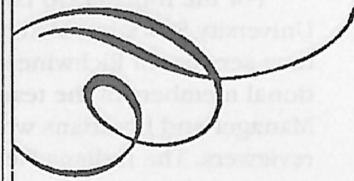


## THE INDIANA STATE DEPARTMENT OF HEALTH AS A SOURCE OF CONSUMER HEALTH INFORMATION

*by Susan Maguire*



Americans are increasingly turning to the Internet for authoritative health information. Even the most conservative statistics estimate that about 40 percent of Americans with access to the Internet use it to obtain health information.<sup>1</sup> These consumer health information (CHI) seekers share a number of characteristics: they use search engines more frequently than recommendations or advertisements; they are concerned about the credibility of online sources; and more than half believe that health information found online is accurate.<sup>2</sup>

To that end, government sites are a popular source of CHI because they are perceived to be reliable.<sup>3</sup> State health department web sites, then, should be a reliable and useful source of CHI. Kristine Alpi, in a study of the value of state health department web sites, explained the role of a state health department: "The emphasis on making sure that the consumer has access to information that can change their behavior helps explain the role of state departments of health in providing consumer health information."<sup>4</sup> She examined state health department web sites for access features, information on a broad range of health topics, information in other languages, and understandable format. Her results revealed that these web sites were generally useful as CHI sources, but not a panacea. An examination of the Indiana State Department of Health (ISDH) web site (<http://www.in.gov/isdh/>), using some of Alpi's criteria and other evaluative tools, reveals that this site likewise offers reliable CHI but that access to this information is complex.

Some of the access features identified as desirable by Alpi are the presence of a search engine, site map or A-to-Z topic list, contact information, and consumer-specific pages.<sup>5</sup> Her study of all fifty state health department web sites plus the District of Columbia found that 96 percent of sites had a search engine, 83 percent had a site map, 31 percent had a contact form, 98 percent had contact information, but only 16 percent had consumer-specific pages.<sup>6</sup> Indiana is comparable with the rest of the country: the ISDH web site has a search engine but no site map; the "About Us" page provides

contact information<sup>7</sup>; and, like many other state health department web sites, the ISDH web site does not clearly label its CHI.

This is not to say that the site does not contain CHI. There are two places on the site that seem to house this type of information: "Health Information" and "Public Health Programs." In each place, the CHI (such as "Health Tips for Hot Weather" and "Lyme Disease") is listed with other public health documents like "Tattoo and Body Piercing Facilities Guide" and "Birth Defects and Problems Registry." Although much useful CHI appears to be on the site, this is clearly not a main focus.<sup>8</sup>

Nonetheless, the information is there. According to Alpi, information on a broad range of topics should be available. The top three most-available topics from her study were immunization, environmental health, and smoking.<sup>9</sup> According to a recent Pew Internet study, the most popular health searches are specific diseases or conditions; specific medical treatments or procedures; and diet, nutrition, and vitamins.<sup>10</sup> The Healthy People 2010 initiative indicates physical activity, obesity, and tobacco use as top public health initiatives.<sup>11</sup>

The ISDH web site provides access to some of these materials, as well as information on newsworthy health topics. CHI available under "Public Health Programs" includes the following popular topics: immunization, environmental health, and several specific health conditions.<sup>12</sup> In general, this section of the web site is the most useful for CHI. Its pages coincide with ISDH public health initiatives but can be helpful to consumers interested in specific health conditions. Some of the conditions covered are asthma, breast and cervical cancer, Lyme Disease, diabetes, and HIV/STDs.

Because of the undifferentiated structure of the site, it is not practical to simply click and find the other most popular topics; however, by using the site's search engine, it is clear that a range of topics are addressed in some form by the ISDH. For example, the area of diet, nutrition, and vitamins is mainly treated in terms of women's health: there is a page on folic acid and diet information on the breastfeeding page. The informa-

tion on obesity can be found under the link to the Office of Women's Health. This information, though, would be quite difficult to locate without the search engine.

The ISDH often relies on outside sources (usually other government sources) to meet consumer health needs. The little information on physical fitness is a link to the Governor's Council for Physical Fitness and Sports. Despite many community initiatives across the state to reduce public smoking, the only information on tobacco use on the ISDH web site is an external link to the U.S. Department of Health and Human Services Tobacco Cessation Guidelines web site. On the agency's home page, there is a news item about the new USDA food pyramid, with a link to MyPyramid.gov, the USDA food pyramid web site. This inconsistent external linking can be confusing for health consumers, but it reflects the general tendency of the ISDH web site to a lack of clear access to CHI. Even internal pages are inconsistently designed: the pages on asthma and diabetes are both very attractive, but are aesthetically completely different. This is another possible area of confusion for consumers who must evaluate the authority of Internet information, although one that is perhaps alleviated by the persistent frame that shows the ISDH logo and the site's information categories.

In addition to commonly searched topics, state department of health web sites may be accessed by consumers concerned with newsworthy public health issues. Since state departments of health frequently release statewide health concerns to the press and are therefore cited in news reports, consumers may more readily associate their state public health agency with an access point for breaking public health concerns. The recent measles outbreak in several Indiana counties is one such example.<sup>13</sup> The ISDH web site provides good information on the outbreak geared toward consumers. An item on measles is the third on the prominent "News and Advisories" list on the ISDH home page. There are several pages of information, including information about the outbreak advising residents of several counties to check vaccinations and a measles fact sheet in English and Spanish. Regarding this current health concern, ISDH coverage is very good.

The mere presence of the information is not enough, though. There are many factors that contribute to the inaccessibility of information on the ISDH web site, including the complicated organizational structure detailed above, the use of overly complex language, and the general inaccessibility of the web site via search engines such as Google.

In a soon-to-be-published study on access to CHI, Elizabeth Orban points out that nearly half of all Americans are at least marginally illiterate, and that the average reading level of American adults is between

eighth and ninth grade.<sup>14</sup> Using Microsoft Word to evaluate the reading level of each page according to the Flesch-Kincaid scale, the following results were found: grade 10.9 for the "Asthma Basics" page, grade 11.9 for the "Diabetes Quick Facts" page, and grade 5.5 for "Measles Quick Facts."<sup>15</sup> Only one of these sample pages, then, is written at a reading level likely to be understood by much of the public. This represents another inconsistency in ISDH's delivery of CHI via the Web.

Further, this generally low-reading level is not always due to educational discrepancies. Many literacy problems are related to fluency in English; when searching health information, the problem of English-as-a-second-language becomes that much greater. As Christina Courtright points out, "Linguistic and cultural differences often make it difficult for new residents to understand what authorities at various levels expect and require of them."<sup>16</sup> According to the 2003 American Community Survey, 7.8 percent of Indiana citizens speak a language other than English at home, and almost half of those speak Spanish.<sup>17</sup> This number only accounts for legal U.S. citizens; there are many more Spanish-speaking residents of Indiana who are not included in census data but who still require health care and are affected by public health situations. To that end, the ISDH web site includes a portal of links in Spanish, which, although it does not mirror the English-language contents of the site, appears to contain a diverse offering of public health information.<sup>18</sup> In addition, the measles fact sheet is also available in Spanish; in doing so, the ISDH has made this emergency health information more available than information on some other health topics.

But who exactly are the visitors? The accessibility of the ISDH web site is further compounded by its relative invisibility to search engines. This is significant because, according to a 2000 Pew Internet poll, 81 percent of Americans who search for health information on the Internet do so via search engines.<sup>19</sup> This problem is not specific to ISDH, however: "Few health department sites will rise to the top of a basic health topic search results list from a search engine such as Google because of the limited number of links to individual documents within the sites. National and international organizations prefer to link to less geographic-specific resources."<sup>20</sup>

A few sample Google searches reveal the problem. For the search "measles, Indiana," ISDH is the fifth result. For the search "diabetes, Indiana," ISDH is the eighth result. Yet for the search "asthma, Indiana," ISDH does not even show up in the first four pages of results.<sup>21</sup> Unless a consumer were searching directly for the ISDH web site, it is unlikely that it would be accessed.

Perhaps this is for the best. The inconsistency of the information presented on the ISDH web site may prove frustrating and confusing to a novice CHI seeker. Although it generally meets Alpi's criteria for a "rich resource" for CHI, there are many problems with the site, not the least of which are that it is neither easily navigable nor easily found. The best use for the ISDH is by health and information professionals, who can interpret the structure and then disseminate the appropriate information to their customers. In this way, the Indiana State Department of Health will fulfill its role of providing health information to the state's consumers.

#### ABOUT THE AUTHOR

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#### FOOTNOTES

1 Baker, Laurence, et al. (2003, May 14). Use of the Internet and E-mail for Health Care Information: results from a national survey. *JAMA* 289(18), p. 2401.

2 Fox, Susannah, et al. (2000). The online health care revolution: How the Web helps Americans take better care of themselves. *Pew Internet & American Life Project: Online life report*, pp. 14, 18. Accessed 13 June 2005 from <http://www.pewinternet.org/>

3 Alpi, Kristine M. (2005). State Health Department Web Sites: Rich Resources for Consumer Health Information. *Journal of Consumer Health on the Internet* 9(1), p. 36.

4 Ibid., p. 35.

5 Ibid., p. 37.

6 Ibid., p. 39.

7 Although, interestingly, this page does not include any information on the department besides the geographic.

8 Perhaps some information about the department would have more clearly identified its purpose.

9 Alpi, p. 40.

10 Fox, Susannah. (2005, May 17). Health Information Online. *Pew Internet & American Life Project*, p. i. Accessed 13 June 2005 from [http://www.pewinternet.org.](http://www.pewinternet.org/)

11 Healthy People 2010. (n.d.). Leading Health Indicators: Priorities for Action. Accessed 13 June 2005 from <http://www.healthypeople.gov/LHI/Priorities.htm>.

12 Emergency preparedness, Alpi's fourth most-available topic, is featured prominently on the ISDH home page under "Bioterrorism."

13 Measles on rise in Lafayette area. (2005, June 14). *Indianapolis Star*. Retrieved 15 June 2005 from <http://www.indystar.com>.

14 Orban, Elizabeth. (in press). Health Literacy: challenges and implications for consumer health librarians. *Indiana Libraries*.

15 As a basis of comparison, this paper measures grade level 11.9 on the Flesch-Kincaid scale.

16 Courtright, Christina. (2005, January). Health information-seeking among Latino newcomers: an exploratory study. *Information Research* 10(2). Retrieved 13 June 2005 from <http://informationr.net/ir/>.

17 United States Census Bureau. (n.d.). *Census 2000 Demographic Profile Fact Sheet: Indiana*. Retrieved 15 June 2005 from <http://factfinder.census.gov>.

18 This limited assessment is based on the fact that the search engine retrieves pages searched using Spanish words, rather than on actual readability assessment of retrieved pages.

19 Fox, Susannah, (2000), p. 18.

20 Alpi, Kristine M. (2005), p. 36.

21 Searches performed 15 June 2005 on [www.google.com](http://www.google.com).