can:

- Hire a photographer to take pictures of the EHDI process. Don't forget to obtain permission from individuals before using their pictures.
- Purchase stock media (photos, videos, illustrations, etc.,) that is available on the web. One of the larger providers of stock images is iStockPhoto.
- Talk with your partners to find out if they have any visual media that could be used.
- To create an individual style for the State's EHDI program, hire a designer to build a look/style to represent your organization.

Design & Layout

Videos & Audio

Video or audio files are creative ways to explain processes, difficult concepts, or show action. Whether you use video or audio files, they should support EHDI's mission and be accessible to all users.



Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.

This standard means that captions (equivalent text for the spoken word) appear at the same time the audio is available for any video or audio recording. It is intended primarily for those who cannot hear the audio, but it has also been found to help those that can hear audio content and those who are not fluent in the language in which the audio is presented. When possible provide the audio or captions in multiple languages. For people with a visual disability, audio or text descriptions provide additional information about what is visible on the screen.

Tech Notes: Video Captioning

When you receive videos for your site, ask for a version with captioning and descriptive text files. Many companies can provide both. You can also add synchronized captions yourself using one of the many captioning tools available.

WebAIM, experienced in accessible web design, provides some useful articles on how to add captions to media files.

- Captioning Software - webaim.org/techniques/captions/software
- Captioning Quicktime - webaim.org/techniques/captions/quicktime
- Captioning RealPlayer - webaim.org/techniques/captions/real
- Captioning Windows Media - webaim.org/techniques/captions/windows
- Real-time Captioning - webaim.org/techniques/captions

5. Browser Compatibility

EHDI administrators and web developers should be familiar with different web browsers. Using a statistics tracking program such as Google Analytics allows you to determine what browsers people use to view your site. Discuss implementing an analytics program with your sites web developer so you can view the statistical information. W3Schools offers month to month statistics and trends information for a variety of browsers.

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The most commonly used web browsers include:

- Internet Explorer 7, 8, 9, 10: the default browser for Windows users
- Firefox: an Open-source browser available for Mac and Windows
- Safari: the default browser for Mac users, but also available for Windows
- Google Chrome: an open-source browser available for Mac and Windows
- Opera: a web-standard-compliant browser and used for many mobile platforms (i.e. smart phones and tablets)

Tech Notes: Browser Compatibility

Each browser has its own set of rules for displaying websites. It is critical to verify that your web pages function as expected in different browsers. This is done by opening the website in a different browser and verifying that all the functions work. Sometimes layout can break or videos won't function. Web browsers do not always keep up with new web development technologies.

With emerging mobile technology, viewers are using their smart phones, tablets, and other mobile devices to view websites. It is important to discuss strategies for creating your State's EHDI webpage to be viewed by mobile devices with your web technician. There are many considerations beyond the scope of this guide that should be considered.

Download the most common web browsers:

- **Internet Explorer** - windows.microsoft.com/en-US/internet-explorer/products/ie/home
- **Firefox** - www.mozilla.com/en-US/firefox/new
- **Safari** - www.apple.com/safari
- **Google Chrome** - www.google.com/chrome
- **Opera** - www.opera.com

Tools to check browser compatibility (NCHAM does not endorse any of these tools).

- **Adobe Browser Lab** - browserlab.adobe.com
- **Browsershots** - browsershots.org
- **IETester** - www.my-debugbar.com/wiki/IETester/HomePage
- **Mobile Device Emulator** - emulator.mtld.mobi/emulator

Accessibility

This section is dedicated to key elements that do not fall under content or design but are still critical for an EHDI website to be functional and accessible.

1. Keyboard Accessibility
2. Links
3. Health Literacy

Accessibility Resources

Resources to find more information about Website accessibility

- W3C - Web Accessibility Initiative (WAI) - www.w3.org/WAI
- WebAIM - webaim.org
- Check local Universities for Centers for People with Disabilities

1. Keyboard Accessibility

The mouse is the most common way for people without disabilities to interact with a website. Move the mouse, point and click to select a link or scroll down on a page. People with disabilities rely on assistive technology devices to interact with the web. The use of a keyboard as an input and control device is universally supported and operable by many people with disabilities. When all functionality of content can be operated via a keyboard or keyboard interface, the site can be accessed by those with no vision, motor disabilities, and those who must use alternate keyboards or input devices that act as keyboard emulators (such as speech input software or on screen keyboards).

“Most assistive technologies for people with motor disabilities either work through the keyboard or emulate the functionality of the keyboard.”
—Webaim

Referenced Articles:

- Ensuring keyboard control for all functionality
www.w3.org/TR/2010/NOTE-WCAG20-TECHS-20101014/G202
- Motor Disabilities Assistive Technologies
webaim.org/articles/motor/assistive

Tech Notes: Keyboard Accessibility

To determine if a webpage is keyboard accessible, first determine what functionality is available to users on the page. It is important to consider functions performed using both the mouse and the keyboard together. Examples of functionality include the use of physical controls such as links, menus, buttons, check boxes, radio buttons, and form fields, as well as the use of features like drag and drop, selecting text, resizing regions, or opening context menus.

Accessibility

Tech Notes: continued

Once the functionality of the content has been determined, the author verifies that each of the functions identified can be performed using only the keyboard. Most browsers use the following conditions to navigate a website:

- TAB key to navigate forward through links (Opera browser use A)
- SHIFT + TAB to navigate backward through links (Opera browser use Q)
- ENTER key to follow links.
- When inside forms, the arrow keys will allow you to select items within lists or radio buttons.

Pay close attention to any interactive features, such as dynamic menus, drag-and-drop functions, or mouse rollover events. If the mouse rollovers are merely decorative (e.g. they create a “glow” effect), you needn’t take any extra steps. However, if the mouse rollovers reveal additional important information, ensure that this information can be accessed by the keyboard alone.

2. Links

Links that make sense out of context and function properly are critical for navigating and interacting with a website. Links can appear as text or images to open other web pages/sites, redirect viewers to another part of the page, or open a new application for a media file. These contextual link descriptions allow users to distinguish links and help them to understand where the link goes before they click it.

Use the following guidelines to determine when a link makes sense out of context:

- **Linked Text:** uses descriptive text that indicates the link’s purpose
- **Linked Image:** uses ‘alt text’ to indicate the link’s purpose
- **Linked media file:** linked text must indicate the media file type
- **Link with media icon:** uses descriptive text and the icon provides additional information about the target (the document type, e.g. PDF, DOC, WMV, etc.)

Links do not make sense when non-informative link phrases such as: “click here,” “read more,” or “click for more detail” are used.

Referenced Articles:

- **Webaim: Links and Hypertext**
webaim.org/techniques/hypertext/link_text

3. Health Literacy

It is critical that all audiences understand information concerning hearing loss and newborn hearing screening. Parents, healthcare providers, interventionist, and EHDI want infants and toddlers with hearing loss to be identified as early as possible and provided with timely and appropriate audiological, educational, and medical intervention. To improve health literacy of EHDI website content it is important to be aware of target audiences. Things that affect the users' comprehension of material is not limited to but includes culture, socioeconomic status, education level, and disabilities.

“Health literacy is defined as the degree to which individuals have the capacity to obtain, process and understand basic health information needed to make appropriate health decisions and services needed to prevent or treat illness.”

—Health Resources and Services Administration (HRSA)

Reading level of content is used to determine if the general audience should be able to understand the material provided on your website. Ways to improve the reading level on a web page is to simplify language, use illustrations, graphics, bullet points, tables, ect. At times it may be necessary to include additional resources or provide content that is written in another language to provide the same information to users.

To quantify reading levels of web content you can use a readability indicator tool such as:

- Flesch Kincaid Reading Ease
- Flesch Kincaid Grade Level
- Gunning Fog Score
- Coleman Liau Index
- Automated Readability Index (ARI)

Since EHDI programs have a broad target audience it is suggested that content for families should be written for people with a lower secondary education (7-9 years of school). Information for healthcare providers can be written for people with a more advance education level (more than 12 years of school). Information about the EHDI process applies to all audiences and should be developed for people with a lower education level and have more detail available for people with a higher education level.

Accessibility

Health Literacy Resources

Learn more about health literacy and reading levels of web content: (*NCHAM does not endorse any of these sites)

Articles

- **About Health Literacy**
www.hrsa.gov/publichealth/healthliteracy/healthlitabout
- **A Guide to Writing and Designing Easy-to-Use Health Web Sites**
www.health.gov/healthliteracyonline
- **W3C, Reading Level- includes examples and other resources**
www.w3.org/TR/UNDERSTANDING-WCAG20/meaning-supplements
- **Lower-Literacy Users: Writing for a Broad Consumer Audience**
<http://www.useit.com/alertbox/20050314>

Tools

- **Readability Test Tool**
<http://www.read-able.com>

Key Components

Use this Checklist to guide your efforts to ensure a high-quality EHDI website. Place a “check” next to each of the elements below that is currently represented on your website. Use the guide to help you identify ways to address missing elements.



Content

Overview of State EHDI Program

- ___ Describe State’s EHDI Program
 - Mission statement that defines “EHDI” (Early Hearing Detection Intervention)
 - Describe “1-3-6 milestones” in association with the EHDI process
- ___ Provide information pertaining to the history of EHDI in your state, including legislative history
- ___ Explain the importance of infant hearing screening
- ___ Include contact information for your State’s EHDI program
 - How to contact your State’s program coordinator, address, phone numbers, e-mail
 - TTY information
 - Contact for families who speak a language other than English

Information for various stakeholders

Families:

- Include relevant information for parents, guardians, and/or caregivers:
- ___ Explain the importance of having a child’s hearing screening completed before 1 month of age
 - ___ Describe what to do if a parent or caregiver doesn’t know their child’s newborn hearing screening results
 - ___ Define and explain terms found in a screening result, such as “pass,” “fail,” “refer,” or “incomplete”
 - ___ Describe what to do if a parent or caregiver has concerns about their child’s hearing
 - ___ Explain the importance of continued hearing screenings for a child, throughout their childhood

Key Components

- ___ Provide a way to email questions and provide links to access resources, pay for services, find or locate parent support groups, learn more about assistive technology
- ___ Provide information on where to find a pediatric audiologist
- ___ Provide information and resources in other languages such as PDF's, brochures, and web content

Healthcare Providers:

Include relevant information for hospital workers/midwives, medical homes/primary care doctors, and audiologists/ENTs:

- ___ Describe the provider's role in conducting a hearing screening and following up on hearing screenings that have been completed
- ___ Describe how the provider reports screening results to EHDI and other reporting procedures
- ___ Explain how to deliver and explain hearing screening/diagnostic results to families
- ___ Provide referral sites for rescreening, diagnostic evaluations, and early intervention, including contact information for these services

Early Intervention (EI) Providers:

Include relevant information for Part C programs, Schools for the Deaf, private therapists, and audiologists:

- ___ Describe the EI provider's role in screening and diagnostic evaluations
- ___ Describe how EI providers report results to EHDI
- ___ Explain the importance of an audiological follow-up
- ___ Provide contact information/links of various agencies and pediatric audiologists in the community
- ___ Provide information about EI resources for children who are deaf/hard of hearing: family organizations, resource guides to help families learn about communication options, etc.

Information about the EHDI process

Screening

- ___ Explain why screening is important for children
- ___ Define screening and rescreening
- ___ Describe when hearing should be screened and rescreened
- ___ Describe who conducts screenings
- ___ Provide information on where to obtain a screening

Key Components

Diagnosis

- ___ Define diagnostic evaluation
- ___ Describe when diagnostic evaluation is needed
- ___ Describe who should conduct diagnostic evaluations
- ___ Provide information on where to obtain diagnostic evaluation
- ___ Provide information about financial support for families in need of diagnostic evaluation (insurance, public programs)

Early Intervention

- ___ Define early intervention
- ___ Identify who to contact (i.e. early intervention services)
- ___ Provide information on a variety of communication options

Audiological Intervention

- ___ Describe hearing devices (hearing aids, cochlear implants)
- ___ Explain the importance of consistent, routine monitoring of hearing devices

Family Support

- ___ Define family support
- ___ Discuss why family support is important
- ___ Provide information on family support organizations and other resources

Surveillance

- ___ Discuss the role of the state EHDI program in surveillance of health care
- ___ Discuss the role of providers in reporting to the EHDI program

Design & Layout

Organization

- ___  Allow any webpage to be read without the use of style sheets and still be organized
- ___ Include headings that are consistent and can be identified by screen readers
- ___ Provide important information first with an option to learn more

Key Components

Style of Presentation

- ___ Follow a consistent page design
- ___  Have sufficient color contrast between the background and text
- ___ Provide consistency for all text elements

Navigation

- ___ Provide several methods to locate a web page
- ___  Provide method that permits users to skip repetitive navigation links

Visual Media

- ___ Reflect cultural diversity for visual content
- ___  Use “ALT Text” for all images/graphics
- ___  Provide captioning and descriptive text transcripts for audio and video

Browser Compatibility

- ___ Function in multiple browsers

Accessibility

Keyboard Accessible

- ___  Allow users to navigate through the website using only the keyboard

Links

- ___  Provide links that make sense out of context
- ___ Use links that work (no broken links)

Health Literacy

- ___ Provide content with the appropriate reading level

Your EHDI program website's primary purpose is to support your program's mission and provide access to information about the EHDI process. Collaborating with your web development team, stakeholders, and knowing your states policies and practices before implementing or modifying an EHDI website is vital to its success. An effective website necessitates a marketing plan to ensure that it is reaching its target audience. As viewer expectations and information changes, your site needs to change to meet these needs. This section provides recommendations on marketing and managing an effective, functioning website over time.

Key marketing and management considerations include:

1. **Website Marketing**
 - ◇ Brand identity
 - ◇ Word- of-Mouth Promotion
 - ◇ Promotional Materials
 - ◇ Social Networking
 - ◇ Search Engine Optimization
2. **Continuous Quality Improvement (CQI)**
 - ◇ Website Improvement Strategy
 - ◇ Maintenance

1. Website Marketing

Marketing your state's EHDI website is an effective way of telling people about your program and how your services can meet their needs. By having quality content and an established identity for your organization, people will remember and use your State's EHDI website as a reliable source of information. Many marketing strategies work together increasing the effectiveness of online and off line promotion of your state's EHDI program and website. Direct promoting of an EHDI website is a collaborative effort of EDHI administrators, staff, and stakeholders. Traditional methods include talking to people and passing out print material about your website. Technology has allowed organizations to expand their marketing techniques to communicate with larger audiences in a cost effective manner, using social networking sites and electronic media. The visibility of your state's EHDI website is determined by how easily it's found in a search and by its web address (URL).

Brand Identity

Brand identity communicates your organization's values, mission, and unique personality by evoking a response from audiences. In simpler terms it reflects an organization's reputation and creates a consistency for everything it does. Establish Brand Identity guidelines that your

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organization will follow to increase the effectiveness of your program. Components that require consistency when creating a brand identity for your State's EHDI program include:

- **Brand:** An idea that is portrayed when people think of early hearing detection and intervention in your state
 - ◇ Defines the state EHDI program's personality
 - ◇ States the program's defining attributes or characteristics
 - ◇ Spells out what your organization stands for
- **Writing style:** Sets the tone for the audience's perception of your organization
 - ◇ Defines written and verbal standards used for communicating with people
 - ◇ Defines health literacy writing styles for targeted audiences
 - ◇ Determines how content is organized
- **Visual Identity:** Is the organization's visual presence
 - ◇ Establishes guidelines for a consistent look for print and electronic materials
 - ◇ Describes how elements such as color (color schemes), fonts, and logos should be used



Figure 4.1a



Figure 4.1b

If your site is hosted within your state health department's website consider applying some of their branding for your brand. An example is California's NHSP program's logo (fig 4.1a) uses a similar heart shape and the same blue color as the Department of Health Care Services logo (fig 4.1b) in California. Other EHDI programs that are hosted separate from the state, like Pennsylvania, have created their own visual style for their website that crosses over into their documents. Collaborate with stakeholders and people involved within your program to come up with guidelines that benefit your organization.

Brands Identity Example

The Red Cross has a well-known non-profit brand identity. When people hear or see the Red Cross logo, they think of the organization and what it stands for - an emergency response organization that aims to prevent and relieve suffering in a variety of situations. Over the years people have come to trust them.

The following examples of brand identity guidelines are provided to give EHDI administrators ideas on creating their own guidelines.

- Oregon State University Brand Identity Guidelines
www.oregonstate.edu/ua/brand
- Boy Scouts of America Brand Identity Guide
www.scouting.org/scoutsource/Marketing/Brand/BrandGuide

Word of Mouth Promoting

Stakeholders are the most efficient (positive or negative) promoters for an organization. Word-of-mouth promoting is virtually free, spreads quickly, and can make a major impact on people's decisions about whether or not to use your organization's resources.

Types of word-of-mouth communication include:

- **Personal:** most effective method, personal communication occurs between individuals or via a presenter to a group of people.
 - ◇ During face-to-face conversations the audience is influenced by words, voice tone, and body language.
 - ◇ During telephone conversations, audiences can pick up tonal cues from the sender.
- **Digital:** successful at traveling quickly over long distances and can involve conversations or one-way electronic communications.
 - ◇ Multimedia -based communication influence people via images, audio, and text based dialogue. Examples include websites, blogs, Facebook, email, and YouTube.
 - ◇ Text -only messages include Twitter, text only emails, RSS feeds, and instant messaging.
- **Viral:** success comes from massive exposure.
 - ◇ Impressive video footage or something 'chat worthy' that gets passed through the population via personal email or a similar tool.

References

- n.p., "Word of mouth, social media and viral advertising," Marketing-Made-Simple.com, n.d. Web. 10 Nov 2011.

Pennsylvania Word of mouth campaign

After the PA EHDI website was made live, key stakeholder representatives who participated in development of the website helped to spread the word. For example the PA Advisory Committee Chair, who is also a past President of the PA Academy of Audiology, presented on the state EHDI program at a state-wide meeting of the PA Academy of Audiology. His presentation featured the website and included comments on how it could be a valuable resource for PA audiologists. Also, early intervention stakeholders who attend PA Advisory Committee meetings and who contributed to the website design also conduct yearly state-wide meetings of early intervention providers. These individuals now start the meetings with a brief update on the state EHDI program and always mention the EI information available on the PA EHDI website.

Example provided by Arthur A. Florio PA EHDI administrator.

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Promotional Materials

Promotional materials let people know about your website and organization. Promoting can be done through print materials or electronically in both a direct and non-direct way. Create promotional pieces by adding the web address of your State's EHDI website to materials you already have. Items sent to stakeholders and policy makers include letterheads, business cards, stationery, brochures, postcards, pamphlets, and literature. Adding a "tag line" with the EHDI web address to your email signature costs nothing and can be sent out hundreds of times a day.

Promotional pieces

Use the brand identify concept to create stronger products to promote your State's EHDI website and program. These products can be mailed, sent electronically, handed out at conferences, or downloaded from your site.

- **Newsletters** are the most common item used to keep stakeholders and the public informed about the happenings within an organization.
- **Rack Card** is an advertising tool. They are typically 4 by 9 inches in size and are designed to get people's attention. They can be included as an insert with mailings.

www.paeearlyhearing.org

Vital information for:

- Families of children with hearing loss
- Primary care physicians
- Audiologists
- Birth hospitals
- Midwives
- Educators

www.paeearlyhearing.org

Visit our website!

It's packed with information on early hearing and speech in children birth to 3 years of age

- Hearing screening
- Hearing loss diagnosis
- Early Intervention
- Find a pediatric audiologist in your area
- National, state and local resources
- Parent support

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™
Pennsylvania Chapter Funded in part by the Pennsylvania Department of Health

www.paeearlyhearing.org

Visit our web site!

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™
Pennsylvania Chapter Funded in part by the Pennsylvania Department of Health

Social Networking

Social networking is a form of communication that builds awareness of a state's EHDI program through dynamic web technologies. The key to success in online marketing through social networks is having consistent, meaningful posts, and interacting with the participants. Relationships are developed between audiences and your organization through the sharing of knowledge. Take time to review your state EHDI program's marketing strategies to determine the best approach for social networking. Research what types of tools and social communities people use to find information related to your program's goals.

Social networking sites encompass the principles of blogging, forums, and sharing of social media. Participants can create profile pages and promote themselves and their organization through links and by building a fan base. Some organizations provide these tools within their own sites. Whether you go to social networking sites or have social tools on your site, a State EHDI program can connect with other individuals or groups that have similar interests or share ideas and experiences.

Another way for audiences to know what is going on in your program is by providing an RSS feed on your website people can subscribe to. RSS feeds are a simple way for state EHDI programs to send out website content updates, news articles or other information that is important to audiences. No promoting is necessary other than having a link available that people can use to sign up to receive these updates.

Social Networking Sites*

There are many social networking communities available online that can be used to promote a State's EHDI website and reach out to the community.

- Facebook - www.facebook.com
- Google Plus - plus.google.com
- Twitter - twitter.com
- Live Journal - www.livejournal.com
- LinkedIn - www.linkedin.com
- Tumblr - www.tumblr.com
- look for “niche” communities in the areas of: public health, Audiology, infant hearing, Intervention for children

Social Media Sites*

- **Video**
 - ◇ Youtube - www.youtube.com
- **Photo**
 - ◇ Flickr - www.flickr.com
- **News**
 - ◇ Digg - www.digg.com
- **Audio**
 - ◇ podcasts
- **Wikis**
 - ◇ Wiki - www.wiki.com

*None of these sites are endorsed by NCHAM, they are provided as examples.

Search Engine Optimization

A crucial step to marketing is making sure people are able to locate your state's EHDI website. Providing direct links to stakeholders ensures that they can type in or click the URL to find the home page of your site. Otherwise, audiences must rely on search engines, such as Google or Bing (database driven companies that store information about other website that users can use to search the World Wide Web) to find your website. Search engines use complex algorithms to determine a site's ranking based off of key words used for the search that are relevant to their site.

“Search engine optimization (SEO) is the process of improving the ranking (visibility) of a website in search engines. The higher (or more frequently) a web site is displayed in a search engine list (like Google), the more visitors it is expected to receive.”

- www.w3schools.com/web/web_search

The intent of this section is to provide information about variables used in search engine algorithms. Work with web developers to determine the most effective and ethical strategies for search engine or web site optimization. Exploiting loopholes - “gaming the system” – can cause your ranking to be significantly demoted or your website banned from Google searches. Best ranking practices entails writing quality content for your targeted audiences on your website and for social networking.

Methods to consider when improving your state's EHDI website ranking include, but are not limited to:

- Having quality content
 - ◇ Update information on a regular basis
 - ◇ Provide content that targeted audiences want
- Using standards compliant HTML coding
 - ◇ Heading tags/titles: Key words used in heading tags count for more in certain algorithms
 - ◇ Page structure: Words near the top of a page could have a higher ranking value
 - ◇ Meta Tags: Include good descriptions for each page
 - ◇ Alt text: Use Appropriate “alt text” for images
- Submitting XML site maps to common search engines.
 - ◇ Google - www.google.com
 - ◇ Yahoo - search.yahoo.com
 - ◇ Bing - www.bing.com
- Linking to and from your website
 - ◇ Use “partner” sites to distribute your EHDI website link because of their potential value in directing appropriate users to your site.

2. Continuous Quality Improvement

Managing your state EHDI program's presence on the Internet involves collaborating with key stakeholders, partners, and your web development team to ensure the website and its content are of high quality. Working together, you can create a site that meets the needs of families, healthcare providers, interventionists, and the public to achieve the program's mission. Ensure that your website is achieving its purpose by using a continuous process of monitoring and revisions when needed.

Website Improvement Strategy

Resources and tools are available everywhere for quality improvement processes. This section provides a strategy that EHDI administrators can use as a guide for their website improvement efforts.



Start by analyzing your state EHDI program's website to find a need for change or improvement. This is found by comparing the desired outcomes or what your program wants to achieve with its website and what your state's EHDI website currently accomplishes. The gap where the current state of the website doesn't meet its desired goals is the element that should be improved. The EHDI Website Resource Guide provides a list of key components in the areas of content, design & layout, and accessibility as a guide for EHDI administrators in this process. Collaboration with key stakeholders, EHDI staff, and using tools such as website surveys can assist in identifying gaps as well.

It is important to determine the cause of the gap before making a plan of action. Otherwise the selected improvement method may not be the best solution to attain the desired results. Be aware of state or your webhost's guidelines and policies before implementing your plan of action. When your program is ready, implement changes to your website. After some time, evaluate the changes made to verify that the desired outcomes are being met. If the website is not meeting its expectations for the change, revise the plan of action or repeat the CQI process by analyzing new data. Additionally, it is important to collect more in-depth information, be it through a web-based online tool such as an analytics program or by interviewing selected users every two-three years, to quantify the achievements of your state's EHDI website.

Tech Notes: Web Analytic Resources

“Web Analytics is the measurement, collection, analysis and reporting of Internet data for the purposes of understanding and optimizing Web usage.” – WAA

Web analytic programs can:

- Measure webpage traffic
- Calculate the Number of visitors
- Analyze the geolocation of visitors (demographics)
- List what functions are being used
- Much more, depending on program used.

Wikipedia provides a list of web analytics software that is available.

Maintenance

State EHDI websites are a valuable resource for all stakeholders in your organization. Routine maintenance of the website is essential to improve quality, verify that content is up-to-date, and provide the newest information to stakeholders. Improvements can be as simple as changing contact information to fixing a link or as complex as reorganizing the site’s structure to implement accessibility standards. There is no set time on when a website should be updated or redesigned, but continuous monitoring and implementing needed changes helps to extend its life. Analyzing the state’s EHDI website once a year will help in determining if the state’s EHDI program is meeting the needs of its stakeholders and the program’s mission. Smaller updates or changes should be implemented as needed. EHDI administrators should take into account who will be implementing the change, approvals needed (if any), time constraints, and if the improvement will benefit stakeholders and the state’s EHDI program. The goal of maintaining a website is to keep audiences interested in what your program has to offer. Providing quality content that is accessible, up-to-date, and having new information about early hearing detection and intervention services in your state will keep stakeholders coming back to your site.

A website is a dynamic tool used to provide information and resources. It is not meant to be static.

Web Basic Terms

Alternative text also known as “alt text” is an accessibility requirement for all non-textual content on a webpage. It needs to provide the same essential information for users for what it represents. For example if users cannot view an image the alt text will let the user gain the same knowledge they would have by looking at the image.

Bread crumb trail is a list of links that show an organized succession of pages in a website.

Browser is a program that allows users to access the Internet. It reads the HTML and CSS files (coded pages) to display the information graphically. Each browser provides a different experience for users. Some of the most common ones include, but are not limited to: Chrome, Safari, Internet Explore, Firefox, and Opera.

Domain Name is the area of the internet in which a website or page can be found. For example NCHAM’s domain name is infanthearing.org. All webpages for NCHAM related to infant hearing can be found starting with this domain.

Link is an interactive part of a webpage that allows users to go to another webpage or document. Links can be clickable text or images.

Local Navigation are links associated with a specific section of pages within a website. It can also be used to go to a specific section of a webpage.

Mobile Technology is a broad definition encompassing electronic devices that are portable. Well known devices include Smartphones, tablets, laptops, as well as video games, and GPS systems.

Search Engine is any web based program that allows users to search the internet for content (documents, webpages, images, videos, etc.) that contain the specified words. Each search engine has its own algorithm based on different criteria for finding content. Some websites such as YouTube provided their own search engine while others are just academic search engines. Generic popular search engines include: Google, Bing, and Yahoo.

Site Map is a webpage that provides links to all pages of the website. It is generally organize in an outline form. Site maps can be uploaded to search engines for better rankings.

Universal Navigation is on all pages of a website. Includes the same links in the header, footer, or sidebars. They help viewers navigate the webpages to different sections.

URL is the specific web address or link to access a webpage.

Webpage is a single page of content belonging to a single group, topic, organization, or person. Can include and infinite amount of information.

Website is a collection of web pages belonging to a single group, topic, organization, or person under the same domain name. Can contain one page or an infinite amount or pages.

Technical Terms

Blog is a webpage or website that is consistently updated with new posting related to a specific topic, organization, or group accessible to others online. Posts are shown in reverse chronological order. There are many platforms already setup for users or organizations to quickly get started such as Facebook and Wordpress. Some sites allow other to post comments for different posts.

Content Management System (CMS) is a program that is created to help people input content into a template website. There are different levels of complexity for each CMS allowing the user some or no control over the website functionality, layout, structure, etc. Some CMS allow users to input content with little to no experience with programming knowledge.

CSS (Cascading Style Sheets) is a style sheet language used to describe the format and appearance of a webpage. These sheets can be used with any markup language. They are used in conjunction with HTML pages to style a webpage. One style sheet can be used for multiple webpages allowing all the styles to be the same for across the website.

Headings are an element (tag using <h1>, <h2>, etc.) used in HTML pages for structural hierarchy of a webpage or document. Accessibility devices are able to navigate using these headings and search engines can use these as part of their algorithm for listing your website. Styles for headings can be altered using CSS.

HTML (Hyper-Text Markup Language) is a programming language using text to structure what is on a webpage. It's a code typed out using "tags" to define how a web browsers should display the content of a webpage. Need an individual HTML page for each page within a website.

Learning Management System (LMS) is similar to a CMS but goes beyond in functionality. Generally used for education and training purposes it can be setup to register and track users completion of courses, provide discussion rooms, develop tests, send out reminders, can generate reports for the educator, and much more. As the name implies it manages the learning needs of an organization.

Standards compliant website means that the standards for the World Wide Web Consortium (W3C) is implemented into the webpages. This allows internet users to view all websites the same no matter which browser is used. It also allows content to be accessed in different ways by using a screen reader or a keyboard input device instead of the mouse.