



Finding and Evaluating Health Information On the Web

Instructor Manual

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Introduction

Finding and Evaluating Health Information is a 2-hour, hands-on workshop designed to introduce the novice or intermediate Web searcher to pre-selected, trusted Internet resources on health topics. Participants will learn about two different health Web sites as you demonstrate the key site features. They will then work as a group to extract research questions from a realistic health-related scenario, and then work independently to find answers to those questions using the two sites in question.

There will be plenty of opportunity for hands-on practice, informal feedback to learners, and lots of time for questions to be asked and answered. Workshop participants will go home with a set of useful handouts on Web searching as well as the health Web sites reviewed in class.

Goal and Objectives

The broad goal of this workshop is to empower community residents to make good health decisions by using health information wisely. The workshop will promote greater understanding of how health information is organized and made accessible on the Internet.

Learning objectives:

1. Given a fictional scenario involving personal health issues, the learner will state three potential researchable questions.
2. The learner will match each of three stated research questions to the site most likely to answer the question.
3. Given a researchable question, the learner will navigate to the search box or screen and type the search term(s) in the correct place.
4. The learner will identify two current treatments for a stated condition or disease.
5. Given the name of a specific medication, the learner will state the names of other drugs that may interact with the stated medication.
6. After reviewing a specified health Web site, the learner will apply eight quality criteria to analyze whether or not the site contains quality, trusted health information.

Workshop Agenda

Below is a schedule of workshop events and activities, and the estimated time you should allow for each. In the **Appendix** of handouts, you will find a version of this agenda to pass out to workshop participants.

Detailed information on the activities is found in subsequent sections of this **Instructor Manual**.

Introductions (10 minutes): Ask learners to briefly introduce themselves and describe their motivation for attending the workshop. If at all possible, limit workshop attendance to eight learners to better facilitate this type of group activity. If any learner returned a *Pre-workshop Survey* and significant issues were disclosed, now is the time to discuss. Distribute the *Review of Basic Web Searching* handout for later reference.

Scenario 1 (10 minutes): Pass out *Health Scenario 1*, the handout with details about a man newly diagnosed with chronic obstructive pulmonary disease (COPD). Work with the group to analyze and extract at least three health-related research questions from the scenario.

Web site demonstration (15 minutes): Pass out the *List of Health Web Sites* which contains the names, URLs, and brief descriptions of the sites you'll demonstrate. Spend five to eight minutes reviewing the basics of each site, focusing on how each might be used to answer various types of health questions.

Scenario 1, revisited (15 minutes): Learners sit at their computers and follow along as you use the two health Web sites to search for answers to the questions generated from Scenario 1.

Scenario 2 – searching exercise (15 minutes): Pass out *Health Scenario 2*, a printed sheet with information about a woman whose father has been diagnosed with early stage Alzheimer Disease. Help the group to again generate three research questions. Working independently, learners will then apply their new knowledge about the Web sites and search techniques to find answers to those questions. Make sure to circulate around the room to answer questions and provide feedback.

Group discussion (10 minutes): Lead a group discussion on *Health Scenario 2*. Talk about which Web sites learners selected and why, and

discuss their search techniques, the answers they found, and any difficulties they may have experienced.

Evaluation criteria (15 minutes): Pass out the *Web Site Evaluation Criteria*, a printed handout that lists eight key criteria and contains a URL link to the same information. Show the participants how to apply the criteria for a given Web site (American Diabetes Association). Encourage learners to participate by helping find the relevant information on the site.

Evaluation exercise (10 minutes): Direct participants to fill out the *Evaluation Worksheet* for a health Web site with questionable information. Encourage them to work in pairs to find the related information.

Assessment (15 minutes): For their *Final Assessment*, give learners a third printed health scenario: the case of a young woman diagnosed with Type 2 diabetes. Working independently, they will generate three research questions and then find the answers to those questions and write them on the *Assessment*.

Wrap-up (5 minutes): Encourage learners to ask questions, make comments, or to follow up with the instructor via e-mail or phone if questions arise later. Pass out business cards or a sheet with contact information to facilitate future contact.

Working with Adult Learners

Researchers in adult education have developed principles and guidelines for training adults (Arnold 1991). In general, adults retain:

- 20 percent of **what they hear**
- 30 percent of **what they see**
- 50 percent of **what they both see and hear**
- 70 percent of **what they see, hear, and say**
- 90 percent of **what they see, hear, say, and do**

Adult learners therefore need not only **hear** a lecture, **see** a demonstration, and **discuss** the material, but they must also have an opportunity to **do** something with the information. For this reason, this workshop has been designed to take advantage of all four types of learning opportunities.

The following table illustrates some principles for working with adult learners, and how to capture those principles in a training environment. The table is adapted from the *Trainer's Guide for Cancer Education* published by the National Institutes of Health and National Cancer Institute.

Participants learn best when...	So a trainer should...
They feel valued and respected for the experiences they bring to the training.	Elicit participants' experiences and perspectives.
The learning experience is active and not passive.	Actively engage participants.
The learning experience fills their immediate needs.	Make sure that content and skills are directly relevant to participants.
New material is related to what participants already know.	Use training methods that establish this relationship and integrate new material.

Learning is reinforced.	Allow participants to practice new skills and ensure prompt, reinforcing feedback.
Learning is applied immediately.	Provide opportunities for participants to apply the new skills they have learned.
Learning occurs in small groups.	Use training methods that encourage participants to explore attitudes and skills with others.
They accept responsibility for their own learning.	Make sure that content and skills are directly relevant to participants so that they will want to learn.

In an adult training situation, trainers should try to move learners through the *adult learning cycle* at least once every module or four-hour period. This cycle, perhaps best expressed by David Kolb (1984), contains four stages:

1. **Experiencing.** Learners do an activity or exercise together, or draw on a shared experience.
2. **Processing.** Learners share observations and feelings about the experience.
3. **Generalizing.** Examining the meaning of the experience, comparing it to other experiences, and identifying general patterns or principles.
4. **Applying.** Developing an action plan for “real life” situations using insight from the other stages.

When using this model, trainers should seek to “chase’ the learner round the cycle, asking questions which encourage Reflection, Conceptualization, and ways of testing the ideas” (Atherton 2005). This can be done one time or many over the course of a single workshop, but the cycle should be completed at least once for an adult learning experience to be complete.

Facilitating Discussions with Adult Learners

Discussion is an important part of any training event for adults, because it allows them to contribute knowledge and expertise from their own experiences. Adults who have been out of the classroom for a while may be reluctant to speak up or contribute to a discussion. They may fear looking silly, or that their comments are irrelevant. There are certain steps you can take as a trainer to help adults feel more at ease, and enable them to make positive contributions to discussions.

- Maintain relaxed body language. Move around, to make yourself seem more accessible to participants, but remain within sight at all times.
- Set some ground rules to help make discussions comfortable and productive. For instance, point out that the instructor will verify that a speaker has finished with his or her comments before opening the floor up to comments from others.
- Ask participants to give examples from their lives when they are making a point.
- Bounce questions back to the group before answering them yourself. Ask the group *“how would you handle this issue?”*
- Always thank participants for their comments.
- Link questions asked or comments made back to things said by participants earlier in the session.

Open ended questions are an important component of the trainer’s toolkit. If the material permits, don’t ask questions that can be answered by a simple “yes” or “no.” Instead, ask questions that begin with “when,” “why,” or “how.”

Open ended questions are “a simple way for trainers to acknowledge that participants have valuable information and experience to share” (National Cancer Institute, 69). Adult learners in your classroom can share ideas and ways to help other learners find solutions and overcome barriers. The ability to make such important and positive contributions goes a long way toward encouraging lively discussion in your training session.

Open ended questions also provide a way for you to make sure learners understand the material you’ve already covered. Use an open ended question to review information from an earlier activity by asking something like: “how does this relate to what we discussed in Activity 1?”

Active listening is another technique to use when facilitating discussions with adult learners. Here are some ways to use active listening in a discussion:

- Repeat what participants say in order to clarify and emphasize their points.
- Connect what participants say to material covered earlier in the training.
- Ask for clarification if a point appears confusing to you or to another learner in the class.
- Always thank participants for their contributions.
- Make eye contact when a learner is speaking.

Positive feedback should be offered to participants as often as possible. However, if you find it necessary to give corrective feedback, do so in a way that helps build learner skills and confidence. To give corrective feedback:

- Focus on the participant's *behavior*, not the participant.
- Always comment on something that the learner did well.
- Point out *one specific thing* on which the participant could improve.

There will usually be at least one learner in a classroom who an experienced trainer may call a **challenging learner**. Since this workshop is optional and participants are quite motivated to be there, the likelihood of having an unmotivated or confrontational learner is minimal. In the event that you *do* have an “arguer” in the workshop, practicing the following tactics may help:

- Control your own temper, and don't allow the individual to “bait” you.
- Try to find merit in points made by the combative individual.
- Give the individual a task or role in the workshop to occupy his or her time and attention.
- As a last resort, call for a 5-minute break and speak to the person in private to find out what's going on.

Information on the preceding four pages adapted from *Trainer's Guide for Cancer Education*. See References section for complete information.

Before the Workshop

To help ensure a workshop free from problems, there are certain activities that you as a trainer must do a few days before the scheduled training event.

Room Requirements

This workshop is designed as a hands-on session, so participants ideally need to have a personal computer on which to work independently. At minimum, classroom space should offer no more than two learners to one computer.

As an instructor, you'll be demonstrating various Web site features and asking participants to watch and then follow along. This means that you'll need to have a PC projector for the instructor PC and a large screen on which learners can view what you're doing.

All PCs should be Internet-enabled and have a Web browser installed (Internet Explorer or Mozilla Firefox).

Participant Handouts

The Appendix of this Instructor Manual contains all of the handouts for participants. For each attendee, you'll need to make one copy of each of the following handouts:

- Learner Agenda
- Web Searching Basics (can be single-page front and back, or two pages)
- Newly Diagnosed COPD (Health Scenario #1)
- List of Health Web Sites
- Alzheimer's Caregiver (Health Scenario #2)
- Evaluating Health Web Sites
- Evaluation Checklist
- Final Assessment
- Workshop Evaluation

To help learners keep all their materials together you may want to provide a folder for each participant, or offer a small 3-ring binder and have handouts pre-punched.

Training Room Set-Up

About an hour before the scheduled workshop start time, make sure that all PCs are booted and able to connect to the Internet. It may be helpful to verify that the two Web sites you'll be using are up and running, although there isn't much you as an instructor can do if either of the sites are down.

Some adult education instructors find it helpful to use a "parking lot" when running a workshop with a specific agenda. A parking lot is a physical area in the classroom – a whiteboard, blackboard, or easel – where participant questions can be "parked" until it makes sense to answer them. For instance, a learner in this particular workshop may ask a question along the lines of, "How do I know if the health information on this site is valid?" This is an important question, but it makes sense to hold the question until the learning activity on health Web site evaluation. Writing the question in the parking lot ensures that the question isn't forgotten, and is answered for all learners. If you choose to use a parking lot in your classroom, set this up ahead of time so it's ready for you to write participant questions.

Using an Assistant

If possible, arrange to have another person serve as an instructor's helper for the workshop. Having a second set of eyes and hands may be crucial if learners have trouble with their computers, can't find the search sites, or get "lost" on the Web. If an assistant isn't available for the duration of the 2-hour workshop, having a helper for the *Health Scenario 2* activity is encouraged. The exercise is only 15 minutes long, but with one instructor and eight participants this leaves little time for meaningful or substantive interaction.

Learning Activities

The following pages offer a detailed look at the scheduled learning activities, including Web site features on which to focus, possible ways to demonstrate the Web resources, and some potential questions to generate during the Health Scenario activities.

Introductions

This is a good opportunity to get a sense of learners' skills with Web search engines in general, and in particular with any experience they have searching for health-related information. Ask each participant to introduce himself, give a primary motivation for registering for the workshop, and briefly state whether he has ever found – and used – health information on the Internet. After all learners have had an opportunity to speak, pass out the *Web Searching Basics* handout. Advise everyone that while generalized search engines won't be addressed in this workshop, this handout may serve as a useful review for future searches.

Health Scenario 1

Pass out *Health Scenario 1*, the case of a man recently diagnosed with chronic obstructive pulmonary disease. You may want to read the scenario aloud while participants follow along. After reading the scenario, ask participants to come up with possible research questions. If you were George, what questions might you have about your diagnosis, your medications, your quality of life, or your prognosis? Everyone will jot down potential questions on the sheet itself to answer later.

Potential questions for this scenario might be:

- What are the primary side effects of Advair?
- What will my prognosis be if I don't completely quit smoking?
- What surgery might be available for COPD?
- What is pulmonary rehabilitation?
- Is bowling OK?
- What are the conditions that would require continuous oxygen use?

Work with the group to generate and write down at least three questions. Then ask learners to put the sheet aside while you show them a few good Web sites for answering health-related questions.

Web Site Demonstrations

Pass out the *List of Health Web Sites*. Spend the next 15 minutes showing participants the basics of the following two health Web sites:

- MedlinePlus
- Drug Digest

MedlinePlus (www.medlineplus.gov)

MedlinePlus is a very large and comprehensive site. Rather than overwhelm participants with the number and availability of advanced features, you may wish to focus on the following areas and features of the site:

1. Point out that all information provided by and linked to from this site is prescreened by librarians and health information specialists at the National Library of Medicine.
2. Explain that users may browse the main areas of the site one at a time, or that they may do a search and look at a results list that pulls information from all areas of the site.
3. The key areas of the site are found on the left hand side of the main page. The most important are *Health Topics*, *Drug and Supplements Information*, *Medical Encyclopedia*, *Health News*, and *Directories*. Spend a few minutes looking at what the user will see when clicking on one of these main areas. You may want to go to *Health Topics* and then COPD, as a preview for the upcoming exercise answering the previous health scenario questions.
4. Also point out that accessible from the main page are interactive tutorials for learning about a number of diseases, conditions, diagnostic tests, and treatments. Let learners know that an up-to-date computer, with sound and multimedia capability, is generally required to successfully use these tutorials.
5. Point out to learners that the drug information on MedlinePlus is comprehensive and accurate, but that the next site may be a better choice if drug information is the primary search target.

Drug Digest (www.drugdigest.org)

Drug Digest is a “noncommercial, evidence-based, consumer health and drug information site dedicated to empowering consumers to make informed choices about drug and treatment options.” Following are key features of the site to review:

1. The site does offer a *Drug Library*, which contains information similar to that found in the drugs section of MedlinePlus.
2. The unique and important features of Drug Digest are its *Check Interactions* tool, and the *Compare Drugs* option.
3. Clicking on *Check Interactions* allows the user to enter in two or more medications to find out if there are any known interactions. The user can select from both prescription and over-the-counter medication, and can also check to see if a particular drug interacts with alcohol or any food. The tool indicates whether an interaction is well documented, and the severity of the interaction.
4. Clicking on *Compare Drugs* lets the user review how different drugs in the same drug class compare in terms of effectiveness, dosing, and availability. This information is brief, and not all drugs are found within this database, but this can be a helpful tool for more commonly prescribed drugs. References to medical research are provided.
5. In the *Compare Drugs* section, users can do a *Side Effect Comparison* on a number of commonly prescribed drugs. When the user enters a drug name, the site presents a list of side effects and an *incidence* percentage for each side effect. For instance, less than 1.0% of people taking acetaminophen (Tylenol) experience nausea. Only .9% of people taking Prilosec experience nausea, but 2.4% of them get headaches.
6. The final tool of interest is the printable *Medication Card*. By clicking the *Interactive Tools* link and then selecting the medication card, a user can print a card to carry in her wallet containing information about her primary care doctor, drugs she is taking, and any known drug allergies.

Health Scenario 1, Revisited

Now that you've introduced the two health Web sites to the learners, it's time to look again at the questions generated from the COPD scenario. Read the questions aloud to the group, and ask them to tell you which of the two sites would be a good place to start looking for answers. If both sites seem appropriate, be prepared to search them both.

Ask learners to follow along on their laptops as you go to either MedlinePlus or Drug Digest. Depending upon the questions that were generated, you can either browse to a particular site area (Health Topics; Interactive Tutorials; etc.) or do a broad, global search. Ask learners to follow along and try the searches that you do, but state that independently searching is okay, too.

Let participants know that this is a good time to ask questions about the sites: how they're organized, the types of information available, how to search, and so on. If a question is asked that seems tangential, put it in the "parking lot" for later discussion. Be prepared to spend 15 minutes on this activity.

Health Scenario 2

After learners have had some hands-on experience with MedlinePlus and Drug Digest, it's time to pass out the next case study. *Health Scenario 2* involves a young woman whose father has just been diagnosed with early-stage Alzheimer's disease. This scenario is unique because two sets of research questions are possible: questions about caretaking for an Alzheimer's patient, and questions about the disease itself.

Go through the same process that you did with *Health Scenario 1*. Read the scenario to the class, and then brainstorm as a group to come up with at least three research questions. Having more than three questions is fine. Since participants will perform the next search independently, it may be helpful for them to have several questions from which to pick.

After brainstorming as a group, ask the learners to apply their new knowledge of searching the health Web sites to come up with possible answers to their questions. The class will have 15 minutes to explore the sites independently. Use this time to circulate around the room, answering questions, providing feedback, and helping those who may be having problems with their computers, the sites, or understanding the assignment. Encourage them to help other learners, but stress the importance of actually searching the sites on their own.

Group Discussion

After 15 minutes, ask the learners to stop searching so that everyone can discuss what they found. Use this as an opportunity to point out that there is often no single right way to search for information; rather, there are multiple ways to locate answers to a specific question. Talk about how they searched and why, the answers they found, and any difficulties they might have experienced. Plan to spend about 10 minutes discussing their searches.

Evaluating Health Web Sites

Tell the participants that it's time to shift gears. Remind them that the two sites you've searched today are *pre-screened* for quality and reliability, but that many other health Web sites they find after they leave may not be. For that reason, it's important to know how to evaluate a health-related Web site.

Pass out the *Evaluation Criteria* handout. Briefly explain that the eight criteria were developed by the Health on the Net (HON) Foundation, and that they provide a generally accepted set of guidelines for health Web sites to follow. Read the criteria aloud to learners, but emphasize that to understand the criteria a user should see them "in action."

On the instructor PC, navigate to the American Diabetes Association Web site (www.diabetes.org). Ask participants to help you find the relevant information on the ADA site, either by directing you or by searching for the information on their own PCs. For instance, the first criterion – Authority – is defined as the following:

Any medical or health advice provided and hosted on the site will only be given by medically trained and qualified professionals. Otherwise, a clear statement should be made that a piece of advice offered is from a non-medically qualified individual or organization.

Where would someone find this information on the ADA site? Ask learners to explore for the answer. Point out that information about a Web site isn't always easy to find; the *About Us* link provides general information about the Association, but not about who is writing the health information on the site. You have to really hunt to find this information, which is in the *Terms of Use* section of the site.

Continue down the *Evaluation Criteria* until you've found most, if not all, of the information needed to evaluate the ADA site. Plan to spend about 15 minutes working on this as a group.

Evaluation Exercise

Pass out the *Evaluation Checklist* to participants. Tell them to choose a partner, and then select one of the following two sites to evaluate as a team:

- The First Human Male Pregnancy
www.malepregnancy.com
- Dr. Lorraine Day's Web Site
www.drday.com

Since there are only 10 minutes for this activity, let the learners know ahead of time that there will likely not be time to review the findings for this exercise. All are welcome to share questions or concerns while working on the checklist. Alternatively, a participant may choose to stay after the workshop is finished in order to discuss the evaluation results with you.

Final Assessment

This is the final learning activity, and an opportunity for participants to demonstrate mastery of the techniques learned today. The assessment offers the same format of the two previous health scenarios. Since this *Final Assessment* serves as a test of sorts, ask learners **not** to ask for help from fellow classmates. Tell them that there are no grades for this activity, but that it is important to understand their own strengths and weaknesses for the learning experience to be meaningful.

Read the scenario aloud in case there are participants with slow or low literacy skills. Advise them they will have 15 minutes to do the following:

1. Come up with three possible research questions
2. Identify which site(s) would most likely answer those questions
3. Find the answers to the questions using one or both of the two sites

While you should not help answer the generated health-related questions, please ask learners to request help with the technology, or with clarification of the exercise.

Wrap Up

While collecting the assessment worksheets from participants, hand out a *Workshop Evaluation* and ask that they complete the brief questionnaire before leaving the classroom.

Ensure learners that you will continue to be available to answer questions, respond to comments, or clarify any confusing material. Decide whether you would rather be contacted by phone or email, and make that point of contact available. If you don't have a preference for the means of contact, you might consider passing out business cards so that participants have your complete contact information.

Congratulations! You've made it to the end of the workshop. Be sure to analyze both the learner *Final Assessments* and the *Workshop Evaluations*. Your analysis will offer valuable information about where you may need to spend more time, clarify instruction, or create an environment more conducive to learning.

References

Arnold, R., Burke, B., James, C., Martin, D., & Thomas B. (1991). *Educating for a change*. Toronto: Doris Marshall Institute for Education and Action.

Atherton, J. S. (2005). *The experiential learning cycle*. Retrieved August 3, 2006, from Learning and Teaching Web site, National Teaching Fellowship Scheme (UK):
<http://www.learningandteaching.info/learning/experience.htm>

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Upper Saddle River, NJ: Prentice-Hall.

National Cancer Institute, National Institutes of Health. (2001). *Trainer's guide for cancer education* (NIH Publication No. 02-5052). Washington, DC: Public Health Service.

**Appendix
Participant Handouts**



Finding and Evaluating Health Information

A Workshop on Health and Medical Information on the Internet

LEARNER AGENDA

1. **Welcome and introductions.** We'll take a few moments to introduce ourselves to our fellow learners, and discuss our individual interest in and motivation for taking this workshop.
2. **Analyzing a health scenario.** Each of you will receive a printed scenario detailing a health-related situation. As a group, we'll come up with a list of possible research questions that a person in that scenario might have.
3. **Trusted health Web sites.** I will demonstrate two trusted and authoritative health Web sites, and you'll have an opportunity to follow along from your own computer.
4. **Health scenario 1, revisited.** After learning the basics of using the health Web sites, as a group we'll use those sites to search for answers to the health questions we generated earlier.
5. **Health scenario 2.** I will pass out a second health scenario. We'll again work as a group to identify at least three important health questions from the case scenario. Then working independently, you'll use the two Web sites to find possible answers to those health research questions.
6. **Group discussion.** Did you have any trouble with the sites? With finding reasonable answers? With expressing the health question as a search term or phrase? We'll discuss our searches and any questions or problems you have.
7. **Evaluating health Web sites.** We'll review 8 criteria to assess the quality of a health or medical Web site. Then we'll use a quality checklist to examine those criteria for one specific site.
8. **Final assessment.** To see if you've retained the information we reviewed today, you'll have one final health scenario to analyze and search. There will also be an opportunity to evaluate the workshop, and ask me any final questions you may have.

Web Searching Basics

Types of Web Resources

Type	Example Site	When to Use
Directory	Yahoo www.yahoo.com	<ul style="list-style-type: none"> • When you have a broad idea or topic • When you want to see a recommended list of sites • When you want to browse in a controlled environment • When you want to avoid lots of documents with little relevant content
Search Engine	Google www.google.com	<ul style="list-style-type: none"> • When you have a narrow or obscure topic • When you are looking for a specific site • When you want a large number of documents on your topic • When you want to search the full text of millions of pages
Deep Web	Complete Planet www.completeplanet.com	<ul style="list-style-type: none"> • When you want changing content such as the latest news or articles • When you want information normally stored in databases, such as listings of doctors, journal articles, laws and regulations, company data, etc.

Here's an example of when you might use each type of Web resource:

Directory	Search Engine	Deep Web
Disabilities	Visually impaired workers	ADA interpretation
Civil War	Battle of Appomattox	Post-war analysis
British Literature	Charles Dickens	Dickens literary criticism

Web Searching Basics

Search Tips and Techniques

Search engines tend to have a default Boolean logic. That means that spaces in between words are interpreted to be either an **AND** or an **OR**. It is very important that you know which term is the default for the search engine you're using.

Search engines usually require phrases to be enclosed in quotations: "instructional design"

There are a few search services that specialize in retrieving results from individual top level domains (*edu; gov; mil*). For instance, **SearchEdu.com** limit results to Web pages found on educational sites.

To search for your keyword as part of a URL, use the following search strategy:

URL: embroidery

This finds all Web sites with the word "embroidery" as part of the URL.

Place the plus sign (+) in front of all words you want to retrieve:

+instructional +design +technology

Meta-search engines allow you to send your search to more than one search engine at a time and return the results from each one. Some of these include **Clusty** (www.clusty.com), **DogPile** (www.dogpile.com), and **Mooter** (www.mooter.com).

Newly Diagnosed COPD

Health Scenario #1

THE SCENARIO

George is a 68-year-old man who had been experiencing shortness of breath for three or four months before he finally saw his doctor. The shortness of breath seemed to get worse when he was climbing stairs, taking a brisk walk, or exerting himself. He has also had a constant, nagging cough for at least six months and has been an on-again, off-again smoker for the last fifty or so years.

After doing some diagnostic tests, his family doctor tells George that he has something called chronic obstructive pulmonary disease, or COPD. COPD is the name for the combined diseases of chronic bronchitis and emphysema. His doctor tells him that must immediately stop smoking.

The doctor feels that his COPD is mild, so George won't have to be on continuous oxygen for now (that may change in the future). Instead, the doctor prescribes Advair, a steroid to be used with an inhaler. One of George's bowling teammates tells him he heard a medical news story about some kind of surgery for COPD, so George wants to bring that up at his next doctor's appointment. When George asks if he can continue bowling and other light exercise, his doctor refers him to a pulmonary rehab center.

WHAT DO WE WANT TO KNOW?

If you were George, what questions might you have about your diagnosis, your medications, your quality of life, or your prognosis? With the group, brainstorm some possible research questions based on the information given above. You should come up with at least three questions.

Flip this page over to write down the questions that the group comes up with. We'll work on answering them later in class.

Newly Diagnosed COPD

Health Scenario #1

RESEARCH QUESTIONS

Question 1:

Possible Answer:

Question 2:

Possible Answer:

Question 3:

Possible Answer:

List of Health Web Sites

Following are the two health Web sites we'll look at today, an additional one you may want to check out yourself sometime, and a link to the Web site evaluation criteria.

ONLINE HEALTH RESOURCES

- **MedlinePlus** (www.medlineplus.gov): Pre-screens and organizes health information from the National Institutes of Health as well as other government agencies and authoritative organizations. Contains textual information as well as multimedia tutorials, streaming video, Spanish language health information, and low literacy materials.
- **Drug Digest** (www.drugdigest.org): Contains comprehensive, evidence-based drug information designed for healthcare consumers, including drug images, contraindications, and drug interactions.
- **American Board of Medical Specialties** (www.abms.org): Offers information on those physicians certified by one of 24 medical specialty boards represented by ABMS. Registration is required to search, but is free.

WEB SITE EVALUATION CRITERIA

- **HON Code of Conduct** (<http://www.hon.ch/HONcode/Conduct.html>): Explains the principles of an ethical and high-quality health Web site as stated by the Health on the Net Foundation.

Alzheimer's Caregiver

Health Scenario #2

THE SCENARIO

Julie's 61-year-old father Jeff has just been diagnosed with early stage Alzheimer's Disease. Julie is an only child whose mother died seven years ago when Julie was 22, so she knows she will eventually become her father's primary caretaker. Julie is single with no children, and has the space and financial resources to help take care of her dad. She has already invited him to live with her.

Jeff's doctor prescribed Aricept for him, and Julie would like to learn more about it. Jeff is already on an antidepressant because he's been depressed off and on since the death of his wife. He also takes ibuprofen regularly for mild arthritis.

Julie also wonders if there is a nutritional aspect to treating Alzheimer's. Are there certain foods she should be cooking to slow the progress of his disease? Or are there any other home treatment regimens that can help? Jeff's doctor mentioned something about possibly enrolling him in a clinical trial, a research study of new medications for Alzheimer's. Julie is worried about taking experimental drugs, but Jeff would like to get more information.

Julie wonders what she'll do when her father's Alzheimer's gets worse and she must leave him alone while she works, runs errands, or socializes outside the house. She knows that outside help is probably available, but isn't sure who to ask or how to find out about the options that exist.

WHAT DO WE WANT TO KNOW?

There are several questions Julie has about Jeff's Alzheimer's as well as her own role as a caregiver. As a group, we'll come up with three questions to research. Then on your own, use the Web sites we discussed to find possible answers for those questions.

Flip the page to record our three questions, and then your answers.

Alzheimer's Caregiver

Health Scenario #2

RESEARCH QUESTIONS

Question 1:

Possible Answer:

Question 2:

Possible Answer:

Question 3:

Possible Answer:

Evaluating Health Web Sites

Health on the Net (HON) Code of Conduct for medical and health sites

PRINCIPLES

1. **Authority.** Any medical or health advice provided and hosted on the site will only be given by medically trained and qualified professionals. Otherwise, a clear statement should be made that a piece of advice offered is from a non-medically qualified individual or organization.
2. **Complementary nature.** The information provided on the site is designed to support, not replace, the relationship that exists between a patient or site visitor and his or her existing physician.
3. **Confidentiality.** Confidentiality of data relating to individual patients and visitors, including their identity, is respected by the Web site. Legal requirements of the country and state of the site are met or exceeded.
4. **Attribution.** Information contained on the site is supported by clear references to source data where appropriate, and where possible, has specific links to that data. The date when a clinical page was last modified is clearly displayed.
5. **Justifiability.** Any claims relating to the benefits or performance of a specific treatment, commercial product, or service is supported by appropriate and balanced evidence.
6. **Transparency of authorship.** The designers of the Web site provide information in the clearest possible manner and provide contact addresses for visitors who seek further information or support. The Webmaster displays his/her email address clearly throughout the Web site.
7. **Transparency of sponsorship.** Support for the Web site is clearly identified, including the identities of commercial and non-commercial organizations that have contributed funding, services, or materials for the site.
8. **Honesty in advertising and editorial policy.** If advertising is a source of funding, it is clearly stated. A brief description of the advertising policy adopted by the Web site owners is displayed on the site. Advertising and other promotional material is presented to viewers in a manner and context that differentiates it from original material created by the institution operating the site.

Evaluating Health Web Sites

Evaluation Checklist

HONCODE PRINCIPLES

1. The site provides general information about the organization or individual responsible for its operation and content, and a person is named as editor or principal author.
 - Yes, an author's or editor's name is given
 - No
2. The site provides medical or health information or advice.
 - Given by medical or health professionals whose training and credentials are listed.
 - A clear statement is made whenever information is offered by non-medical professionals.
 - Some health or medical information is not attributed to an author with credentials.
3. A statement about the purpose of the Web site and its intended audience is displayed.
 - Yes
 - No
4. A statement is made that the information found on the Web site is designed to support, not replace, the relationship between physician and patient.
 - Yes
 - No
5. A privacy or confidentiality policy regarding email addresses, personal information, and medical information is displayed on the site.
 - Yes
 - No
6. Is the last modified date provided for the site?
 - Yes, for the site as a whole.
 - Yes, for each page containing health or medical content.
 - Yes, for all pages of the site.
 - No
7. Does the site contain information from external sources?
 - Yes, but no reference to the source is made.
 - Yes, a valid HTML link is provided to the source data.
 - Yes, a bibliographic reference to the source data is given.
 - No, the content is original, written by the editorial Web site team.

Evaluating Health Web Sites

Evaluation Checklist

8. Does the site make claims relating to the benefit or performance of a specific medical treatment, commercial product, or service?
- Yes, all claims are supported by clear references to scientific research results and/or published articles.
 - Yes, the claims are based on personal research or opinions.
 - No
9. A valid email address for the Webmaster is provided, or a link to a contact form is easily accessible from the site.
- Yes
 - No
10. Is the source of the funding for the site clearly described?
- For commercial or non-commercial organizations: Yes No
- For personal or private sites: Yes No
11. The site displays advertising that is a source of income.
- Yes, and the advertising policy is described.
 - Yes, and separation between editorial content and advertising is obvious.
 - Yes, but no explanation regarding banner advertising is given.
 - Yes, but advertising is not identified as such.
 - No, there is no advertising and a clear statement explaining the decision not to host advertisements.
 - No, but there is no statement displayed.
12. The site is part of a link or banner exchange.
- Yes, and a statement describes the relationship with other sites.
 - Yes, but there is no specific description of the relationship or policy.
 - No

Migraine Headaches

Final Assessment

THE SCENARIO

For about six months, 46-year-old Theresa has had periodic migraine headaches. She had occasional migraines in her 20s, but after the birth of her first child when she was 31 the migraines completely stopped. She can't think of anything that happened six months ago that may have prompted or triggered this new bout of headaches. Although Theresa is still having menstrual periods, she wonders if the headaches signify the beginning of menopause.

Theresa schedules an appointment with her family doctor. The doctor seems a little concerned about the amount of Motrin she's been taking for the last few months. She asks Theresa to start keeping a food and activity journal for four weeks before moving forward with a treatment plan.

Theresa returns after four weeks. The doctor briefly reviews her food and activity journal, but doesn't immediately spot any patterns or triggers. She writes two prescriptions for Theresa. The first, Topamax, is a preventive drug. The second is a nasal spray called Migranal intended for pain relief when Theresa is actually having a migraine episode. Theresa worries about the effects of too many drugs in her system, and also wonders what is safe to take for menstrual cramps and muscle aches when they occur.

Theresa's best friend Grace mentions a magazine article she read on treating headaches with acupuncture, but she doesn't remember if the article specifically mentioned migraines. Theresa is interested, but doesn't know how to find someone who practices acupuncture. She also wonders if relaxation exercise, like yoga or meditation, would help.

WHAT DO WE WANT TO KNOW?

If you were Theresa, what questions might you have about migraine headaches, your doctor's assessment, your prescriptions, or possible therapy? On your own, please come up with three research questions based on the information given above.

Flip this page over to write down the questions. Then select one or both of the Web sites we learned about in class. Use those sites to search for possible answers to your questions. Write those down as well.

Migraine Headaches

Final Assessment

RESEARCH QUESTIONS

Question 1:

Possible Answer:

Question 2:

Possible Answer:

Question 3:

Possible Answer:

Finding and Evaluating Health Information

A Workshop on Health and Medical Information on the Internet

WORKSHOP EVALUATION

Please take a few minutes to answer the following questions about your experience with the workshop today. Your answers will remain anonymous, and will be used to improve future version of this course!

Use the following scale when answering each question, and circle your response:

- 1 – strongly disagree
- 2 – disagree
- 3 – neutral
- 4 – agree
- 5 – strongly agree

1. I learned what I expected to learn in the class.

1 2 3 4 5

2. I learned practical uses of the information.

1 2 3 4 5

3. The instructor demonstrated mastery of the topic.

1 2 3 4 5

4. The instructor interacted effectively with the learners.

1 2 3 4 5

5. The class had a good balance of demonstration and hands-on activities.

1 2 3 4 5

6. There was adequate time to learn the material.

1 2 3 4 5

7. I will be able to use what I learned in the next six months.

1 2 3 4 5

8. I would recommend this course to others.

1 2 3 4 5

Please write any additional comments on the back of this sheet. Thank you for your participation today!