HEAVEN'S GATE? INTERNET PORTALS FOR HEALTH CARE PROVIDERS

YET ANOTHER disease has emerged to cast its blight across the land. Not yet given a name, the syndrome is characterized by being sick of hearing about the internet and its stepchild, the World Wide Web (aka WWW, Web, W[3]). If you suffer from this malady, you may wish to skip this issue. Nevertheless, electronic publication is likely to expand exponentially for the forseeable future.* Already, the WWW offers an essentially limitless supply of medical and pseudo-medical information, in effect guaranteeing that—in case you were still trying—you will never get caught up with The Literature.

While Internet access can be a mixed blessing, there is a growing amount of useful stuff on it. Separating the wheat from the chaff can be a daunting prospect, however—not to mention finding the wheat field in the first place. This *CD Summary* is intended to provide a few tips for finding health care information on the Internet, as well as pointers to a potpourri of interesting sites. For the rank beginner, we recommend two articles that have appeared recently in JAMA.[1,2]

Assuming access to the WWW, generally by modem or hard-wired connection (e.g., through an office network) and an appropriate account, you will need a Web **browser**—software that allows you to view Web documents. The most common browsers today are Netscape Navigator™ and Microsoft Internet Explorer™.

SEARCHING THE WEB

Once connected, you need to find something. One can follow a semi-random sequence of mouse clicks, but this quickly becomes tedious. To go to a specific site, you need its address, or Uniform Resource Locator (URL). URLs typically look something like *http:// www.ohd.hr.state.or.us/cdpe* and must be entered precisely, with proper case and punctuation (or lack thereof).

* presumably with the exponent >1.

Imagine using a library with no librarian or card catalog, and where the pages to every book were dumped into one big pile on the floor. Now imagine that there are millions of people adding, changing, rearranging, and removing pages in this pile every day. This is the Web today, and it can be hard to find what you want.

The tools for searching for information on the Internet are called **search engines**. They allow users to hunt by topic or key words. To investigate a new topic or find general information on a broad subject, the best place to start might be a hierarchical Web directory such as Yahoo™. Such directories attempt to classify sites on the Web into topics branching from the general to the specific. If you have more specific goals, Web indexing programs may be a better choice. Each search engine has its own quirks. Complicated queries are theoretically possible (e.g., Boolean and/or/not searches), but take some study and practice to master in real life. Another article in the JAMA series explores this subject.[3]

Many experts recommend using multiple search engines, as different engines often yield surprisingly different results. Experience helps. Some popular options are listed in the table.

Selected Web Search Engines

For Novices	
Excite	http://excite.com
Lycos	http://www.lycos.com
Webcrawler	http://webcrawler.com
Yahoo!	http://www.yahoo.com
For Experts	
AltaVista	http://altavista.digital.com
HotBot	http://www.hotbot.com/index.html
Infoseek	http://guide.infoseek.com
MetaCrawler	http://www.metacrawler.com
MetaSearch at Highway 61	http://www.highway61.com
The Internet Sleuth	http://www.isleuth.com
Medicine-Specific Search Engines	
Achoo	http://www.achoo.com
Health A to Z	http://www.healthatoz.com
Medsite Navigator	http://www.medsitenavigator.com

THE TRUTH IS OUT THERE

A lot of information is available via the Web. Some of it is accurate. Keep in mind that any clown with a computer and Internet access can set up a WWW site—and most of them have. As with any source of information, you need to have a critical eye and assess the credibility of your sources. For every site put up by a governmental agency, university, or professional organization, there's another laetrile home page.

OHD PLUGGED

The Oregon Health Division is proud to announce the arrival of its new web site at *http://www.ohd.hr.state.or.us*. Present offerings include: current and back issues of the *CD Summary* (in Acrobat™ [pdf] format[†]; check "Stats and Info"), Oregon Immunization ALERT information, weekly tallies of reportable diseases, and many vital Oregon vital statistics. We have ambitious plans for this site and new stuff is being added all the time, so we encourage you to browse it often—daily if possible. Questions, comments, or suggestions for material to post can be directed to the Health Division's Webmeister (*rocke.p.klockner@state.or.us*).

VIRTUAL SITE-SEEING

Thousands of Web sites have information of potential value for health care providers. The annotated table on the back provides a few suggestions for sites you may find interesting. Most provide links to web sites of related interest. If you're looking for a new hobby, scan newsletters and journals for additional Internet addresses.

References

1. Peters R, Sikoski R. The Web, unplugged: hardware, software, and connections. JAMA. 1996;276:1607-1608.
2. Sikorski R, Peters R. Internet anatomy 101: accessing information on the World Wide Web. JAMA. 1997;277:171-172.
3. Peters R, Sikoski R. Navigating to knowledge: tools for finding information on the Internet. JAMA. 1997;277:505-6.

† Adobe Acrobat is a "universal" format that allows formatted text and graphics to be read by those who may not have the applications, fonts, or even operating system used to create them. To read pdf files, Acrobat Reader must be installed on your computer. Different versions of the Reader (for Mac, UNIX, and other fine operating systems) can be downloaded "free" from Adobe's Web site (*http://www.adobe.com*).

Selected Sites of Interest to Health Care Professionals (Like everything else these days, subject to change without notice)

Title & Internet Address (URL)	Comments
Oregon Health Divison *http://www.ohd.hr.state.or.us*	*CD Summary* back issues (in Acrobat format); all you ever wanted to know about the organizational chart of the OHD; vital statistics; more!
Agency for Health Care Policy and Research *http://www.ahcpr.gov*	Clinical practice guidelines.
Catalog of Internet Resources for Health Sciences *http://www.ohsu.edu/bicc-Library/netcat/netcat.htm*	Links to health science organizations and agencies, reference materials, consumer health, local and regional resources, journals, preclinical and clinical topics.
Centers for Disease Control and Prevention *http://www.cdc.gov* *http://www.cdc.gov/nchswww/nchshome.htm* *ftp.cdc.gov (anonymous ftp site)*	CDC prevention guidelines, travel medicine recommendations, the *MMWR*, more.... Links to National Center for Health Statistics. CDC's databases can be queried from CDC WONDER, if you have an account.
Food and Drug Administration *http://www.fda.gov*	Up-to-date notices on drug and device approvals, recalls, etc. Good info about foodborne disease, including the "Bad Bug Book."
Health Canada *http://www.hwc.ca*	Links to many health datasets. Health happenings north of the border. Practice your French.
Health Care Financing Administration *http://www.hcfa.gov*	Medicare/Medicaid information, including laws and regulations by state.
Internet Medicine Online: Electronic Journals *http://www.lrpub.com/imd-bin/wilma/ejournal*	Links to medical journals.
Medscape *http://www.medscape.com*	Peer reviewed articles, medical news by topic, color graphics, interactive quizzes, literature searches, including **free access to MEDLINE** (users are asked to register)
Multimedia Medical Reference Library *http://www.med-library.com*	Access to research journals, audio and video clips and software information.
National Institutes of Health *http://www.nih.gov*	Information by health topic, NIH research news, and listings of health-related organizations.
National Library of Medicine *http://www.nlm.nih.gov*	NLM publications, research programs, and grants. Gateway to health databases and access to MEDLINE and Grateful Med.
NCI CancerNet *http://cancernet.nci.nih.gov*	Cancer treatment information by cancer type, patient information, and summary statistics.
Oncolink *http://oncolink.upenn.edu*	Information on cancer treatments and diagnosis. Links to other sites that focus on cancer.
Oregon Health Sciences University *http://www.ohsu.edu*	Public service programs, patient and physician resources, education and research programs. Link to medical sites from Cliniweb.
Reuters Medical Information System *http://www.reutershealth.com*	Daily medical news by subject area.
U.S. Bureau of the Census *http://www.census.gov*	Census documents including 1990 data, population estimates and projections for various geographic scales.
Virtual Hospital *http://indy.radiology.uiowa.edu/VirtualHospital.html*	Multimedia textbooks, teaching files, and clinical guidelines.
Washington State Dept. of Health *http://www.doh.wa gov*	Check out the competition. Lots of neat stuff. Reasonably accurate.
World Health Organization *http://www.who.ch*	Epidemiological issues, including infectious disease outbreaks around the world. Statistical information by topic.
WWW Internet Biomedical Resources *http://sun3.lib.uci.edu/~sclancy/med.htm*	Links to information on clinical medicine, consumer advocacy, diseases, drugs, physician directories, practice guidelines, software, and medical societies.