

**Assessing the National Library of Medicine's
Healthy People 2010 Information Access Project
(<http://phpartners.org/hp>) Website**

Focus Group Study Results

**Report written by
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TABLE OF CONTENTS

Executive Summary	5
Purposes of Study.....	7
Methods and Procedures	9
Participant Demographics	12
Results	13
<i>Information Gathering Habits</i>	13
<i>Observations on Site Value</i>	13
<i>Observations on Site Organization</i>	15
<i>Explicitly Stated User Wants</i>	15
<i>Potential Areas for Navigation Improvements</i>	16
<i>Potential Areas for Search Improvements</i>	18
Conclusions and Recommendations	19
Appendices	23
<i>Appendix 1: List of Organizations Contacted to Recruit Participants</i>	24
<i>Appendix 2: Focus Group Participant Application Form</i>	25
<i>Appendix 3: Information and Consent Form</i>	26
<i>Appendix 4: Demographic Information Questionnaire</i>	27
<i>Appendix 5: Demographic Statistics of Focus Group Participants</i>	28
<i>Appendix 6: Focus Group Protocol</i>	30
<i>Appendix 7: Focus Group Roles</i>	33
<i>Appendix 8: Task Card Code Sheet</i>	35

Executive Summary

In January 2005, the Public Health Foundation conducted two focus groups to gather information about how public health professionals view and use the National Library of Medicine's (NLM) Healthy People 2010 Information Access Project website

(<http://phpartners.org/hp>). Of the eleven total participants, seven (64%) had used the site¹ before the day of the focus group.



Before participants were asked to perform seven different information searches on the site, they were asked how they currently get information on the effectiveness of potential public health strategies to achieve their program objectives. The following is an outline of the major findings from the focus group study:

Information Gathering Habits

Most participants noted that they used online sources, such as other government agency websites, other NLM sites like PubMed and MEDLINE; and online journals. Some participants were familiar with and used PubMed and MEDLINE frequently, while others said they did not use these resources.

Participants said they prefer to gather information from 'trusted sources,' which were often specific to their program duties and include health associations, professional listservs, universities such as Johns Hopkins and the University of Washington, as well as other state health departments with a reputation for excellence in a particular area such as those in North Carolina or Wisconsin.

Site Value

After participants conducted various information searches, they were asked to talk about their impressions of the site. Overall the site was viewed as useful for finding the type of information public health professionals seek in relation to program development. Participants stated that the site content would benefit the type of work they do and that the site provides a good 'starting point' for an information search they might conduct. Participants noted several positive aspects to the site, including its timesaving pre-formulated searches, the broad range of information available, as well as its links to other sites and additional information.

¹ Unless noted otherwise, 'site' in this report refers to the National Library of Medicine's Information Access Project portion of the Public Health Partner's website.

Participants were asked specifically about the value of the extra links provided for the Environmental Health focus area. Most noted the extra information was useful.

Site Organization

The major barrier most participants spoke about was site organization. Although the site's purpose is geared to Healthy People 2010 information, many felt that it was limiting to only be able to search by Healthy People 2010 focus area. As one participant noted, *"If you aren't looking for information on Healthy People 2010, this site isn't for you."* To make information on the site easier to navigate and more valuable to a broader audience that is not so familiar with the Healthy People 2010 framework, many participants suggested different ways the site could be organized (by broader topics or public health department functions such as surveillance or health promotional activities).

Most participants found it relatively easy to find needed information, but participants also noted that the site might be difficult to navigate for infrequent web users.

Explicitly Stated User Wants

Participants noted several ways the site could better serve their needs, including providing summaries or synopses of several articles related to one topic to reveal 'best practices' or 'model programs.' Participants thought that better topic organization and content descriptions were needed in the site. A few participants noted that links to additional health data would be helpful.

Navigation Preferences

Participants talked about several navigation issues that would make it easier to find information on the site. These include: 1) Placing the Healthy People focus areas on the left navigation bar, 2) Placing less information on each page, 3) Using more descriptors for links, and 4) using a standard search button for the "PubMed Search" link.

Search Preferences

Many participants stated that they would like more guidance on the PubMed search capabilities, so that they could tailor a search if needed. Participants also felt that making the site search function easier to use and more like Google would be helpful to them.

Please refer to the report for details of findings and several short- and long-term recommendations.

Purposes of Study

In 2001, the National Information Center on Health Services Research and Healthcare Technology, at the National Library of Medicine (NLM) and the Public Health Foundation (PHF) collaborated to develop the Healthy People 2010 Information Access Project (HP 2010 IAP) website, located at <http://phpartners.org/hp/>. The site is part of a larger NLM website called Partners in Information Access for the Public Health Workforce, located at <http://phpartners.org>.



The purpose of the HP 2010 IAP website is to make information and evidence-based strategies² related to achieving the Healthy People 2010 objectives easier to find. NLM and PHF staff worked together to develop and pilot pre-formulated search strategies for objectives in six selected Healthy People 2010 focus areas. As of December 2004, all 28 Healthy People focus areas now have pre-formulated search strategies available.

The 'one-click' search strategies on the HP 2010 IAP site search PubMed, a database of the NLM that provides access to over 11 million citations from MEDLINE and additional life science journals. PubMed includes links to many sites providing full text articles and other related resources.

In order to determine how public health professionals view and use the site and to recommend changes to NLM on improvements that can be made, in 2004 NLM contracted with PHF to conduct a focus group study.

Specifically, the focus group study sought to accomplish the following:

1. Determine how public health professionals view the HP 2010 IAP website, including how they perceive the site's relevance and potential benefits to their work.
2. Identify the most and least useful features of the HP 2010 IAP website as perceived by public health users.
3. Observe how public health professionals use the site in order to identify the following:

² Evidence-based Strategies are defined by NLM as those resources that 1) draw citations from the peer-reviewed literature available through PubMed; 2) are designed to yield more information on interventions and models than the extent or nature of problems addressed by a Healthy People objective; 3) ensure that all preformulated searches were reviewed by Public Health Foundation staff or external subject matter experts to check that searches adequately capture most published literature (available through PubMed) related to achieving the objective; and 4) provides links to relevant guidelines.

- Tasks that are performed easily and correctly;
 - Tasks that are performed with difficulty or cause confusion; and
 - Tasks that are performed incorrectly or unsuccessfully.
4. Identify user preferences and needs for web-based information about evidence-based strategies to achieve Healthy People 2010 objectives, in order to recommend improvements or enhancements to the HP 2010 IAP site.
 5. Learn how and where public health professionals currently get information on the effectiveness of strategies to achieve public health objectives.

Methods and Procedures

Recruitment of Participants

The Public Health Foundation (PHF) sought to recruit two groups of eight to 10 participants each for a 90 minute focus group held on January 25,th 2005 at the National Library of Medicine's headquarters, located at the National Institutes of Health (NIH) campus in Bethesda, Maryland. A stipend of \$40 was offered to each participant to cover travel costs to the NIH campus. Participant demographic information (Appendix 4 and 5) and a consent form (Appendix 3) were collected on the day of the study.

Healthy People 2010 and other public health program planners, and those working to develop and implement population-based programs that fall within one of the 28 Healthy People focus areas were targeted as participants for the focus groups. Participants were recruited from the D.C. metro area, including Northern Virginia, the District of Columbia, and Maryland counties of Prince Georges, Montgomery, Howard, and Baltimore.

PHF contacted the three area Healthy People 2010 state coordinators and requested that they assist in the recruitment of participants. Each coordinator was given an information sheet on the study and an application form. In addition, PHF contacted various health associations located in the D.C. metro area whose local members might be willing to participate in the study. Organizations were targeted for their relationship to a particular Healthy People 2010 focus area. For example, the American Dietetic Association, whose 70,000 members represent food and nutrition specialists was targeted because its members may be involved in developing programs related to obesity, heart disease, diabetes, and other Healthy People 2010 focus areas. A complete list of organizations contacted by PHF can be found in Appendix 1.

Focus Group Protocol

Staffing:

1 Primary moderator (PHF)

2-4 Assistant moderators (from PHF and NLM) observed, recorded information, and provided logistical assistance

Duration: 90 minutes

Set up at NLM:

- Computer lab with 8-10 computer stations with internet connections
- Laptop with internet connection, projector, and screen for moderator
- One round or rectangular table and chairs for discussion
- Refreshments and snacks in table area (Participants were asked not to eat or drink at the computer stations)

Design Overview

Upon arrival, participants were asked to complete a short demographic information questionnaire (Appendix 4) describing their job duties related to health planning, age range, education level, and use of the internet to access planning information.

Part I: Introduction (15 minutes)

- Welcome
- Oral overview of topic, overall process, and ground rules
- Quick opening question:
How do you currently get information on the effectiveness of potential public health strategies to achieve your program objectives?
- Instructions and demonstration (modeling desired behavior with another website) for Part II. The moderator also provided a brief background on the purpose of the IAP site.

Part II: Tasks & observation (30 minutes)

- Each person was seated at a computer.
- Participants were asked to "tour" the HP 2010 IAP site individually by completing a short list of tasks on a card. Tasks included:
 - Find articles related to achieving the Objective 19-2 on adult obesity, in the "Nutrition and Obesity" focus area.
 - Use this site to find the latest news on obesity through MedlinePlus.
 - Find the exact wording of Healthy People Objective 23-11 on performance standards, in the "Public Health Infrastructure" focus area.
 - Find articles on strategies to reduce deaths from falls (Objective 15-27).
 - Choose a Healthy People topic important to your planning efforts. Record the topic. Explore the information available on this topic at your own pace.
 - Find a description of the purpose of the site.
 - Find links to Environmental Health organizations dealing with water quality.
- The sequence of tasks was different for each person. The order of tasks was randomly selected, so participants did not know what others were doing and would be less likely to be influenced by others' reactions.
- Participants were asked to "talk out loud" or write down thoughts about their experience using the site, particularly if they had difficulties. The moderator demonstrated the desired participation by completing a mock task for another website (www.thecommunityguide.org), saying out loud comments such as "I think I clicked the wrong button to do this," or "There are too many choices."
- Participants were invited to record any additional comments on the back of their task cards to: a) remind them of potential items to share during the group discussion and b) turn in to the facilitators.
- Observers "floated" in the center area and had a copy of the list of tasks for each participant. When participants commented, observers asked individuals the

number of the task that they were working on and noted their comments. Observers also observed how participants completed tasks directly, without hovering over the participant, and recorded these observations.

Part III: Facilitated discussion (45 minutes)

- Facilitated discussion questions such as the following:
 - *After spending some time on the site, what do you think of it? (Probe for ease, speed, relevance of information, navigation, etc.)*
 - *How useful and relevant to your work is the "PubMed Search" for articles on specific Healthy People topics? Did you use the 'related articles' link?*
 - *If things weren't useful, why not? What other types of information would be helpful?*
 - *Did you find the extra information in the Environmental Health section useful? Would that type of format be useful for the other topics?*
 - *What was the best thing about this site? (Probed for content related comments.)*
 - *What was the worst thing?*
 - *Complete this sentence, "I would return to this site again if..." (probe for both circumstances of when and suggested improvements)*
 - *Imagine that you were in charge of encouraging other public health professionals around the country to use this site. What would you do or say?*
 - *All things considered, what one message should we take back to the people who developed this site?*
- Oral summary.
- Review purposes; asked if anything was missed.
- Thanks and dismissal. For those participants who accepted the stipend, they were mailed.

Analysis:

In the Results section of this report, PHF prepared a written report summarizing the findings of the focus groups, which includes recommendations for areas of improvement and future site development. No information is attributed to participants' names or identifying information in the report. PHF performed a "notes-based, tape-assisted" analysis of the focus group data. PHF staff primarily used their detailed notes and observations from the moderator (PHF) and assistant moderators (PHF and NLM) for the analysis. Staff members consulted the focus group tape for assistance as needed to fill in any missing areas. A transcript was not used.

Participant Demographics

PHF recruited twelve professionals in the target audience for two focus groups on January 25, 2005 at the National Institutes of Health campus in Bethesda, Maryland. A total of eleven participants attended (six in the morning group, five in the afternoon). The program fell slightly short of its original objective, which sought at least seven participants for each group. Seven (64%) participants stated that they had used the Healthy People 2010 Information Access Project website before the day of the focus group.

Participant characteristics described below are based on self-reported information on the demographic information questionnaire.

Age Range of Participants (N=11)	Percent of Participants (Number of Participants)
20-29	18 % (2)
30-39	27 % (3)
40-49	18 % (2)
50+	36 % (4)

Participants in the focus groups had high levels of education (91% had a Master's degree or above). Please note that planners of Healthy People 2010 and similar population based initiatives are typically senior level staff and often have advanced degrees. Thus, while participants are not representative of the public health workforce as a whole, their educational background is likely to be similar to many in the intended target audience.

Over half (54% or 6 participants) said they do the following health planning activities in their jobs: program development, research and literature review, and training or technical assistance to community groups, community advisory boards, etc. Less than half of the participants (27% or 3 participants) said they work with community health improvement plans.

Seven participants (64%) said they "Almost Always" use the web to find information to help them plan their health programs. Another three (27%) said they use the web "Most of the Time," while only one participant (9%) said they "Sometimes" use the web to find information. A graph of the complete demographic information on participants can be found in Appendix 8.

Professional Titles Represented by Participants

- Special projects coordinator
- Epidemiologist
- Public health program specialist
- Nutritionist (2)
- Community health educator
- Program coordinator
- Public health nutrition and health policy advisor
- Public health nursing supervisor (3)

Results

The following findings are based on a qualitative analysis of the information collected by PHF and NLM staff during focus group discussions. Where useful, the report includes information observed during Part 2 of the focus group, during which participants were observed to be using the IAP site.

Information Gathering Habits

- ❑ **Participants frequently use online resources.** Participants were asked how they currently get information on the effectiveness of potential public health strategies to achieve their program objectives. Most participants noted that they use online sources, such as other government agency websites, other NLM sites like PubMed or online journals. Some participants were familiar with and used PubMed and MEDLINE frequently, while others said they did not use these resources.³ Other participants said they found information by attending conferences or calling/talking to colleagues.
- ❑ **Users look for ‘trusted sources’ of information.** Participants said they prefer to gather information from ‘trusted sources,’ which includes health associations, professional listservs, universities such as Johns Hopkins or the University of Washington, as well as other state health departments such as North Carolina or Wisconsin. Participants said they used association websites for a known topic, but were more likely to use Google if the topic was unfamiliar to them.

Observations on Site Value

- ❑ ***The site is very relevant and useful to the kind of work public health professionals’ do.*** All participants agreed that the site was useful for the type of work they do. One person noted it could be a good training tool for Healthy People 2010 related activities. Another participant noted that this site—compared to other Healthy People sites—has added value because of the pre-formulated searches. Most participants agreed that the site provided much useful information.

Overall, participants felt the site content is beneficial to the type of work they do. Other things participants like included: its timesaving pre-formulated searches, the broad range of information available, as well as its links to other sites.

- ❑ ***The site provides a good starting point.*** Participants noted that the site provides a lot of information that could be found in a relatively short period of time. Many referred to it as a “good place to start,” particularly if they had to conduct an

³ Participants with familiarity and experience using other NLM sites such as PubMed or Medline found the pre-formulated searches to be too limiting. They wanted to be able to change the search parameters. Participants with less NLM searching experience found the pre-formulated searches to be a time saver.

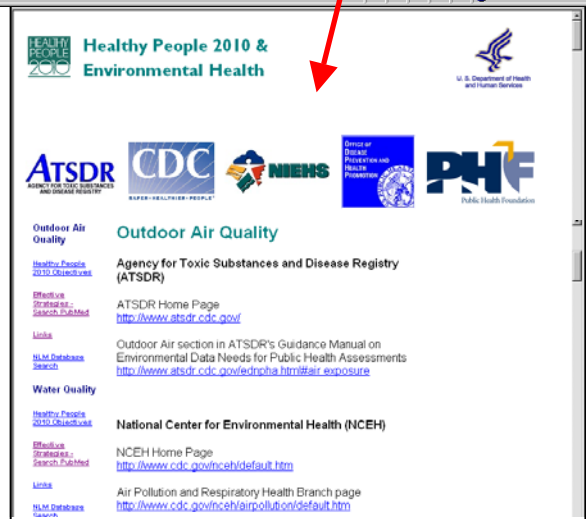
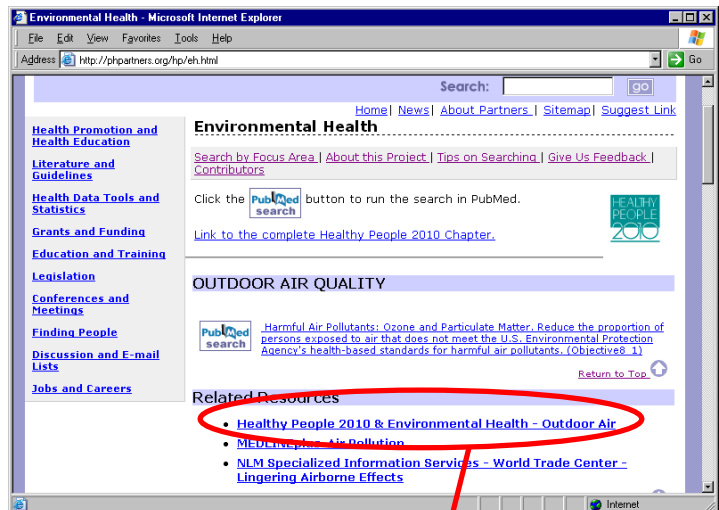
information search on a new or unfamiliar topic. One participant even called it the “Walmart of Healthy People 2010,” referring to the breadth of information on Healthy People. Participants said they liked ‘one-stop shopping,’ referring to sites that contained large quantities of information, with many links to different websites or sources of information.

❑ **The site saves public health professionals time in searching for information.**

Almost all participants thought the site would save them time in their search for information and that it is a particularly good place to conduct a search for either a broad range of topics or for a new or unfamiliar topic. One participant noted that there is a need at the local level to have easily accessible information because public health professionals often don’t have time to dig for it. Another noted that “*If someone needs ‘quick and dirty’ information on program planning, this is the site.*” Users also said they liked that the pre-formulated topics did all the searching for them, which they noted would save them time.

❑ **The extra links are useful.**

Participants were asked if the extra links in the Environmental Health area are valuable. [NLM, PHF and other project partners provide a detailed listing of links to other types of information—such as to the National Center for Environmental Health, the Environmental Protection Agency, Agency for Toxic Substances and Disease Registry, etc—for the Environmental Health focus area. See Healthy People 2010 & Environmental Health page of extra links at right.] One participant noted that she would expect the extra links on the site, noting that “*I would think that the NLM should have it, since they are a repository for information.*” There was a lot of agreement among participants that the extra links provided in the Environmental Health area are valuable, especially for a topic that is new or unfamiliar to a health professional. Most participants agreed that having one trusted source of information or a ‘gateway’ site that provides a robust catalog to links to other trusted sources of information is useful. Only one participant disagreed, saying she would not go to a ‘warehouse’ of information and that she would only go to the site if she were looking for something specific.



Observations on Site Organization

- ❑ **Organization of information by Healthy People focus areas is confusing.** Even users familiar with Healthy People 2010 had difficulty determining where to click for topics that were not explicitly part of the focus area name. As examples, participants did not readily associate "water quality" with the "Environmental Health" focus or click on the "Nutrition and Overweight" focus area for "obesity." Many participants commented that adjusting the way site information is organized would make the site easier to navigate, make information easier to find, and broaden the site's value. One participant noted that the Healthy People focus areas are "kind of narrow" [as search terms]. As one participant noted, *"If you aren't looking for information on Healthy People 2010, this site isn't for you."*

Many participants suggested different ways the site could be organized (by public health department function, surveillance or health promotional activities, etc.). Another commented that organizing the information by public health functions (the 10 essential public health services, or other public health models), would help her to see the relevance of the site to activities that fall outside of Healthy People 2010 objectives. Another noted that *"most people deal with one or two chapters of Healthy People, not just a single focus area."* Most agreed that creating broader topic areas, with examples of related topics listed underneath the main topic area would simplify use and create easier site navigation.

- ❑ **Navigation is relatively easy for experienced internet users, but may be difficult for infrequent web users.** There were mixed results on how easy participants felt the site was to navigate. Most participants said they were able to find articles quickly and that the site is easy to navigate. *"I could find what I wanted in two or three clicks,"* was the majority response in the focus group. However, one participant noted that *"It wasn't intuitive, I went around in circles. You need to know how to find what you're looking for before you can find what you are looking for. This isn't something I do regularly."* In her case, the site was not a time saver. (This participant noted at the beginning of the focus group that she preferred gathering information on evidence-based practices by "talking with peers," not by searching the web.) Another noted that, *"If I were a practicing public health nurse, this site would be difficult to use. I just wouldn't have enough time to go digging around for information."*

Explicitly Stated User Wants

- ❑ **Participants want additional data content for site.** Many participants said they would like information on, or links to, data sets related to the focus areas. Others said they would like to see links to government data tables, something similar to FastStats (http://www.cdc.gov/nchs/fastats/map_page.htm).
- ❑ **Users want easy access to full text articles.** For those who did not have university access or subscriptions to professional health journals, help accessing full text of articles was also cited as information that participants would like to have on the IAP site.

- ❑ **Users want better topic organization and content descriptions.** While one user described the site as the “Walmart of Healthy People 2010,” another noted that “Walmart [the site] can be hard to navigate.” Although participants like that the site is a rich reservoir of information, they agreed that the amount of information can make it hard to navigate. Most participants said they want the site organization on each page to be more ‘synthesized’ or ‘lumped’ into broader categories (which don’t necessarily have to be related to Healthy People 2010), so that the number of overall topics are condensed.
- ❑ **Users want a synthesis of pre-formulated search content.** All the users agreed that the pre-formulated searches save them time. But participants also want NLM to provide a synopsis of several articles to reveal ‘best practices’ or ‘model programs’ for each focus area or objective. They noted that this would benefit public health professionals by reducing the amount of time needed to read through all the articles found on the HP 2010 IAP site. Participants suggested that synopsis information could also include what is known about a specific topic and what gaps in knowledge exist on a particular topic.

Potential Areas for Navigation Improvement

Observers for the two focus groups saw that the majority of participants found the information on their task cards quickly and easily. One participant, who had reported that she had little experience using the internet to search for information, had the most difficult time completing the tasks. She often ended up on the healthypeople.gov site, outside of the HP 2010 IAP site, or on the main Partners (phpartners.org) site.

Below is a list of potential areas for improvement, based upon the areas with which participants were observed to have the most difficulty during Part 2 of the focus group, in which each participant was given a list of tasks to complete that required them to navigate through the site to find information. The same areas of concern were discussed during Part 3 of the focus group, in which participants talked about their experience in using the site to find information.

- ❑ **Left and top navigation menu bars.** Many participants said they were expecting to find the focus areas listed on the left sidebar, as many other websites organize information in this way. They also noted that the left sidebar listed general menu items, which to them had no relationship to the focus areas or even Healthy People 2010. Participants found this confusing. Many noted that “Home” on the top navigation bar bumped them to the



larger Partners site, not the "home page" of the IAP site where other focus areas are listed. One participant suggested programming the site to open a new browser window when users click on a link, to enable them to see where they came from and to alleviate the problem of hitting the "Home" button and being taken to the main Partners site, rather than the IAP site.

Observer comments: A few participants repeatedly used the left navigation menu bar to try to find information. It was not clear to users that this information would refer them to pages in the larger Partners site and not just the IAP site.

- ❑ **Amount of information on each page.** Many participants said they would prefer to have information condensed on the IAP site, so that they did not have to scroll down the page to view all the available information. One participant suggested reducing the amount of information in the Environmental Health section to the top fifteen topics, to make the information more manageable for those conducting searches.

Observer comments: A few of the participants did not automatically scroll down a page to look at all the information listed.

- ❑ **Content descriptors for links.** Participants noted that the IAP site should have descriptors associated with links, which would give a description about what type of information was behind a link before they actually clicked on it. One participant commented *"The nutrition related link took forever to load. You should provide a short description of the information you are going to see, before you click on it. That way you can decide if you really want it before you waste your time downloading it."*

One participant suggested that the "Related Resources" section be renamed to reflect its content in a more accurate way, since many participants did not understand that it contained links to organizations.

Observer comments: As noted above, many participants had difficulty with the task of finding information on water quality organizations in the Environmental Health section. Some users used the search box; others found the focus area and Water Quality, but then still were not sure where to click to get to the "organizations" section.

- ❑ **Search button icon for the "PubMed Search" link.**

Observer comments: Several participants hesitated before clicking on the blue "PubMed Search" icon that would take them to the pre-formulated searches for an objective area. It was not intuitive to many participants that the graphic should be clicked, but eventually most users clicked on the link.

Potential Areas for Search Improvements

- ❑ **Guidance on PubMed search capacities.** Once IAP site users run a pre-formulated search, they are taken outside the IAP site to PubMed, where participants experienced difficulty in refining searches on their own. Many participants said they wanted to be able to search for information in broader ways than the Healthy People 2010 focus area format currently allows. For example, one participant said she wanted to be able to run a search on all focus areas related to children, while another said it would be nice to have a list of key terms or topics that were associated with each focus area. *“The website should not discourage searches by the narrow focus areas or by search term,”* said one participant. Another commented: *“There is no way for me to get population specific information related to children. I want to be able to go to the “Injury and Violence” prevention section and run a mini search on information related to children.”* Note: Although one participant knew how to adjust search limits, others did not notice this.
- ❑ **Search functions on the Partners site and PubMed site.** *“People are used to Google, which is so user friendly and you don’t have to know anything about search terms.”* In discussions, participants noted that when they tried to use the Partners site search for information by Healthy People 2010 objective number (e.g., 2-2), nothing came up in the search results. Many thought a search engine that worked more like Google would be easier to use, not only for the Partners site, but also on PubMed.

Many participants said they wanted more [or more obvious] **search tips**, a **Frequently Asked Questions** page, and greater flexibility in PubMed searching. For example, the ability to adjust the time frame for an article search was desired. (None of the participants noticed that the capability to do this was already available on the site.)

Conclusions and Recommendations

Based on participant feedback from the January 2005 focus groups, the Healthy People 2010 Information Access Project web site was seen by public health professionals as very relevant and useful to the kind of work that relates to program development. The site's purpose—to make information and evidence-based strategies related to the Healthy People 2010 objectives easier to find—is clearly being met by the site's pre-formulated searches. The site delivers significant value for a niche audience of internet-experienced professionals looking for information related to Healthy People and who would otherwise strike out on their own in PubMed or other web sites.

Participants noted that the site was a 'good starting point' for information searches and its pre-formulated searches were seen as providing 'added value' for users because they saved time. The focus groups revealed that the wealth of information on the site has potential value to many public health professionals who do not see themselves as "looking for Healthy People information," offering NLM and the Partners an opportunity to strategically examine whether the site should be changed significantly to serve a broader audience.

There were a few important areas in which participants felt the site could be improved. The following are major areas in which participants either 1) had the most difficulty with the site (as viewed by observers) or 2) where they noted during discussions that the site could be improved.

1. Search function
2. Organization of information by Healthy People topic
3. Expand the additional links area for each focus area
4. Navigation and Design

Both short-term and long-term, strategic recommendations are presented below, as well as suggestions for marketing the current IAP site.

Short-term Recommendations

The following recommendations offer solutions that NLM can complete within the current framework and structure of the HP 2010 IAP site. These recommendations address **navigation** and **design issues**, as well as **expanding the number of links** for each focus area.

1. **Expand the number of links to additional information to full capacity** (as is done in the Environmental Health focus area) **for all focus areas**. Participants noted that the NLM site provided a great 'starting point' in which they could gather large quantities of information about a specific topic. When asked specifically about the value of the expanded content under the Environmental Health section, all agreed it was useful. Prioritize expansions in areas noted by participants, such as database links, working closely with practitioners and subject matter experts. Co-sponsorship

or involvement of leading organizations and associations could reduce the burden of collecting links, reduce duplication, and create a built-in market for the information.

2. **Provide a tutorial of the site.** Many users had difficulty navigating the large amount of information available on the site. Offering an online IAP site tutorial that presents an overview of how the site is organized and how the pre-formulated search strategies work, may help users become better acquainted with the site's features. The format could be similar to the two-minute animated tutorials used for PubMed, which also should be prominently featured on the IAP site. The tutorial could include information on the pre-formulated searches, its limitations, as well as instructions on how users can expand the pre-formulated searches to include more or less terms, a longer period of time, etc. The tutorial could also include tips on how or where to find specific types of information that may not be available on the IAP site, as well as information on how the site relates to larger public health frameworks (such as the 10 Essential Public Health Services, or public health department functions).
3. **Add a FAQ page.** Many participants suggested that the site was too narrowly focused on the Healthy People 2010 project. Users wanted to know how the site's content relates to other public health functions. Adding a Frequently Asked Questions (FAQ) page that includes information on how Healthy People 2010 relates to other public health activities, may help users better understand how the information on the site can be useful.
4. **Provide a written synopsis of information for each focus area.** Participants noted that the pre-formulated search strategies were helpful and saved them time, but that additional 'synthesis' of the information would be very helpful. They specifically suggested adding a literature synthesis of pre-formulated search content. This would require a major investment in time, requiring a NLM staff member or researcher to scan current research and literature for each focus area, analyze the information, and write quarterly or annual briefs. A possible short-term solution would be to pilot the creation of a literature synthesis for one 'hot topic' focus area, such as obesity or its related diseases. NLM could market and track the usage of the synopses, and conduct a second focus group to determine the utility of the pilot.
5. **Provide easier or more prominent assistance in accessing full-text articles,** such as promoting Loansome Doc, internet linkage to the nearest regional medical library, or centralized internet or telephone assistance to order copies where full-text articles are not already linked in PubMed.
6. **Navigation Recommendations:**
 - a. Use a more standard search button to run the PubMed search box to make it more obvious to users.
 - b. Add capability of searching by objective number or Healthy People 2010 chapter.
 - c. Add list of key search or related terms after each Healthy People focus area that can be used to find information related to a focus area.

- d. Move the focus areas to the left navigation bar. Add an IAP “Home” button and eliminate most of the general Partners site navigation from this subsection.
- e. Synthesize the information on each page into more manageable groups. For example, under the section “Health Data Tools and Statistics,” there are seven main headings listed at the top of the page. The seven resources are then listed out on the same page, along with their individual resources. To make the page content less overwhelming for users, NLM should consider moving the content under each of the seven headings to its own page.
- f. Set PubMed search strategies and all links to open in a new browser window to enable users to more easily return to the IAP site for additional information and assistance.
- g. Review the other detailed suggestions in this summary report and focus group notes to decide other potential IAP changes.

Long-Term and Strategic Recommendations

To address the larger issues surrounding the **search function** and the **organization of information by Healthy People focus area**, as well as opportunities to expand the value of the site to a broader audience, PHF recommends the following long-term solutions:

1. **Eliminate or modify the use of Healthy People 2010 focus areas as headings to organize all content.** Although participants agreed that the pre-formulated search strategies were helpful and saved them time, they often had difficulty locating information by focus area name. Although some participants in the target audience said they still work within the Healthy People 2010 framework, many did not. To reach this larger audience that can benefit from the site, users would need to be able to access the information on the site in ways that they are familiar with, whether that be by essential public health service, health department function or current program areas. To meet this need, NLM might test a standard topical interface to find objectives with an *option* to look up objective by exact focus area title, if known. NLM also may wish to explore offering a search feature that matches user key words to the corresponding focus area names, similar to the way users can search the MeSH or MEDLINEplus topic databases to find the corresponding heading or topic name used by NLM to organize information.
2. **Hold several additional focus groups to test alternative strategies to organize the content.** In order to gain a clearer picture of how public health professionals prefer to look for and gather information, NLM should hold several additional focus groups with public health professionals from a broader range of disciplines and internet experience. Issues to explore and information to gather during these focus groups would include: 1) key search words most likely to be used by public health professionals; 2) perceived relationships between site content and the topic names, frameworks or public health models that are currently in use at health departments, and 3) usability testing for proposed site redesign and organization.

3. **Work with PubMed leaders to develop keyword search strategies** that are more like Google and include easy prompts to help users refine searches. After gaining additional information from public health professionals on how they prefer to search for and gather information, NLM IAP staff should work with PubMed staff or Google Scholar (<http://www.scholar.google.com>) to develop search options that mirror how public health professionals work and think. This will help the site become more user-friendly and enable health professionals to quickly and easily find all types of information.¹

Marketing the Site

In an effort to understand how the National Library of Medicine could better market the site to public health professionals, focus group participants were asked: *Imagine that you were in charge of encouraging other health professionals to use the site. What would you say or do?*

Ongoing marketing and promotional activities to the target audience are needed to increase use and knowledge of the site. Many users were not aware of the site, but felt it would be useful to their co-workers. The list below represents PHF's recommendations, as well as recommendations made by focus group participants.

- Create partnerships and request links from organizations that are trusted sources of information from each focus area. Because professionals have a variety of topic-specific sites that they go to for their jobs (e.g. American Heart Association, or the University of Washington), the best way to reach them is through these organizations that may also be enlisted as 'partners' to help with providing links from their web sites to the relevant topics or individual objectives on the IAP site.
- Create or promote a HP 2010 IAP tutorial that would serve a dual purpose 1) creating an awareness of the site via promotion of the tutorial, and 2) teaching the basics of how to search on the site (as noted above).
- Continue to promote the site at the annual APHA conference, as well as other major public health conferences, using targeted marketing towards public health 'program planners' and making available an online demonstration.
- Highlight its easy and time saving pre-formulated searches for those seeking information related to Healthy People 2010. Publicize the site as "a place to start" looking for evidence-based information.
- Promote one focus area a month. Target the promotion towards health organizations and professionals most likely to be interested in the particular focus area. (For example, mental health professionals at the National Mental Health Association or the National Association of State Mental Health Program Directors could be targeted for the 'mental health and mental disorders' focus area.) Request inclusion of links to relevant focus areas in HHS topical communications, such as the HealthFinder.gov notices of monthly health observances, Steps for a HealthierUS e-mails on nutrition and obesity, or the Healthy People listserv notices.

Appendices

APPENDIX 1

List of Organizations Contacted to Recruit Participants for Focus Groups

Organization and Focus Area		E-mail Contact Information
Arthritis Foundation	Arthritis	Kspivey@arthritis.org
American Diabetes Association	Diabetes Kidney Disease	Media@diabetes.org
National Center for the Dissemination of Disability Research	Disability	NCDDR@sedl.org
Agency for Toxic Substances and Disease Registry, CDC	Environmental Health	atsdric@cdc.gov
Family Health International	HIV/AIDS Maternal Infant and Child Health	Network@fhi.org
FoodSafety.gov	Food Safety	dms@foodsafety.gov
	Health Communication	iphwxm@gwumc.edu
Health Communication Partnership	Health Communication	mmc@jhucpp.org
American Heart Association	Heart Disease Stroke	council.connections@heart.org
National Partnership for Immunization— Immunization and Infectious Disease	Immunization and Infectious Diseases	Npi@hmhb.org
National Association of School Psychologists	Injury and Violence Prevention	publications@naspweb.org
National Mental Health Association	Mental Health and Mental Disorders	thebell@nmha.org
National Registry of Food Safety Professionals	Food Safety	info@nrfsp.com
American Dietetic Association	Nutrition and Overweight	cpd@eatright.org
Office of Minority Health Resource Center	Access to Quality Health Services HIV/AIDS	communications@omhrc.gov
National Osteoporosis Foundation	Osteoporosis	Communications@nof.org
American Alliance for Health, Physical Education, Recreation & Dance	Physical Activity and Fitness	aahe@aahperd.org
Planned Parenthood	Family Planning	vikina.mejia@ppfa.org
Association of Reproductive Health Professionals	Family Planning	communications@arhp.org
American Legacy Foundation	Tobacco Use	info@americanlegacy.org
Sight and Hearing Association	Vision and Hearing	jlps@sightandhearing.org
Asthma and Allergy Foundation of America	Respiratory Disease	mike@aafa.org

APPENDIX 2

Focus Group Application Form

Please return by Friday, January 7th, 2005

Please fax to: Houkje Ross
Public Health Foundation
202-218-4409 FAX

Or return by mail: Houkje Ross
Public Health Foundation
1300 L Street, N.W., Suite 800
Washington, D.C. 20005

I would like to participate in a focus group for the National Library of Medicine Healthy People 2010 Information Access Project on January 25, 2005, in Bethesda, Maryland on the National of Institutes of Health Campus.

___ I am available in the morning of January 25, 2005 from 10am to 12 noon.

___ I am available in the afternoon of January 25, 2005 from 2pm to 4pm.

___ I am available for either time period.

Name and Title: _____

Organization: _____

Address: _____

Telephone: _____

Fax: _____

Email: _____

**Questions? Please contact Houkje Ross at 202-218-4415 or e-mail: hross@phf.org
THANK YOU! WE APPRECIATE YOUR INTEREST!**

APPENDIX 3

**National Library of Medicine
Healthy People Information Access Project
Focus Group Participation Form
January 25, 2005**

Information and Consent Form

I state that I am over 18 years of age and wish to participate in a voluntary focus group to evaluate the National Library of Medicine Information Access Project (IAP) website located at <http://phpartners.org/hp/>.

The purpose of this study is to 1) determine how public health professionals view the website; 2) identify the most and least useful features of the site; 3) identify user preferences and needs; and 4) learn how and where public health professionals currently get information on the effectiveness of strategies to achieve public health objectives.

I understand that my voice will be recorded.

All information collected in the study is confidential. No identifying information will be referenced in any report that is published as a result of this study.

I understand that I am free to ask questions or to withdraw from participation at any time without penalty.

Name: _____

Signature: _____ **Date:** _____

I understand that I am eligible to receive a \$40 stipend to cover the costs associated with traveling to the NIH campus.

___ I elect to waive the \$40 stipend.

___ I wish to have the \$40 stipend mailed to the following address:

Name: _____
Address: _____

APPENDIX 4

**Demographic Information Questionnaire
Healthy People 2010 Information Access Project Focus Group**

Name: _____

Title: _____

1. Which of the following health planning activities do you do in your job? Please check all that apply.

- Program development
- Research and literature review
- Training and technical assistance to community groups, community advisory boards, etc.
- Community health improvement plans
- Other (Please describe) _____

2. Age Range. Please check one.

- 20-29
- 30-39
- 40-49
- 50+

3. Level of Education. Please check one.

- High school graduate
- Associate Degree
- College (e.g. B.A. or B.S.)
- Master's (e.g. M.A., M.S.)
- Advanced Degree (Ph.D., Ed.D., Dr.P.H., M.D. etc.)
- Other _____

4. How often do you use the web to find information to help you plan health programs? Please check one.

- Almost always
- Most of the time
- Sometimes
- Seldom
- Never

5. Have you ever used the Healthy People 2010 Information Access Project website before today?

- Yes
- No

APPENDIX 5

DEMOGRAPHIC STATISTICS OF FOCUS GROUP PARTICIPANTS

1. Which of the following health planning activities do you do in your job?

Health Planning Activity	Percent of Participants (Number of Participants)
<i>Program Development</i>	54 % (6)
<i>Research and literature review</i>	54 % (6)
<i>Training and Technical Assistance to community groups, community advisory boards, etc.</i>	54 % (6)
<i>Community health improvement plans</i>	27 % (3)
<i>Other</i>	18 % (2) <i>(Included statistics and outbreak investigation, public health consulting, and HP2010 STD)</i>

2. Age Range:

Age Range	Percent of Participants (Number of Participants)
20-29	18 % (2)
30-39	27 % (3)
40-49	18 % (2)
50+	36 % (4)

3. Level of Education:

Level of Education	Percent of Participants (Number of Participants)
<i>High School Graduate</i>	0
<i>Associates Degree</i>	0
<i>College (e.g. B.A. or B.S.)</i>	9 % (1)
<i>Master's (e.g. M.A., M.S.)</i>	64 % (7)
<i>Advanced Degree (e.g. Ph.D., Ed.D., M.D., Dr.P.H., etc)</i>	27 % (3)

4. How often do you use the web to find information to help you plan health programs?

Frequency	Percent of Participants (Number of Participants)
<i>Almost Always</i>	64 % (7)
<i>Most of the time</i>	27 % (3)
<i>Sometimes</i>	9 % (1)
<i>Seldom</i>	0
<i>Never</i>	0

5. Have you ever used the Healthy People Information Access Project website before today?

Yes	64% (7)
No	36% (4)

Titles Represented by Participants

Special projects coordinator

Epidemiologist

Public health program specialist

Nutritionist (2)

Community health educator

Program coordinator

Public health nutrition and health policy advisor

Public health nursing supervisor (3)

APPENDIX 6

Healthy People 2010 Information Access Project (HP 2010 IAP) Website Focus Group Protocol

Purposes:

1. To determine how public health professionals view the HP 2010 IAP website, including how they perceive the site's relevance and potential benefits to their work.
2. To identify the most and least useful aspects of the HP 2010 IAP website perceived by public health users.
3. To observe how public health professionals use the site to identify the following:
 - Tasks that are performed easily and correctly
 - Tasks that are performed with difficulty or cause confusion
 - Tasks that are performed incorrectly or unsuccessfully
4. To identify user preferences and needs for web-based information about evidence-based strategies to achieve Healthy People 2010 objectives, in order to recommend improvements or enhancements to the HP 2010 IAP site.
5. To learn how and where public health professionals currently get information on the effectiveness of strategies (this is a widely used public health term with public health professionals) to achieve public health objectives.

Participants:

Two groups of 8-10 public health professionals. Public health professionals in the user target audience will be Healthy People 2010 coordinators, program planners, or other agency planners employed by health departments, managed care organizations, non-profit organizations, or other organizations responsible for developing and implementing population-based programs to protect or improve the public's health. The target audience is program planners from the D.C. metro area.

All participants will be recruited from the Washington, DC metropolitan area through personal referrals from Healthy People 2010 coordinators and other local public health leaders. A stipend of \$40 will be provided to cover participants' travel costs.

PHF Staffing:

1 Primary moderator

2-4 Assistant moderators to observe, help record information, and provide logistical assistance

Duration: 90 minutes

Set up at NLM:

Computer lab with 8-10 computer stations with internet connections

Laptop with internet connection, projector, and screen for moderator

One round or rectangular table and chairs for discussion

Refreshments and snacks in table area (Participants will be asked not to eat or drink at the computer stations)

Design Overview

Part I: Introduction (15 minutes)

- Welcome
- Oral overview of topic, overall process, and ground rules
- Quick opening question:

How do you currently get information on the effectiveness of potential public health strategies to achieve your program objectives?
- Instructions and demonstration (of what Stacy would like the participants to do during their performance of tasks (modeling desired behavior with another website) for Part II. The moderator will also provide a brief background on the purpose of the IAP site.

Part II: Tasks & observation (30 minutes)

- Each person will be seated at a computer.
- Participants will be asked to "tour" the HP 2010 IAP site individually by completing a short list of tasks on a card, such as the following:
 - Find articles related to achieving the Objective 19-2 on adult obesity, in the "Nutrition and Obesity" focus area.
 - Find the latest news on obesity through a MedlinePlus link.
 - Find the exact wording of Healthy People Objective 23-11 on performance standards, in the "Public Health Infrastructure" focus area.
 - Find articles on strategies to reduce deaths from falls (Objective 15-27)
 - Choose a Healthy People topic important to your planning efforts. Record the topic. Explore the information available on this topic at your own pace.
 - Find a description of the purpose of the site.
 - Find links to Environmental Health organizations dealing with water quality.
- The sequence of tasks will be different for each person. The order of tasks will be randomly selected, so participants will not know what others are doing and will be less likely to be influenced by others' reactions.
- Participants will be asked to "talk out loud" or write down thoughts about their experience using the site, particularly if they have difficulties. The moderator will demonstrate the desired participation by completing a mock task for another website (such as a search task on "CDC.gov"), saying out loud "I think I clicked the wrong button to do this," or "There are too many choices."
- Participants will be invited to record any additional comments on the back of their task cards to a) remind them of potential items to share during the group discussion and b) turn in to the facilitators.
- Observers will "float" in the center area and have a copy of the list of tasks for each participant. When participants comment, observers will ask individuals the number of the task that they are working on and note their comments. Observers may also observe how participants complete tasks directly, without hovering over the participant, and record these observations.

Part III:

Facilitated discussion (45 minutes)

- Facilitated discussion questions such as the following:
 - After spending some time on the site, what do you think of it? (Probe for ease, speed, relevance of information, navigation, etc.)
 - How useful and relevant to your work is the "PubMed Search" for articles on specific Healthy People topics? Did you use the 'related articles' link?
 - If things weren't useful, why not? What other types of information would be helpful?
 - Did you find the extra information in the Environmental Health section useful? Would that type of format be useful for the other topics?
 - What was the best thing about this site? (Probe for content related comments.)
 - What was the worst thing?
 - Complete this sentence, "I would return to this site again if..." (probe for both circumstances of when and suggested improvements)
 - Imagine that you were in charge of encouraging other public health professionals around the country to use this site. What would you do or say?
 - All things considered, what one message should we take back to the people who developed this site?
- Oral summary
- Review purposes; ask if anything was missed
- Thanks and dismissal. For those participants who accepted the stipend, they will be mailed.

Analysis:

PHF will prepare for NLM a written report summarizing the findings of the focus groups, with recommendations for areas of improvement and future site development. No information will be attributed to participants' names or identifying information in the report. PHF will perform a "notes-based, tape-assisted" analysis of the focus group data. This means that PHF staff will primarily use their detailed notes and observations for the analysis. Staff members will consult the focus group tape for assistance as needed to fill in any missing areas. A transcript will not be used.

Follow-up:

NLM may wish to do the following to determine its plan of action:

1. Meet by teleconference with PHF to review the findings in the context of the WebTrends site web statistics and discuss priorities for modifications or enhancements to the site based on primary data collected through the focus groups.
2. Assign NLM staff to conduct an internal assessment of the site against research-based usability guidelines as identified by the National Cancer Institute (NCI) at <http://usability.gov/guidelines>. As these guidelines indicate, a multitude of factors affect usability of a website, ranging from navigation links to font size to the order of information. Although the focus groups will identify several usability issues that were important to public health participants, we do not expect them to address all potential usability issues. Therefore, an internal assessment of the site also may be useful. Using the NCI's "Web Design and Usability Guidelines" as a checklist, the reviewers could view the Healthy People 2010 Information Access Project site and rate how well the site conforms with the guidelines on a scale of 1 ("Not at all") to 5 ("Extremely well"). Low scores may indicate additional areas where NLM web developers may wish to try to improve the site.

APPENDIX 7

Focus Group Roles

Greeter: Stacy

This person will welcome participants and show them to the coffee table, the computer room, and the location of the bathroom.

Form taker: Houkje

This person will ensure that all participants fill out the consent form and demographic information sheet.

Late arrival handler: Houkje

This person will make sure to brief any late arrivals on what has happened in focus group. To get the later arriver into the computer room as soon as possible; to save time, late arrivers will be asked to fill out only consent forms. They will be asked to fill out the demographic sheet after the focus group has ended.

Hopefully, all late arrivers will only miss the coffee and a small part of the introduction. If they arrive in the middle of the session, while participants are working on task cards, they will be given fewer task cards.

(Back up: lone)

Moderator: Stacy

The moderator's role is to ensure participants understand the purpose of the focus group, give an overview of how the focus group will play out, and give them instructions on the tasks they will be asked to complete.

Assistant Moderators: Houkje, Lisa, lone

The assistant moderator's main role is to *observe* the participants as they complete their tasks. Each assistant moderator will have a list of the tasks each participant has been asked to complete, along with a notebook and pen for recording any observations about specific tasks. (Did the participant find the information s/he was asked to find? If not, what did they do instead? What were the participants saying during the exercise? etc.)

Unless a participant is unable to complete a task, assistant moderators should not help participants in completing the tasks.

Discussion Session Note-taker: Houkje

During the discussion portion of the focus group, a tape recorder will be used. A note-taker will also be capturing the main themes that come up during the discussion.

Back-up: Lisa (During the preliminary introduction of the focus group, this person will take notes while Houkje is out of the room assisting later arrivals).

Time Keeper: lone

To ensure that the focus group is completed within the 90-minute timeframe, a time-keeper will ensure that each part of the focus group is completed within its allotted time.

Welcome/coffee: 30 minutes

Introduction: 15 minutes

Tasks: 30 minutes

Facilitated discussion: 45 minutes

**The participants were told to expect that the entire focus group would take 2 hours. (10-12am or 2-4pm). There is an extra half-hour for welcome, coffee, and/or wrap up.

Technical Assistant: Lisa, lone

If a computer is not functioning properly, the technical assistant would help the participant get set up at a new computer to be able to complete the tasks.

APPENDIX 8

Task Card Code Sheet:

Each task card has a two-letter code written on the upper right hand corner. This allows assistant moderators to quickly identify which task a participant is working on, without interrupting.

The sequence of tasks is different for each person. The order of tasks was randomly selected, so participants will not know what others are doing and will be less likely to be influenced by others' reactions.

DF

Find articles on strategies to reduce deaths from falls (Objective 15-27).

IF

Find the exact wording of Healthy People 2010 Objective 23-11 on performance standards, in the “Public Health Infrastructure” focus area.

MP

Use this site to find the latest news on obesity through MedlinePlus.

NO

Find articles related to achieving the Objective 19-2 on adult obesity, in the “Nutrition and Overweight” focus area.

XX

Choose a Healthy People 2010 topic important to your planning efforts. Record the topic. Explore the information available on this topic at your own pace.

PU

Find a description of the purpose of this site.

WA

Find links related to Environmental Health organizations dealing with water quality.