

An Assessment of 51 United States Early Hearing Detection and Intervention Websites: Is Needed Information Being Provided for Parent Decision Making?

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Abstract

Growth of the Internet as an information resource has provided expanded opportunities for families to easily gather information on a range of topics, including those related to health. State Early Hearing Detection and Intervention (EHDI) websites and other electronic data sources are an important opportunity to support families seeking information on options for their children who have been identified as deaf or hard of hearing. A review was undertaken between August and September 2021 of the 51 United States EHDI (states and Washington DC) websites and related information (such as links to others' sites) to determine if information that is specifically discussed in the federal legislation is provided in a manner that is comprehensive, somewhat helpful, or inadequate.

Keywords: childhood hearing loss, early intervention, parent information

Acronyms: ASL = American Sign Language; EHDI = Early Hearing Detection and Intervention; LSL = Listening and Spoken Language; NCHAM = National Center for Hearing Assessment and Management; NOFO = Notice of Funding Opportunity

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It is common practice that people will use the Internet to search for information on a range of topics including those of a medical concern. In 2001, the Pew Research Center reported that 72% of mothers sought medical information on the Web during the time frame March–May 2001 (Allend & Raine, 2002). Although Internet use is slightly lower among certain groups (lower socio-economic and education), it is still above 75% across race, income, and education. Among parents who actively use the Internet, 61% had made use of governmental websites (Allend & Raine, 2002). The most popular way of searching for information is a generic search engine (87%). Parents of children who are deaf and hard of hearing visit websites specializing in hearing loss (44%) or those recommended by other parents of deaf children (31%). In 2019, 94% of respondents to a survey on Internet use indicated that they used Facebook for health information (Houston, 2021).

A 2005 study published in *JAMA Otolaryngology* found that 48% of parents with Internet access searched for information regarding their child's diagnosis and surgical procedure (Boston et al., 2005). Further, 93% noted that they found information that was understandable and helpful (Boston et al., 2005). The study also found that 84% of parents using the Internet indicated that the information influenced or somewhat influenced the medical decisions they made on behalf of their child (Boston et

al., 2005). The findings of the JAMA study confirmed that parents visit websites that specialize in hearing loss (44%) or those recommended by other parents of deaf children (31%; Porter & Edirippulige, 2007).

Studies of general medical information on the Web is often incorrect, incomplete, or biased (Kothari & Moolani, 2015). The COVID-19 pandemic highlighted this with the influx of mass sharing of information on social media and the Internet. Reliable and balanced medical information on pediatric hearing loss on the Internet is a needed resource and can help reduce stress for families. Reducing overall stress in these families may result in better outcomes for deaf and hard of hearing children (Hintermair, 2006).

An international study of universal screening programs found that approximately half of parents with newly diagnosed deaf or hard of hearing children reported "a perceived lack of information provision" and "parents expressed a desire for more information than they have received" (Gilliver et al., 2013, p. 7). Many parents reported that a single booklet was provided for them by the audiologist, forcing them to seek out additional early intervention and communication options for their child through the Internet (Gilliver et al., 2013). Seeking comprehensive information is a consistent theme with parents noting they began searching the Internet soon after they received their child's diagnosis (Fitzpatrick,

Angus, et al., 2008; Haddad et al., 2019; Jackson, 2011; Yucel et al., 2008). People of all ages and across the socio-economic spectrum use the Internet to seek medical information as a first resort (Finney Rutten et al., 2019).

Early Hearing Detection and Intervention (EHDI) refers to the federal program that provides funding to states to carry out programs to screen infants for hearing loss soon after birth and further provides programmatic support for state early intervention services. EHDI was established by federal law in 2000 and the last reauthorization was in 2017. Before initiation of EHDI programs, the average age for identification of hearing loss in young children was 2 to 3 years of age. This delay meant that many children missed the critical period when language acquisition has already begun for most children (Centers for Disease Control and Prevention, 2003). State EHDI websites are an important opportunity for families seeking information on options for their children who have been identified as deaf or hard of hearing. Although audiologists rely on both verbal communication and visual aids to relay information on hearing loss to parents, early intervention systems remain the top referral by medical professionals (Davis et al., 2021). In a 2021 survey, parents and audiologists both stated that early intervention services were the top state resource provided by audiologists (55%) and to parents (52%) after the initial hearing screen (Davis et al., 2021). This article aims to provide guidance to states on the importance of the State EHDI websites on parent information, examples of states that have done a good job, and providing guidance for improvement. The National Center for Hearing Assessment and Management (NCHAM) emphasizes the importance of these websites, providing a resource guide on developing websites and hosting a “Website of the Year” award (NCHAM, April 2021).

Method

Our goal was to evaluate the accuracy and completeness of information provided on EHDI websites and how such information addressed the *need to know* data noted in federal guidance. The authors conducted a review of 51 websites (50 states and Washington DC) to assess whether components laid out in various federal laws and regulations were provided clearly, comprehensively, and in a balanced manner on four topics: (a) hearing loss information, (b) technology, (c) communication options, and (d) resources for family support. Table 1 gives a brief synopsis of each state’s website. The sources the authors drew from include the 2017 EHDI Reauthorization Bill, the 2019 Joint Committee on Infant Hearing (JCIH) 2019 Position Statement, and the FY2020 EHDI Notice of Funding Opportunity (NOFO). The website review was done between August and September 2021. We note that changes may have been made to these sites since the review. The website information was derived from NCHAM resources (NCHAM, October 2021).

The four topics were reviewed and rated as being comprehensive, somewhat helpful, or inadequate and our methodology can be found in the Appendix. Rating determination explored if the information was thorough, covered the range of options available (relative to

technology and communications options), answered questions that parents might have, and met the criteria laid out by the the sources listed above. The 2017 EHDI Reauthorization specifies that EHDI programs should be “specifically designed to meet the unique language and communication needs of deaf and hard-of-hearing children” (Early Hearing Detection and Intervention Act of 2017, p. 2). It goes on to say that programs should provide families information that is accurate, comprehensive, up-to-date, and evidence-based including the full range of assistive hearing technologies and communications modalities, as appropriate (EHDI 2017).

With respect to website development, the FY2020 EHDI NOFO states:

Develop, maintain, and promote a website or webpage for the state/territory that is user friendly with accessible, culturally appropriate information for families and professionals that is accurate, comprehensive, up-to-date, and evidence-based, as appropriate to allow families to make important decisions for their children in a timely manner, including decisions with respect to the full range of assistive hearing technologies and communication modalities, as appropriate. (Health Resources and Service Administration, 2019)

The NOFO also specifies that future planning should include plans for maintenance of the website. The review of information provided on amplification technology and language supports the Joint Committee on Infant Hearing 2019 Position Statement which recommended EHDI programs fully inform families on communication options and assistive technology (JCIH, 2019).

Results

Of the 51 sites examined (50 states and Washington DC), 26% were rated as *comprehensive*, 35% as *somewhat helpful*, and 39% as *inadequate* (which included four state websites—Alaska, Colorado, Florida, and Montana—that were not operational at the time of the review). Websites rated as comprehensive included thorough content on all of the information items mentioned in the NOFO. Somewhat helpful sites were lacking in one or more of the key topics evaluated or provided basic introductory content. Sites that were rated as inadequate included limited or none of the information that is noted in the EHDI legislation or the NOFO. A summary of the review by each rating criteria follows.

Information on Hearing Loss

Of the criteria reviewed, website information on hearing loss was somewhat helpful (37%) or comprehensive (39%) with 16% of websites judged as inadequate (see Figure 1). Most EHDI websites provided information on hearing loss basics and/or details on the EHDI hearing screening 1-3-6 guidelines recommended in the NCHAM Web Resource guide (NCHAM, December 2021). The websites rated comprehensive included information on hearing loss such as unilateral or bilateral, range of loss (mild, moderate, severe, profound) and what can cause progressive hearing

Table 1
Information on Hearing Loss

State	Information on Hearing Loss		Communication Options		Information on Technology		Resources	
Alabama	Basic information	Somewhat Helpful	Only American Sign Language (ASL) is discussed	Inadequate	None	Inadequate	List of links outdated. Does include Hands & Voices (H&V)	Somewhat Helpful
Alaska	Website down							
Arizona	Basic information	Somewhat Helpful	None	Inadequate	None	Inadequate	Basic but outdated	Somewhat Helpful
Arkansas	Included on the linked parent resource	Comprehensive	Detailed info in the parent resource	Comprehensive	Detailed info in the parent resource	Comprehensive	Limited website links, relies on parent resource pdf	Somewhat Helpful
California	Basic information	Somewhat Helpful	All are mentioned. Text states that Listening & Spoken Language (LSL) is harder, not successful.	Inadequate	Outdated/ incorrect info	Inadequate	Lacks diversity; link on Cochlear Implants (CI) is wrong	Inadequate
Colorado	Under construction							
Connecticut	Comprehensive info on hearing loss plus cytomegalovirus (CMV)	Comprehensive	Limited info but emphasizes importance of unbiased info	Somewhat Helpful	None	Inadequate	Comprehensive links, includes CMV	Comprehensive
Delaware	Limited information	Inadequate	None	Inadequate	None	Inadequate	Resources are limited to governmental agencies (i.e., child support, social services)	Inadequate
D.C.	Basic information	Inadequate	None	Inadequate	None	Inadequate	None	Inadequate
Florida	Link not working							
Georgia	Comprehensive information	Comprehensive	Comprehensive listing of communication options with guidance on choosing options for your family	Comprehensive	Detailed lists on variety of technology	Comprehensive	Comprehensive list including schools that focus on American Sign Language (ASL) and Listening and Spoken Language (LSL)	Comprehensive

Table 1 (cont.)*Information on Hearing Loss*

State	Information on Hearing Loss		Communication Options		Information on Technology		Resources	
Hawaii	Included brochure is comprehensive though little on website	Somewhat Helpful	Limited information. Notes importance of access to sound for development of spoken language, but no info on ASL or Cued Speech	Inadequate	None	Inadequate	Resources listed in brochures but not on website	Somewhat helpful
Idaho	Basic information	Somewhat Helpful	Comprehensive info listed in the resources section but webpage difficult to locate	Somewhat Helpful	Lists info on financial aid for hearing aids	Somewhat Helpful	Basic information but webpage difficult to find	Somewhat Helpful
Illinois	Comprehensive information on hearing loss	Comprehensive	Limited; states info should be unbiased	Somewhat Helpful	Comprehensive information	Comprehensive	Basic information	Somewhat Helpful
Indiana	Links to sources in brochures but nothing on website	Somewhat Helpful	None	Inadequate	None	Inadequate	Basic resources but difficult to locate on website	Somewhat Helpful
Iowa	Comprehensive and recently updated in 2021	Comprehensive	Discusses multiple options; explains based on hearing loss/ family choice.	Comprehensive	Comprehensive information	Comprehensive	Comprehensive links include medical research, companies, organizations, etc.	Comprehensive
Kansas	Limited information	Inadequate	None	Inadequate	None	Inadequate	Limited resources	Inadequate
Kentucky	Basic information	Somewhat Helpful	None	Inadequate	None	Inadequate	Limited resources	Inadequate
Louisiana	Comprehensive information of why/how/what	Comprehensive	Thorough discussion of all options	Comprehensive	None	Inadequate	Comprehensive list of resources	Comprehensive
Maine	Limited information	Inadequate	None	Inadequate	Limited resources	Inadequate	Limited resources	Inadequate
Maryland	Limited information	Somewhat Helpful	Limited information	Somewhat Helpful	None	Inadequate	Limited resources	Inadequate

Table 1 (cont.)*Information on Hearing Loss*

State	Information on Hearing Loss		Communication Options		Information on Technology		Resources	
Massachusetts	Limited, difficult to locate information on website	Inadequate	Basic information but difficult to locate on website	Somewhat Helpful	None	Inadequate	Comprehensive resources on the various education services available. Could be improved by including info on programs/other organizations	Somewhat Helpful
Michigan	Basic information	Inadequate	Mentions info provided to parents should be unbiased and refers to Hands & Voices (H&V)	Somewhat Helpful	None	Inadequate	Needs additional links in addition to H&V	Inadequate
Minnesota	Roadmap brochure is comprehensive, but nothing on website	Comprehensive	Comprehensive resources communication choices for parents	Somewhat Helpful	Multiple options on hearing aids. Little on other tech options	Somewhat Helpful	Comprehensive list of state, local, and national government and private organizations	Comprehensive
Mississippi	Comprehensive information throughout on the process, next steps	Comprehensive	Comprehensive list of education options for all options	Comprehensive	None	Inadequate	Comprehensive list of resources	Comprehensive
Missouri	Comprehensive information	Comprehensive	Comprehensive information that mentions should be unbiased	Comprehensive	None	Inadequate	Basic list of resources	Somewhat Helpful
Montana	Link not working							
Nebraska	Basic information	Somewhat Helpful	Mentions variety of options	Comprehensive	Limited information	Inadequate	Resources are mainly federal options, ASL focused	Inadequate
Nevada	Basic information on website	Somewhat Helpful	None	Inadequate	None	Inadequate	Basic list of resources	Somewhat Helpful
New Hampshire	Basic information in brochures	Somewhat Helpful	None	Inadequate	None	Inadequate	None	Inadequate

Table 1 (cont.)*Information on Hearing Loss*

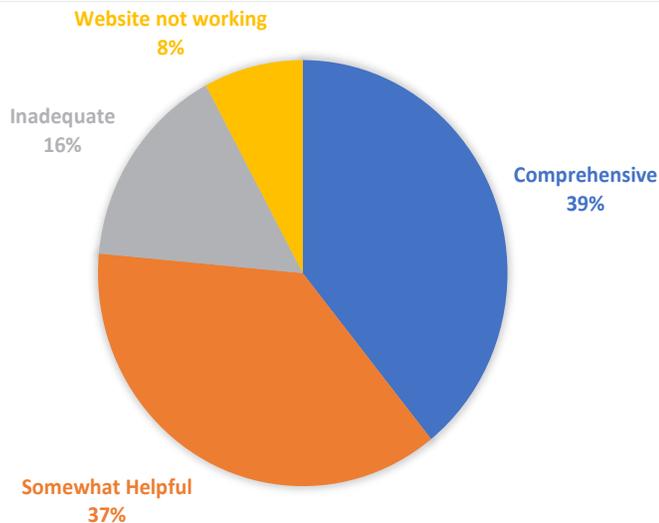
State	Information on Hearing Loss		Communication Options		Information on Technology		Resources	
New Jersey	Basic Information	Comprehensive	Helpful video on what it is like to be deaf/hard of hearing with demonstration of communication options	Comprehensive	Video mentions all types of tech	Comprehensive	Comprehensive resources	Comprehensive
New Mexico	Comprehensive info	Comprehensive	Basic information	Somewhat Helpful	Mentions importance of properly fitted technology	Comprehensive	Comprehensive list of resources	Comprehensive
New York	Limited, outdated information	Inadequate	None	Inadequate	None	Inadequate	Limited and outdated	Inadequate
North Carolina	Basic information	Somewhat Helpful	Mentioned in the links	Comprehensive	Comprehensive info on obtaining hearing aids	Comprehensive	Comprehensive, well organized resources	Comprehensive
North Dakota	Comprehensive information, thorough video introduction	Comprehensive	None	Inadequate	None	Inadequate	Basic list of resources	Somewhat Helpful
Ohio	Comprehensive information	Comprehensive	Mentions all options on parent guide, but guide is hard to locate on website	Somewhat Helpful	Limited info	Somewhat Helpful	Comprehensive info but hard to locate under links to multiple EHDI conference agendas	Inadequate
Oklahoma	Comprehensive information	Comprehensive	None	Inadequate	None	Inadequate	Limited and outdated	Somewhat Helpful
Oregon	Basic information	Somewhat helpful	Limited information	Inadequate	None	Inadequate	Basic links but is missing sites for ASL	Somewhat Helpful
Pennsylvania	Basic information	Somewhat Helpful	None	Inadequate	None	Inadequate	Basic information but difficult to find	Somewhat Helpful
Rhode Island	Basic information	Somewhat Helpful	Limited information but links focused on ASL only	Inadequate	None	Inadequate	Limited links; mainly to ASL focused organizations	Inadequate
South Carolina	Comprehensive information	Comprehensive	None	Inadequate	None	Inadequate	Comprehensive links for both state and national organizations	Comprehensive

Table 1 (cont.)*Information on Hearing Loss*

State	Information on Hearing Loss		Communication Options		Information on Technology		Resources	
South Dakota	Comprehensive information, thorough introduction videos	Comprehensive	Importance of language and communication is mentioned but no details on options	Somewhat Helpful	Tech is shown in introduction videos but no discussion of what they are	Somewhat Helpful	Comprehensive links to state and national organizations	Comprehensive
Tennessee	Basic information	Somewhat Helpful	Parent flyer includes all communication options	Comprehensive	None	Inadequate	Basic list of resources	Comprehensive
Texas	Under FAQs, basic information	Somewhat Helpful	Links to information on options	Somewhat Helpful	None	Inadequate	Related sites page includes comprehensive info	Comprehensive
Utah	Comprehensive information	Comprehensive	No information on website. Included in links	Somewhat Helpful	Comprehensive information including FM systems	Comprehensive	Comprehensive list of resources	Comprehensive
Vermont	Basic information. Website is being updated	Somewhat Helpful	None	Inadequate	None	Inadequate	Comprehensive list of resources	Comprehensive
Virginia	Comprehensive information, links to virtual meet-ups	Comprehensive	Multiple mentions on all communication options	Comprehensive	Thorough parent videos on technology	Comprehensive	Comprehensive list of resources	Comprehensive
Washington	Comprehensive information	Comprehensive	Comprehensive information	Comprehensive	Importance of technology is discussed	Comprehensive	Comprehensive list of resources	Comprehensive
West Virginia	Limited information	Inadequate	None	Inadequate	None	Inadequate	None	Inadequate
Wisconsin	Basic, out of date information	Somewhat Helpful	None	Inadequate	Basic information on hearing aids	Somewhat Helpful	Basic list of resources	Comprehensive
Wyoming	Thorough videos that include information on hearing loss	Comprehensive	Links to LSL and ASL tools	Comprehensive	None	Inadequate	Comprehensive list of resources	Comprehensive

Note. Rating scale is *Comprehensive*, *Somewhat Helpful*, and *Inadequate*. Table also includes website details that resulted in each rating.

Figure 1
Information on Hearing Loss



loss (e.g., a diagnosis of congenital Cytomegalovirus [cCMV]). These elements form a comprehensive picture for parents of recently diagnosed children and are an improvement over the type of information previously provided to parents; in the past most information discussed bilateral hearing loss present at birth (Porter et al., 2018).

Three state websites included thorough introductory videos from culturally diverse families on living with hearing loss and the importance of early intervention. These videos also highlighted different technologies and forms of communication as well as benefits of participating in early intervention programs.

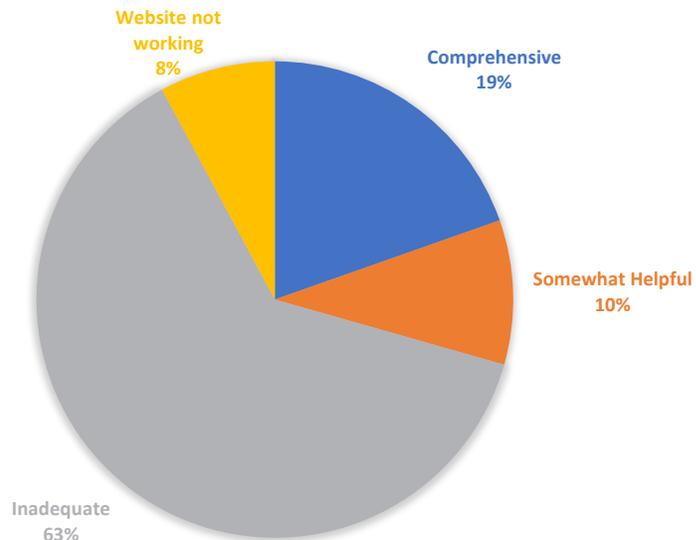
Information on Technology

Ten websites mentioned technology and were rated as comprehensive. The majority of state EHDl websites were found to be inadequate or somewhat helpful in this area; this topic was the most variable of the four examined (see Figure 2). Those rated comprehensive mentioned the importance of properly fitted technology and/or listed the options of hearing aids and cochlear implants. There was a single inclusion of the importance of an FM system. Most websites rated as comprehensive included links to information on hearing aid loan programs and financing. One site mentioned technology options but provided commentary and links that suggested that hearing technology was not effective, reflecting an unfortunate bias against technology.

Communication Options

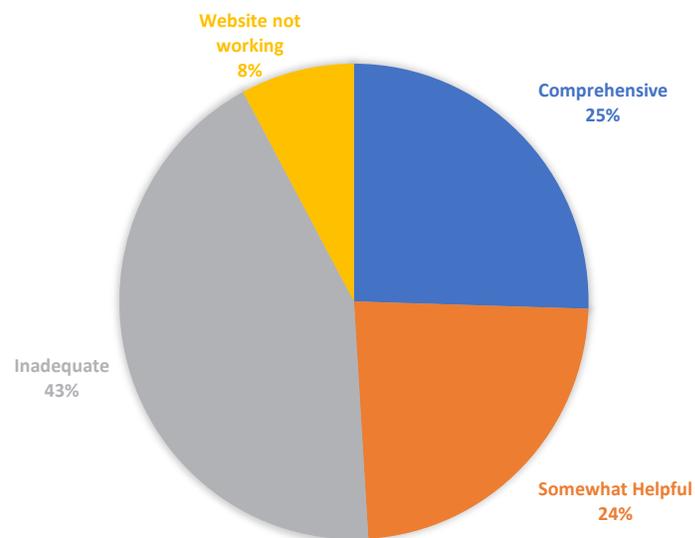
Information provided by EHDl websites on this topic was wide ranging. The most common communication options in the United States are American Sign Language (ASL), Listening and Spoken Language (LSL), total communication, and Cued Speech (White, 2018). In 2018, LSL was used by 49% of deaf or hard of hearing children, 17% used a combination of speech and ASL, and 6% used ASL only (White, 2018). EHDl website content

Figure 2
Information on Technology



on communication options ranged from containing no information to stating that any information on these options should be unbiased (see Figure 3). The more thorough sites discussed all available options.

Figure 3
Communication Options

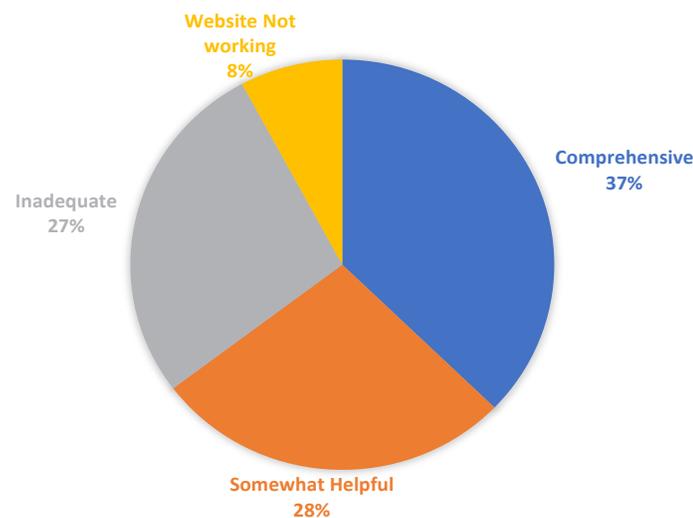


The review found that discussion of communication options (if provided) was most often in links provided to parent resource guides. Some parent resource guides provided detailed information about each communication option while others only provided a list. The reviews of the guides were rated as comprehensive if they were balanced in discussing each option. Three websites were overtly biased toward one option over another, but in those cases the bias was reflected in the provision of resources for one option without mention of the others.

Resources

When reviewing resources, the examination evaluated whether the websites included information from state and federal sources such as the U.S. Department of Education, the Centers for Disease Control, and the National Institutes of Health. Also considered were resources from nonprofit organizations such as Hands & Voices, Alexander Graham Bell Association, and local community organizations; schools for deaf or hard of hearing children; information on locating medical support teams; and other resources that support a family's journey. Ease of locating such information and if the information was current was another consideration. Four sites provided comprehensive resources though the information was difficult to locate on the webpage resulting in a downgrade to a *somewhat helpful* rating; 28% of the sites were rated *somewhat helpful* in this category. Webpages that included a link to a thorough parent resource handout that contained the information above were rated more highly in this evaluation, especially if the resource was easy to locate. Thirty-seven percent of the sites provided comprehensive, easy to find information with 27% rated as *inadequate* (see Figure 4).

Figure 3
Resources



Conclusions

Improving the information families receive on hearing loss and early intervention is the goal of EHDI programs, professionals, and parents. This review of the state websites from August and September 2021 highlights the need for more attention and resources to be dedicated to maintaining a valuable resource for parents of newly diagnosed children to help them find medically supported, unbiased information on hearing loss and next steps. The *2013 Best Practices in Family-Centered Early Intervention for Children Who Are Deaf or Hard of Hearing* includes these concepts in the key principles and states that EHDI programs are often already enacting them in practice and in person (Moeller et al., 2013).

Although this review did not include readability as a criteria, others have shown that almost all sites dedicated to hearing intervention services are written above the recommended 6th grade reading level (Woodruff & Cienkowski, 2021). Anecdotally, parents have expressed frustration with websites using confusing terminology. Also not considered was the role of social media in sharing information despite the increasing reliance on Facebook, Instagram, and others for gathering information (Houston, 2021). Others have addressed the importance of providing information in a parent's native language (Munoz et al., 2016). Looking ahead, consideration should be given to ensuring information is readable, understandable, and accessible across multiple platforms.

Parents need timely information to make informed decisions regarding the early needs of their children with hearing loss and the Internet is increasingly a key source for health information. Accurate, easily available information was considered very helpful by families during the COVID-19 pandemic when access to services were limited or delayed (Yoshinaga-Itano, 2020). Although some states have used their EHDI website to effectively provide comprehensive information to parents, our review indicates that the majority of EHDI sites are not providing the information specified in the 2017 EHDI Reauthorization, the JCIH Position Statement (2019), and the 2019 NOFO. Interviews with EHDI personnel indicated that the difficulties that they had were part of a larger issue with state government website restrictions. We found that it is sometimes difficult to locate state EHDI websites on the Internet. Health Resources Services Administration (HRSA) could consider providing technical expertise to support state EHDI staff in knowing how best to make their web resources widely accessible upon Internet search given the importance of such sources for health information.

Few patterns emerged when reviewing the websites. Overall, the quality of information on hearing technology was rated as inadequate more often than other categories while resources was typically rated highly. However, there was no discernible pattern along political or geographical location. All geographic areas of the country had sites that were rated highly as well as sites that were rated poorly.

Noted are the difficulties in working with state governments in prioritizing resources for website updates—whether for staffing or financial reasons. We suggest that the HRSA, which administers the EHDI Program, be provided with additional funds to support state EHDI programs to help them improve web-based resources, especially in light of the NOFO requirements and other competing demands. Other suggestions for HRSA include the addition of support for EHDI web-based information such as developing and providing content on common topics (e.g., hearing technology and communication options), and staff support at the national level to provide guidance on website improvement and optimization. For those sites rated as somewhat helpful

or inadequate, such support may help programs make incremental improvements that support parents and guardians with needed information for decision-making. The comprehensive sites may serve as a guide for change as well as a tool to be used in advocacy for website improvements moving forward.

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Appendix

Methodology for An Assessment of 50 State Early Hearing Detection and Intervention (EHDI) Websites: Is Needed Information Being Provided for Parent Decision Making?

EHDI websites were reviewed to evaluate whether they comply with the four key content topics laid out in the 2017 EHDI Reauthorization Bill, the 2019 Joint Committee on Infant Hearing 2019 Position Statement, and the FY2020 EHDI Notice of Funding Opportunity (NOFO). The review was conducted between August and September 2021 by the authors of this study. The authors were objective in assessing what was on the websites and whether it was accurate based on knowledge of childhood hearing loss. The criteria are summarized below.

Information on Hearing Loss

- To be rated *comprehensive*, a site needed to include information on types of hearing loss (unilateral, bilateral, levels of hearing loss), possible causes of a progressive hearing loss (such as a diagnosis of congenital cytomegalovirus), and what a family may expect during a hearing exam.
- To be rated as *somewhat helpful*, a site needed to include introductory information on hearing loss such as definitions of mild, moderate, severe, and profound. The review also assessed whether the website included the EHDI guidelines for when to have an audiology follow up and enrollment in intervention services.
- Sites that did not have any of the above information were rated as *inadequate*.
- Three websites included introductory videos; this inclusion contributed to their being rated as comprehensive

Information on Technology

- To be rated comprehensive, a site needed to provide information on cochlear implants, hearing aids, and any additional technology options.
- Further support for a comprehensive rating were those sites that included information on related topics such as FM systems, tips on using technology, and/or noninsurance financing options.
- To be rated as somewhat helpful, at least one option was mentioned. Usually this was hearing aids.
- A site was rated inadequate if technology options were not mentioned.
- A site's score was lowered when incorrect commentary on technology not being beneficial was provided.

Communication Options

- To be rated comprehensive, information on all options was provided as well as other key details such as where to find more information.
- If information was provided via a link to a thorough parent resource guide that included the above, that information contributed to a comprehensive rating.
- To be rated as somewhat helpful, a list of communication options was included.
- A site was rated inadequate if there was no mention of communication options or if not all options were noted equally.

Resources

The authors looked at whether the resources included information on state or Federal sources such as state departments of health and education, the Centers for Disease Control, the National Institutes of Health, and other governmental websites with related information.

- Resources that included mention of non-profit organizations such as Hands & Voices, AG Bell, or others were rated higher.
- Higher ratings were given if the website included comprehensive information on educational options including local schools for the deaf, private oral schools, and public schools with special programs for children who are deaf and hard of hearing.
- Ratings were lower if listed resources were focused on one communication mode with no mention of other options.