



**2007-2008 EVALUATION ACTIVITIES FOR THE
FLORIDA ELECTRONIC LIBRARY:
PUBLIC LIBRARIES AND
CONSUMER HEALTH INFORMATION RESOURCES AND SERVICES**

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EXECUTIVE SUMMARY

Overall, the study finds there are a broad range of consumer health services that public libraries provide and numerous approaches by which these services and resources can be made available. In addition, a number of Florida public libraries are currently providing innovative approaches to make such information available to the public. The findings also show that Florida citizens utilize public library consumer health information resources and services by asking questions on a range of topics such as diseases, diagnosis, medications, medical procedures, and E-Government health-related issues. For example, one finding of the survey is that 87% of respondents (librarians) indicate users ask them health related questions.

The various data collection activities show that public librarians in Florida engage in a broad range of consumer health information services. They have significant interest in further developing these services, have a number of training suggestions for increasing knowledge and skills related to consumer health information, but struggle with adequate resources and staff to support or expand these efforts.

Despite the significant amount of involvement in the provision of consumer health information resources and services by Florida public libraries, public librarians are not in agreement as to their specific roles and responsibilities for this effort. While some would embrace additional responsibilities and activities in the provision of consumer health information, others are not as certain as to the extent to which public libraries should be taking on additional responsibilities – especially when there are currently significant spending cuts affecting public libraries from both the state and local levels.

The purpose of this assessment of consumer health information and services is to understand Florida public library needs for access to health resources and services. In addition, the study can assist the Florida State Library and others plan for and develop strategies to improve Florida residents' access to and use of consumer health information. The goal of this research is to improve the success by which the FEL meets the health information needs of Florida residents and more specifically public library users. To meet this goal, this research has the following objectives:

- Identify local, state, and national consumer health information resources and services;
- Identify user, local library, and FEL issues related to the provision of and access to these resources and services;
- Understand Florida residents' use of consumer health information resources and services through local public libraries; and
- Provide recommendations to the State Library on how the FEL can better provide consumer health information and services to public libraries and schools for Florida citizens.

A review of public library current roles and activities in the provision of consumer health information, interviews with multi-library cooperative directors, focus groups, and a statewide survey of public libraries comprise the data collection effort for this study. Ultimately, findings and recommendations from the report can be used to improve Florida residents' access to and use of consumer health information.

The study makes a number of recommendations that are discussed in greater detail in the report itself:

- Clarify public library roles in the provision of consumer health information services;
- Develop a comprehensive public librarian consumer health information training program;
- Make available more FEL consumer health information resources;
- Increase FEL marketing and advertising;
- Encourage collaborative partnerships between public libraries and health care organizations;
- Encourage collaborative partnerships between public libraries, other libraries and government agencies;
- Develop Web 2.0 and Ask A Health Librarian Services; and
- Conduct Additional Research.

These recommendations provide a beginning strategy to improve Florida residents' access to and use of consumer health information through public libraries.

With increased expectations from Florida citizens for access to and quality of consumer health information coupled with the changing policies and practice of the health care and insurance industries, as well as a push towards open E-Government in the state, librarians face new challenges in the provision of consumer health information. The FEL may serve as an excellent resource for users and librarians seeking answers to health-related responses, but the FEL should be considered as one option (although a very important one), among others, for building a statewide consumer health information network.

There are some strategies that may leverage existing consumer health information services and resources such that they are better known and accessed by Florida residents. But for many of these recommendations, the continued development of such services and resources requires additional funding and support for the State Library of Florida and Florida's public libraries. Investment, however, in Florida residents having greater knowledge of and access to consumer health information is likely to pay significant dividends in a healthier population and possibly reduced overall health care costs.

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INTRODUCTION

The 2007-2008 Florida Electronic Library (FEL) evaluation activities include support for the planning and development of the next FEL five-year plan, an assessment of public library needs to better provide consumer health information via the FEL, a continuation of assessment of the *Ask A Librarian* component of the FEL, and support to the State Library and Archives of Florida (State Library) regarding the maintenance and analysis of FEL statistics. This report presents the results of the statewide consumer health information needs assessment. The results of the needs assessment provide findings that support the continued delivery and future development of consumer health information services and resources through the FEL.

Currently there are a range of information resources related to medical and consumer health information available through the FEL; however, the degree to which these resources are being accessed and used effectively by both the library community and Florida residents is not known. In addition, there is a current statewide initiative among academic medical libraries, various health care organizations, and others to plan for a statewide consumer health information network. The purpose of the current needs assessment is to improve use of current FEL medical and consumer health information services and resources, identify Florida citizen's needs for services and resources through the FEL, and inform the long range plan for design and development of a statewide consumer health information network.

Overall the current consumer health information needs assessment finds that public libraries provide a broad range of consumer health services and there are numerous approaches by which these services and resources can be made available. In addition, a number of public libraries are currently providing innovative approaches to make such information available to the public.

The various data collection activities of this study show that public librarians in Florida engage in a broad range of consumer health information services, have significant interest in further developing these services, and have a number of training suggestions for increasing knowledge and skills related to consumer health information; however, they struggle with inadequate resources and staff to support or expand these efforts. The results of this study will assist the State Library and others to plan for and develop strategies to improve Florida residents' access to and use of consumer health information.

Overview of the FEL

In a January 2007¹ report to the State Library, the Information Use Management & Policy Institute (Information Institute) of Florida State University concluded the FEL has significantly advanced library service for Florida residents during the years 2003-2007. In addition, based on the development levels of each FEL component (i.e., planned and implemented) the FEL will continue to make significant progress towards meeting its goal of providing Florida residents electronic access to information resources and services through the statewide virtual library.

¹ Information Institute. (2007). Florida Electronic Library five-year evaluation (2003-2007). Tallahassee, FL: Information Use Management & Policy Institute.

The FEL links services and resources from different types and sizes of libraries and other organizations across the state. Participant organizations of the FEL include public libraries, academic libraries, special libraries, library consortiums, K-12 media centers, and regional resource centers. Shared access to resources and services held by these participants broaden Florida residents' access to information resources, resources often developed from funds provided by all residents of Florida.

These shared services and resources also provide educational and economic benefits to residents of Florida and to Florida libraries. Centralized licensed products and access to shared resources provide educational opportunities to students not otherwise available and offer economic incentives for participant organizations to share the cost of expensive and at times unobtainable resources.

Based on the 2006-2007 study, the Information Institute found that the FEL provides a wide range of electronic information services and resources that are presented in an organized, coherent, and accessible manner. Also, the study found that FEL resources complement resources currently held in Florida public library collections and provide Florida residents the means for access to a multitude of resources they would not otherwise have at a local level. Some examples of the importance and use of FEL resources and services include:

- As of FY 2006, two hundred sixty four Florida libraries had records in the FEL union catalog;
- FloridaCat Bibliographic increased 330% in total holdings from FY 1986 (7,956,199 total holdings) to FY 2006 (34,207,430 total holdings);
- Gale database searches have grown from an average of 250,000 per month at the beginning of FY 2004 to an average of one million per month at the end of FY 2006;
- Gale & OCLC FirstSearch total searches increased 182% from FY 2005 to FY 2006, an increase from 6,215,938 to 17,572,114 searches;
- FEL portal usage statistics for FY 2004 to FY 2005 increased 44% in total sessions, 43% in the number of full-text downloads, and 25% in the number of items retrieved;
- Total Searches through the FEL portal increased 276% from FY 2004 to FY 2005; and
- FEL web site statistics (i.e. statistics from Thomson-Gale, OCLC FirstSearch, FloridaCat, and Florida on Florida) show 20,042,676 total searches occurred through the FEL web site in FY 2005, an increase of 222% in total searches from FY 2004.

In response to use of and access to FEL services and resources, as presented above, Florida residents (i.e., those who participated in past evaluations) support the concept of a virtual library for the state of Florida and the continued development of the FEL as the virtual library. Based on the results of the 2006-2007 study and other evaluations conducted from 2002 to present, the Information Institute has determined that continued development and implementation of FEL components and other resources during the next five-year period (2008-2012) will offer additional benefits and impacts for Florida residents in terms of access to shared information resources and services.

Consumer Health Information Background and Approach

Currently there are a range of electronic information services and resources related to medical and consumer health information available through the FEL and Florida's public libraries. It is unclear, however, the degree to which library communities effectively access and use these resources, how effectively these resources meet residents' needs, and what types of local, state, and national resources and services are available to meet residents' needs. In addition, a host of issues exist related to users' abilities to access useful medical and health resources and local libraries' abilities to provide access to these resources.

In order to better understand Florida resident's needs for access to consumer health information and services and how local libraries provide access, this study addressed the following research questions:

- Who are the users of existing FEL medical and consumer health information resources?
- What do public librarians think are the most important issues that need to be addressed to improve access and use of FEL medical and consumer health information resources?
- What medical and consumer health information resources and services, other than those already provided by the FEL should be considered for purchase or development?
- What are the training needs of public librarians and public schools in the provision of medical and consumer health information through the FEL?

These research questions provided guidance for the development of the goal, objectives, and research methods used in this study.

Addressing these questions provided an assessment of how the FEL and public libraries currently provide access for Florida residents to consumer health information resources and services. Results from the needs assessment can:

- Assist library administrators, librarians, and users of the FEL with the location and use of FEL medical and consumer health information services and resources; and
- Inform FEL developers of the types and kinds of resources users need and want.

In addition to efforts to understand user needs at a local library level, there is a statewide initiative among academic medical libraries, various health care organizations, and others to plan for a statewide consumer health information network. The results of this assessment of consumer health information resources and services includes recommendations that support the statewide initiative and identify future areas of research needed to improve access for Florida residents to useful medical and consumer information services and resources.

Purpose, Goal, and Objectives

The purpose of this needs assessment is to understand Florida citizens' needs for access to medical and health resources and services. The goal of this research is to improve the success by which the FEL meets Florida citizens' needs for medical and health information. To meet this goal, this research has the following objectives:

- Identify local, state, and national consumer health information resources and services;
- Identify user, local library, and FEL issues related to the provision of and access to these resources and services;
- Understand Florida residents' use of consumer health information resources and services through local public libraries; and
- Provide recommendations to the State Library on how the FEL can better provide consumer health information and services to public libraries and schools for Florida citizens.

The objectives above provide guidance for the development of the data collection strategy.

Methodology

The investigation of consumer health information and its delivery through public libraries utilized a literature review and a user needs assessment to address the goal and objectives of this study. The literature review provides an overview of electronically available consumer health information resources and services and introduces selected issues related to the provision of resources and services through public libraries.

The user needs assessment includes interviews, focus groups, and a survey. The results of each method are presented in the following sections of this report. In addition to the results of the literature review and user needs assessment methods, this report provides a summary of the results of data collection efforts and recommendations on how the FEL might better provide consumer health information and services to public libraries and schools for Florida citizens.

User Needs Assessment Methods

The user needs assessment consists of a multi-method approach for data collection and analysis. Research participants include Florida's Multi-Library Cooperative (MLC) directors and public librarians throughout the state of Florida.

The study team interviewed MLC directors for their administrative perspective on the FEL, MLC medical and consumer health information services and resources, and librarian training. The research team conducted focus groups around the state in each of the six MLCs to gain a more detailed perspective of the day-to-day health related questions and challenges faced in libraries,. The research team also used web-based surveys to reach out to librarians not able to attend the focus groups.

Data collection activities for interviews, focus groups, and surveys occurred between January 15, 2008 and March 15, 2008. Descriptions of data collection methods include:

- *Interviews and Focus Groups* – the research team conducted telephone interviews with directors of Florida's MLCs and focus groups with volunteer librarians in each of the six Florida MLCs. The research team developed a protocol to assess the current use of FEL's medical and consumer health resources and training needs of librarians on the use of medical resources (i.e. searching databases such as PubMed, Web MD, etc.). A copy of

the interview/focus group protocol questions is available in Appendix A of this report; and

- *Surveys* – based on the focus group and interview results, the study team developed a web-based survey to assess the current use of FEL’s medical and consumer health resources and training needs of librarians. Participants included library managers, librarians, library staff, FEL Network Advisory Council members, State Library staff, and others as identified through the research process. A copy of the electronic survey data collection instrument is available as Appendix B of this report.

All three methods of data gathering focused on answering the study questions regarding who uses the FEL, which issues to address to improve access and use of the FEL, what other resources and services would improve the FEL, and what are the medical and consumer health training needs of public librarians.

Data Collection Activities

Interviews

The research team contacted MLC staff January 24, 2008 to schedule one-hour teleconference interviews with MLC directors. The research team confirmed the teleconference dates on January 29, 2008 and conducted phone interviews with the directors of the following MLCs on the following dates:

- PLAN - 2/7/2008;
- CFLC - 2/7/2008;
- SEFLIN - 2/12/2008;
- SWFLN - 2/12/2008;
- TBLC - 2/12/2008; and
- NEFLIN - 2/12/2008.

The research team completed six interviews. In addition, the research team included questions from the survey as part of the interview process (see Appendix B) for comparison across methods.

Focus Groups

Initially, the research team anticipated conducting two focus groups in each of the six MLCs; however, due to scheduling difficulties the research team conducted one focus group per MLC. The number of participants and the focus group dates for each MLC includes:

- PLAN – focus group 3/5/2008 with 6 participants;
- TBLC – focus group 3/11/2008 with 3 participants and 3 no shows;
- SWFLN – focus group 3/12/2008 with 1 participant and 1 cancellation;
- CFLC – focus group 3/13/2008 with 4 participants and 2 no shows;
- SEFLIN – focus group 3/14/2008 with 9 participants and 1 no show; and

- NEFLIN – focus group 3/27/2008 with 8 participants and 1 no show.

In summary, the research team conducted a total of six focus groups with 31 of 39 scheduled participants. In addition, the research team included questions from the survey to the focus group sessions (see Appendix B) for comparison across methods.

User Surveys

The research team pilot tested the online survey January 10-12, 2008 with twelve FSU College of Information doctoral students and four FSU librarians. Final survey instrument development occurred January 16, 2008 (see Appendix B). Additional edits to the online version of the survey were completed by February 28, 2008 and the survey became available for participants February 29, 2008. The online survey was available for participants over an eight-week period, from March 1 – April 19, 2008. The log of weekly counts of submitted surveys (i.e. participants initiated the online survey process) provide the following numbers:

- Week 1 – 3/1-3/7/2008, 78 surveys received;
- Week 2 – 3/8-3/14/2008, 63 surveys received;
- Week 3 – 3/15-3/21/2008, 30 surveys received;
- Week 4 – 3/22-3/28/2008, 21 surveys received;
- Week 5 – 3/29-4/4/2008, 48 surveys received;
- Week 6 – 4/5- 4/11/2008, 8 surveys received;
- Week 7 – 4/12-4/18/2008, 1 survey received; and
- Week 8 – 4/19-4/25/2008, 15 surveys received.

The research team completed collection of surveys April 25, 2008.

The research team received a total of 264 surveys. Initial review found that 54 surveys were blank (i.e. respondents merely clicked through the survey without answering the questions) and 50 surveys were incomplete (i.e. respondents did not answer all the questions). In summary, the research team received 160 completed surveys and 50 partially completed surveys for analysis. The study team cautions readers that the data cannot be generalized across the populations investigated. Thus, the findings may be indicative of broader issues and findings; however, at this point are strictly preliminary and represent the views and responses of study participants.

PUBLIC LIBRARIES AND CONSUMER HEALTH INFORMATION SERVICES

“Consumer health information is defined as an umbrella term encompassing the continuum extending from the specific information needs of patients to the broader provision of health information for the lay person” (Consumer, 2005). Until recently, most consumer health information research focused on either clinicians’ needs or consumer health information requests inside the hospital (Zheng, *et al*, 2004). The research emphasis has shifted to consumers with the development of a variety of web resources. Web resources can be an excellent information resource for health-related documents (National, 2008); however, the increased ease to produce web resources and increase usage creates concerns about the quality of health-related information found on the Internet. Identifying quality information and locating relevant sites from numerous resources available on the Internet is a challenge for users.

This literature review begins with a background of consumer health information in terms of access to health information electronic resources. Next, the review introduces selected issues related to the provision of consumer health information services and resources to Florida citizens through public libraries that include:

- *User Issues* – Internet access, information literacy, health literacy, and traditional literacy, electronic medical records, electronic health records, and personal health records;
- *Local Library Issues* – cost, staffing, training, implementation, and outreach; and
- *State Library Issues* – evaluating resources, building a statewide consumer health information network, promotion, and evaluation

In addition to these issues, a final section of this review summarizes how the needs assessment of this project meets the issues presented in this review. References for the literature review are available in appendix D.

Background of the Electronic Provision of Consumer Health Information

Identifying quality information among the numerous resources available on the Internet is a challenge for users. By evaluating health-related web resources, librarians can help reduce the dissemination of inaccurate consumer health information to users. The following section discusses guidelines for the evaluation of consumer health information web resources and various consumer health information web resources recommended by the Medical Library Association’s Consumer and Patient Health Information Section and available through the State of Florida Agency for Health Care Administration (ACHA).

Guidelines for Evaluation of Consumer Health Information Web Resources

The Medical Library Association’s Consumer and Patient Health Information Section follows National Jewish Medical and Research Center (NJMRC) guidelines when evaluating the quality of consumer health information web resources. Guidelines include content, authorship, purpose, design, and disclosure (2008). The NJMRC guidelines are provided below in Table 1.

Attribute	Qualities
Content Is the information...	accurate factual current comprehensive referenced disguised advertising
Authorship Does the producer of the site provide...	credentials qualifications accountability conflicts of interest sponsorship
Purpose Is the purpose of the information to...	explain inform persuade (sell)
Design Does the site have good...	organization navigation style graphics clarity links access for all users
Disclosure Do they ask for your name...	privacy issues

Table 1: NJMRC Guidelines

Consumer Health Information Resources

The Medical Library Association's Consumer and Patient Health Information Section (<http://caphis.mlanet.org/consumer/index.html>) produces a top 100 list of consumer health information web sites and a top 10 list of the most useful consumer health information web sites. Table 2 (below) presents the top 10 list. The Medical Library Association presents the list in alphabetical order as shown below (Medical Library, 2008). The evaluations for the top 10 and top 100 lists follow the NJMRC Guidelines for criteria (Table 1 above), but the quantified rankings are not provided. The alphabetical list may be given as opposed to a quantified rankings list to avoid the politics of comparing well-known health organizations' web sites.

Web resource	Description
Cancer.gov (http://www.cancer.gov/)	Cancer.gov provides valuable cancer-related information. For the general public, patients, and health professionals, it offers consumer-oriented information on a wide range of topics as well as comprehensive descriptions of their research programs and clinical trials.
Centers for Disease Control and Prevention (CDC) (http://www.cdc.gov/)	The CDC provides health and safety information for all types of users.
Familydoctor.org (http://familydoctor.org)	Familydoctor.org is operated by the American Academy of Family Physicians (AAFP), a national medical organization representing more than 93,700 family physicians, family practice residents and medical students. All of the information on this site has been written and reviewed by physicians and patient education professionals at the AAFP.
Healthfinder (http://www.healthfinder.gov)	Healthfinder is a Federal web site for consumers developed by the U.S. Department of Health and Human Services together with other Federal agencies. It has been recognized as a key resource for finding the best government and nonprofit health and human services information on the Internet.
HIV InSite (http://hivinsite.ucsf.edu/)	HIV InSite provides comprehensive, up-to-date information on HIV/AIDS treatment, prevention, and policy.
KidsHealth® (http://kidshealth.org/)	KidsHealth provides families with accurate, up-to-date, and jargon-free health information. The site is divided into sections for kids, teens, and parents.
Mayo Health (http://www.mayohealth.org)	The Mayo Health web site represents the three underpinnings of the Mayo Clinic's reputation as a pioneer and innovator in medicine - patient care, medical research, and academic education. The site includes videos, slideshows, podcasts, and blogs that utilize Web 2.0 technologies to inform consumers about different aspects of health.
MEDEM: an information partnership of medical societies (http://medem.com/)	MEDEM develops and provides secure, online communications services for use by physicians and other health care providers, including hospitals, health systems, etc., with their patients.
MedlinePlus (http://www.nlm.nih.gov/medlineplus)	MedlinePlus is a high quality authoritative health information web site provided by the National Library of Medicine (NLM) at the National Institute of Health (NIH).
NOAH: New York Online Access to Health (http://www.noah-health.org)	NOAH provides access to high quality full-text consumer health information in English and Spanish that is accurate, timely, relevant and unbiased

Table 2: The Medical Library Association's Consumer and Patient Health Information Section's top 10 list

Countless other web sites exist with quality consumer health information beyond the Medical Library Association's 10 most useful web sites. Of note, the National Center for Complimentary and Alternative Medicine (<http://nccam.nih.gov/>) provides consumers with an alternative medicine perspective, NIH Senior Health (<http://nihseniorhealth.gov/>) specializes in issues exclusively related to seniors and the National Institute of Mental Health (<http://www.nimh.nih.gov/>) contains information on the diagnosis, treatment, and prevention of mental disorders. MedlinePlus deserves additional mention because it allows users to locate specialized information, e.g. clinical trials and drug information.

Additional Useful Public Library Resources for Florida Citizens

AHCA (http://www.fdhc.state.fl.us/Consumer_Resources/index.shtml) provides links to a variety of Florida-specific consumer health information web resources for Florida citizens. Table 3 (below) provides a sample of AHCA resources offered through AHCA's main web site.


Web resource	Description
Consumer Complaint, Publication and Information Call Center (http://www.fdhc.state.fl.us/Consumer_Resources/index.shtml)	This agency provides a toll-free telephone system for consumers to call to file complaints, receive publications, information and referral numbers
FloridaHealthFinder.gov (http://www.floridahealthfinder.gov/) 	FloridaHealthFinder.gov provides information for comparing hospitals, ambulatory surgery centers, health plans, nursing homes, and prescription drugs. The website also lists Florida health care facilities, information on health insurance, medical care resources for the uninsured, resources for seniors, and much more.
Office for Civil Rights - HIPAA (http://www.hhs.gov/ocr/hipaa/)	This web resource provides information on HIPAA
Nursing Home Guide (http://ahcaxnet.fdhc.state.fl.us/nhguide/)	Nursing Home Guide provides a list of nursing homes by region and comparative analysis of the homes

Table 3: ACHA resources

Public Libraries and Consumer Health Information

Librarians' expertise of information resources and their abilities to evaluate the quality of information attracts users with health-related questions to public libraries (Chepesiuk, 2007). In 2000, Wood et al. found that twenty percent of reference requests received by a sample of public libraries were health related. It is reasonable to assume the number of health questions asked at public libraries will not diminish with an aging American population, increasing news coverage of health issues, and changes in public and private health insurance (Gillaspy, 2005).

Since the provision of consumer health information lacks best practices and benchmarks, existing literature in library and information science are limited to a few case studies. Some Florida public library web sites were reviewed to assess efforts to develop programs and services that meet users' consumer health information needs (Libraries for the Future, 2005). The review discusses the issues from the perspective of the user, the local library, and the State Library of Florida. Issues related to a user's access to consumer health information resources include literacy barriers that affect how a user locates and comprehends quality health resources.

Each local library has unique concerns about the costs for resources and training as well as staffing and implementation to ensure Florida citizens can receive help accessing consumer health information resources. State Library issues related to the FEL include evaluating consumer health information electronic resources to include in the FEL, building a statewide consumer health information network that incorporates all consumer health information resources, the promotion of FEL to Florida residents and librarians, and the future evaluation of the FEL.

User Issues

Access for Florida citizens to electronic consumer health information resources includes Internet access issues and literacy barriers that affect users ability to locate and comprehend quality health information resources. Locating consumer health information electronic resources requires Internet access and the ability to locate and evaluate information. The American Library Association (ALA) refers to this as information literacy. Information literacy is a set of skills that help users' access consumer health information resources (American Library Association, 1989).

Another skill set necessary for users' access to consumer health information resources is health literacy, which includes a user's ability to execute basic reading and arithmetic to function in the health care environment (Norman & Skinner, 2006). These issues affect users and the way public librarians are able to assist them. These issues may inhibit a user's ability to communicate health information requests to public librarians, health professionals, etc. An emerging issue for users is access to their own personal health records (PHR), and related information exchanges of electronic medical records (EMR) and electronic health records (EHR).

Internet Access

For those who have Internet access, the Internet is a source where users turn for answers with their consumer health information questions. Thirty-two percent of the respondents in one study indicated using the Internet as their primary source for health information (Licciardone , *et al*, 2001). The Pew Internet & American Life Project has conducted studies on Internet users and health information for the past four years. During that time, the percentage of Internet users who search for health information has been stable even as the entire Internet population has grown (Fox, 2006). Eighty percent of American Internet users have searched for information on at least one of seventeen health topics that include (Fox, 2006):

1. Specific disease or medical problem;
2. Certain medical treatment or procedure;
3. Diet, nutrition, vitamins, or nutritional supplements;
4. Exercise or fitness;
5. Prescription or over-the-counter drugs;
6. A particular doctor or hospital;
7. Health insurance;
8. Alternative treatments or medicines;
9. Depression, anxiety, stress, or mental health issues;
10. Environmental health hazards;
11. Experimental treatments or medicines;
12. Immunizations or vaccinations;
13. Dental health information;
14. Medicare or Medicaid;
15. Sexual health information;
16. How to quit smoking; and
17. Problems with drugs or alcohol.

One result from a national study conducted by the Information Institute, *2006 Public Libraries and the Internet* was that 71.7 percent of libraries view their offering of Internet access to users who would not otherwise have Internet access as a major impact on their community (Bertot, *et al*, 2006). Those without Internet access at home may rely on Internet access through public libraries to answer their consumer health information questions.

Literacy: Traditional, Information, and Health

More than one-fifth of U.S. adults have a traditional level one literacy (Murray, *et al*, 1998). In a more recent survey, eight of Florida's counties have over 30 percent of their populations that read at a level one literacy (National Center, 2003). Level one literacy adults can usually sign their name and identify small amounts of information from a newspaper article, but usually cannot fill out a government benefits application or locate an intersection on a street map. Traditional level one literacy is only one type of literacy needed to locate and comprehend consumer health information (Norman & Skinner, 2006). Level one literacy adults may require additional assistance when searching for consumer health information.

ALA's information literacy competencies define the skills required for an information literate person and include the ability to find, retrieve, analyze, and use information (Ford, 1989). Finding any information via the Web may result in information overload for users. A spokesperson for the US Department of Health and Human Services equated searching on the Internet for health information to drinking from an unfamiliar fire hose (McLellan, 1998). Most users searching for consumer health information are not experts and may not know what they are looking for, how to find it, or even how to describe what they are looking for (Chepesiuk, 2007).

There are many resources on the Internet, but users may not have the health knowledge or skill needed to evaluate the quality of various consumer health information resources.

Being unfamiliar with consumer health information topics adds another challenge to searching (Borman, *et al*, 2005). For those users seeking health information on the Internet, the speed of answers from typical search engines is appealing, but the ability to evaluate the quality of electronic resources is a skill librarians should have and should be able to teach users (Campras, 2007). Most literature discussing the incorporation of information literacy competencies with consumer health information resources is written from an academic or medical librarian perspective (Cobus, 2008; Danielson-Francois 2006; Sumpter, 2006). This provides some perspective of how to teach information literacy competencies that relate to consumer health information to users, but in public libraries, users might not want to learn information literacy skills and only need consumer health information answers.

Health literacy pertains to the skills required to utilize consumer health information and engage in proper health care (Norman & Skinner, 2006). The National Institute for Literacy conducted a nationwide study that found more than 23 percent of patients had inadequate functional health literacy (William, *et al*, 2005). This means patients do not understand relatively simple health tasks, e.g. how to take medication four times a day. Florida citizens searching for consumer health information may have questions that do not require quality web sites or other electronic databases to answer these types of consumer health information questions.

A combination of traditional, information, and health literacy skills are required to utilize consumer health information (Norman & Skinner, 2006). Public librarians in Florida must have these skills to assist citizens with consumer health information. The fact that English is a second language for 1.5 million Florida citizens as of 2000, a figure that more than likely has increased complicates this discussion (Florida Department, 2000). Although MedlinePlus is offered in Spanish, many linguistically isolated user groups that do not have access to consumer health information resources in languages other than English will challenge public librarians who do not have second language skills (Chepesiuk, 2007).

Electronic Medical Records, Electronic Health Records, and Personal Health Records

The emerging technologies and information management issues related to electronic personal health records (PHRs) stem from increased demand by individuals to take control over their personal health data. Patients want to be more engaged in their own healthcare and are seeking out information online (Ball, Smith, & Bakalar, 2007). Patients have been undergoing a role change partly facilitated by technology such as the Internet which has greatly improved access to health information for consumers (Greenberg, D'Andrea, & Lorence, 2004), empowering patients to explore new treatments and research current research journals and to utilize increasingly sophisticated. The Federal push for electronic records stems from Executive Order 13335 from the Office of the President that called for the development of an interoperable health information technology infrastructure (Randeree & Whetstone, 2008). PHRs are facilitated by a developments in physicians' adoption of health information exchange, electronic medical records (EMR) and electronic health records (EHR).

The PHR allows an individual to control and access their own health records from all their providers; PHRs allow a user to “create, review, annotate or maintain a record of their health condition, medication, medical problems, allergies, vaccination history, visit history, or communications, with their health care providers” throughout their lives (Randeree & Whetstone, 2008, p 62). While PHRs clearly have advantages for the consumer, they still need to address privacy and confidentiality as well as issues of access (digital divide) and literacy (health literacy and consumer education materials). Although several companies have offered PHR services, the introduction of Google Health (<https://www.google.com/health>) and Microsoft’s Healthvault products has raised the public awareness of PHRs. In addition, large insurance companies (Kaiser) and employer groups (Wal-Mart, Intel) are adopting PHRs for their employees as a way to reduce costs and increase access. Medicare has begun to use PHRs in test areas in South Carolina.

The public is slowly becoming aware of PHRs. According to a survey conducted by Health Industry Sights in late 2005 (AHIMA Personal Health Record Practice Council, 2006), 83% had never used a PHR; of those respondents, 52% had not heard of a PHR. As the awareness grows, the library will play a larger role in PHR awareness, access, usage and education. Patrons will require assistance with health literacy skills, information seeking skills, and technology usage skills.

Library Issues

Each public library in Florida has unique concerns of staffing costs and implementation related to the provision of consumer health information. A discussion of some of the concerns follows as well as a few examples of how some Florida public libraries have provided consumer health information and how a few libraries from other states have performed outreach activities bridging health organization and public libraries.

Staffing Costs

The costs of providing consumer health information includes the cost of training staff, trained staff availability to help, and maintaining a collection of consumer health information resources (Borman, et al, 2005). Public library employees may or may not be trained to use consumer health information resources. Demonstration and training sessions about National Library of Medicine (NLM) products and services and other relevant consumer health information resources may provide a starting point for public librarians in Florida (Huber & Snyder, 2002). The Medical Library Association provides a Consumer Health Information Specialization Program that is 12 hours long and helps public librarians improve consumer health services for end-users and to build partnerships with health organizations (www.mlanet.org/education/chc/). Although this is only one training option, it provides a framework for other certificate programs to improve the provision of consumer health information for Florida citizens.

Besides skills related to using resources and locating information, public librarians need to understand that consumer health information questions are special questions that require extra care to avoid giving medical advice and ensure they only provide objective information in a way

that is non-threatening to the user (Kouame, et al, 2005). The librarian must provide a comfortable and safe environment where user's privacy is respected and the librarians avoid judging the user (Ham & Carr, 2006). Sprang and Baker (2000) discussed more than the ethical dilemmas of providing information and summarized two other concerns for public librarian-provided consumer health information—the selection of consumer health reference collections materials and ensuring equal access for all users. Specifically, Sprang and Baker (2000) concluded “public librarians...can define a vital role for themselves . . . that is required by today's rapidly changing US health care system” if they provide quality consumer health information resources and ensure equal access to those resources for all (p. 93).

Avoiding explaining medical terminology and redirecting users to resources they can comprehend removes the librarian from any liability (Ham & Carr, 2006). Unfortunately, Florida citizens that have level one literacy skills may not be able to locate any materials that explain medical terminology at a level they can comprehend. Librarians should create clear disclaimers to explain their positions on provision of consumer health information (Ham & Carr, 2006).

Staffing issues relate to a library's willingness to commit resources to training staff about consumer health information and then making the trained staff available (Borman, *et al*, 2005). Without specific articles including cost evaluation related to staffing of consumer health information in public libraries, staff cost is difficult to estimate. The cost to staff a reference desk is surprisingly high per transaction -- \$9.54 was the cost in one study that divided the number of reference transactions by the entire reference budget (Murfin, 1993). Therefore, Florida libraries investing in training and availability of staff to answer consumer health information questions could be shouldering a considerable cost. The cost of consumer health information resources is a different issue, because all of the Medical Library Association's top 10 web sites are free. Creating a directory at each library and maintaining pages of these free consumer health information resources will require staff time and the costs associated with staff.

Sample Florida Public Library Examples

The Palm Beach County Library System has developed a web site that serves as a directory for a variety of consumer health information resources (<http://www.pbclibrary.org/health-wellness.htm>). The page allows users to distinguish between electronic databases owned by the library and free resources on the Internet. The Library System also has regular classes for Florida citizens on consumer health information resources.

In 2000, the NLM funded a partnership between the Halifax Medical Center and the Volusia County Public Library System (<http://www.nlm.nih.gov/nno/hipprojects.html>). The project objectives included increase in the ability of public librarians to use NLM's information resources, increase the opportunities for the public to learn to use and evaluate health information resources on the Internet, increase the public's awareness of the library as a source of health information, and strengthen the existing bond between the Halifax Medical Center and the Volusia County Public Library. This example could be repeated where other Florida libraries form partnerships with health organizations.

Outreach in Other States

A few efforts have been made outside of Florida to create partnerships between public health and public libraries (Linnan et al, 2004). For example, 58 librarians in the Queens Borough Public Library System in New York completed self-administered questionnaires before and after a training on breast health, cancer, and screening (Goytia, et al, 2005). The results from the Queens study indicated that librarians overall were interested in helping, but many librarians lacked the knowledge about cancer and cancer information resources to help. Librarians could serve to bridge a gap between consumers and health care providers in the provision of consumer health information for underserved populations and all other Florida citizens (Goytia, et al, 2005).

State Library Issues

State Library issues are related to evaluating resources that would best help Florida citizens in their provision of consumer health information, building a statewide consumer health information network or directory of those resources, and promotion and evaluation of the FEL. The FEL should include quality consumer health information resources and some could be Florida specific. There are several options for the creation of a statewide consumer health information network. The discussion of State Library issues will conclude with a discussion of the promotion and evaluation of the FEL.

Evaluating Resources

The MLA's top 10 list and top 100 list of the best consumer health information web sites discussed earlier are only two lists of resources provided at the association's site. There are other links to lists on specific health care topics, e.g. diabetes and heart disease. MLA's criteria for evaluating electronic consumer health information resources could be adapted for other potential FEL resources (Miller, *et al*, 2004).

Researchers have expressed concern about keeping print resources current, since the quality of consumer health information resources depends on its currency (Li, 2007). The current FEL resources and any other electronic resource will always be more current than print resources because they are dynamic. Although many of those listed are free and online, it is indeterminable how the resources were evaluated for inclusion in the FEL. Currently, users are presented merely with an alphabetical list of all FEL resources. A directory by subject might benefit all FEL users and not just users searching for consumer health information. Those resources that do pertain to health are written at varying levels of difficulty. Table 4 (below) provides a sample of current FEL health information resources, of which not all are directed specifically toward consumers.

FEL Resource	Description
Gale products include: <ul style="list-style-type: none">• Health and Wellness Center;• Health Reference Center;• Academic, Professional Collection;• Academic OneFile;• General OneFile;• Encyclopedia of Alternative Medicine;• Encyclopedia of Cancer;• Encyclopedia of Genetic Disorders.	Gale’s resources provide full text information from alternative topics such as herbal remedies, yoga, homeopathy, midwifery, chiropractic to general interest and fitness magazines, medical and professional journals, and pamphlets and reference texts.
MEDLINE via OCLC	MEDLINE is NLM’s premier bibliographic database covering the fields of medicine, nursing, dentistry, veterinary medicine, the health care system, and the preclinical sciences, but not entirely full text

Table 4: Sample of FEL health resources

Building a Statewide Consumer Health Information Network

The National Network of Libraries of Medicine (NN/LM) Southeastern/Atlantic Region (SE/A) exists to improve public health by providing all U.S. health professionals with equal access to biomedical information and improving the public's access to consumer health information resources. The program offers several small grants to help develop, promote, and improve electronic access to consumer health information. In addition, the program lists some Florida specific resources (<http://nnlm.gov/sea/about/states/fl/>) that could be incorporated in FEL’s consumer health information resources, e.g. Florida libraries, statistical web sites, and other online health resources.

In North Carolina, NC Health Info (<http://www.nchealthinfo.org>) was recently developed as the result of a three-year NLM funded project to create a NC consumer health information portal (Silbajoris, *et al*, 2007). The study included a survey of the public, librarians, and health care practitioners to create a guide of relevant resources to their most important health questions. Figure 1 below presents a screen shot of NC Health Info’s web page layout.

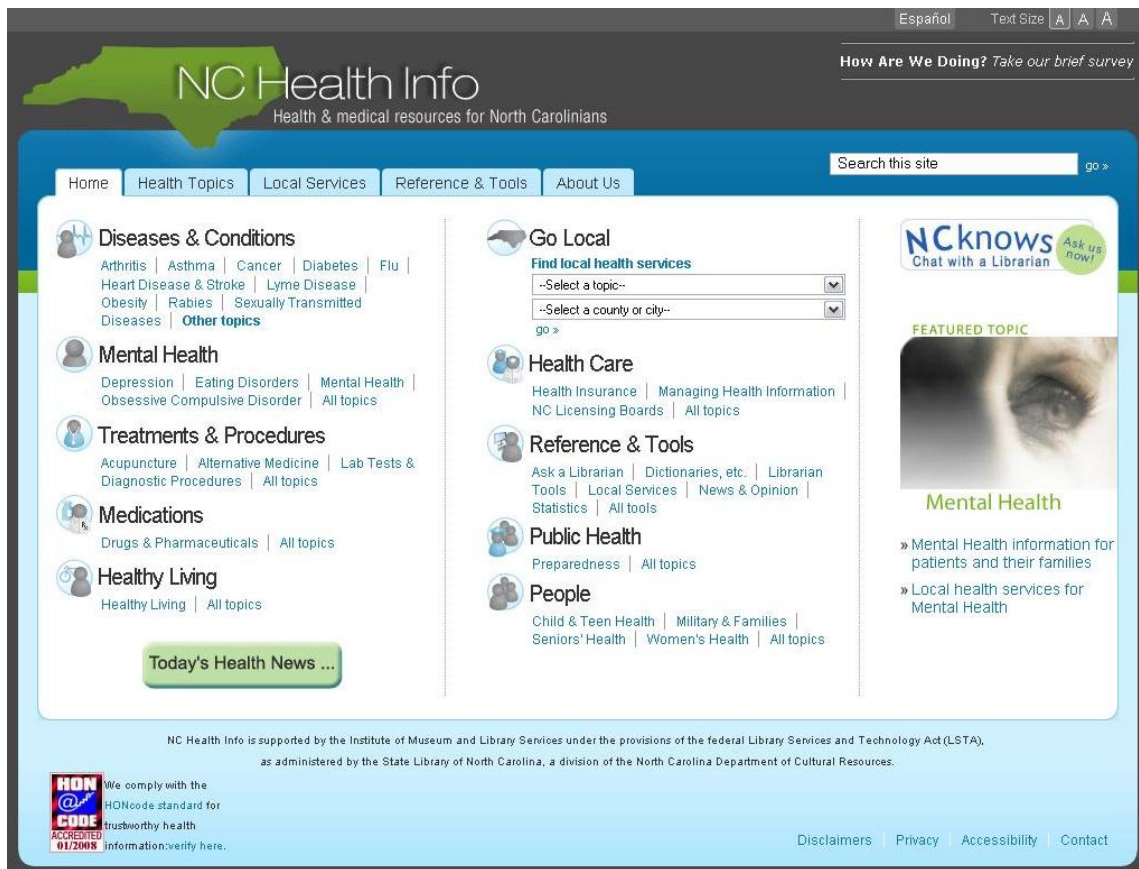


Figure 1: Screen shot of NC Health Info's web page layout.

In the State of Iowa, HealthInfoIowa (<http://www.healthinfoiowa.org/>) was similarly developed as a consumer health information network for Iowans (Libraries for the Future, 2005). HealthInfoIowa's purpose was to deliver health information and expand cooperation between all health information providers. In Ohio, NetWellness (<http://www.netwellness.org/>) was developed through collaborations between the University of Cincinnati, Ohio State University, Case Western Reserve University, the Ohio Public Library Information Network, and the State Library of Ohio. NetWellness allows Ohioans to ask experts about different health topics and links users to a variety of sources.

Go Local (<http://www.nlm.nih.gov/medlineplus/golocal/about.html>) is a product from the NLM developed to link MedlinePlus to information about health services in local geographic areas, including hospitals, physicians, nursing homes, support groups, health screening providers and many others. Currently there are 25 Go Local participants, in 21 states and the Tribal Four Corners. Go Local is a prebuilt option to create a statewide consumer health information network without using the FEL as a portal to improve Florida citizens' provision of consumer health information. This option would not have the same customizability as state developed systems like NC Health Info or HealthInfoIowa.

Promotion and Evaluation

The buy-in from Florida Libraries is critical to increased provision of consumer health information for Florida citizens. Without librarians on reference desks, both physically and virtually around the state utilizing the FEL's resources, users will not know about it. Social marketing to all Florida citizens could include any number of advertisements, but the target market of librarians is vital and can be reached through promotions sent directly from the State Library. After this initial needs assessment, the FEL should do a biannual assessment of the usage and usability of the FEL's consumer health information resources. Future research would focus on Florida citizen's perspectives toward consumer health information in the FEL and how the FEL can improve the accessibility, usability, and functionality of its resources.

Consumer Health Information Training for Public Librarians

In order to provide the library's patron community with high quality consumer health information services, the library staff should be trained in the use of medical and consumer health information resources. One source for training is the demonstration and training sessions offered by the National Library of Medicine (NLM). The NLM offers training designed to meet the needs of the librarian, covering a variety of NLM products and services, as well as other relevant consumer health resources (Huber & Snyder, 2002). Calabretta (2002) identifies another source of worthwhile librarian oriented training, which is offered by the Medical Library Association (MLA). This MLA training provides a *Consumer Health Information Specialization Program* that is 12 hours long and helps public librarians improve medical and consumer health information services to users and build partnerships with local health organizations.

The Florida Consumer Health Information Network (FCHIN) is sponsoring four workshops on consumer health information provided and funded by the National Networks of Libraries of Medicine Southeastern Atlantic Region for one year beginning October 1, 2007. Librarians attending all four of the workshops will be eligible for the Medical Library Association's (MLA) *Consumer Health Information Specialization*. The program explores a number of strategies, including partnering with state and local health care providers, state agencies and regional organizations. Sponsoring these workshops jointly with multi-type library cooperatives is one way FCHIN can bring National Library of Medicine training to all librarians in Florida interested in delivering consumer health information to members of the public. Appendix C provides additional background information about FCHIN.

The MLA certificate program offers a framework for the development of more targeted consumer health information certificate programs, which could be tailored to the specific needs of the target library. Such programs could be expanded to include other related skills that public librarians need when interacting with a patron's medical and health related questions. It is critically important to understand that medical and consumer health information questions are special questions that require extra care to avoid giving advice and only to provide information (Kouame, et al, 2005).

The National Information Center on Health Services Research and Health Care Technology (NICHSR), which is an agency under the NLM, offers public health training courses

and programs to assist in the education of librarians. NICHSR training provides information on health services and public health topics. Another source of health related training for librarians is provided by the National Training Center and Clearinghouse (NTCC) in the National Network of Libraries of Medicine (NN/LM). The NTCC supports a variety of training opportunities, offering several classes that are targeted towards helping public librarians become effective agents for improving patient health and safety. These courses are typically four hours in length and provide health care related information on a variety of topics. This training addresses how to assist patrons in locating and evaluating information which can sometimes be both complex and confusing. Also covered are the ethical and legal issues associated with health care information with regard to privacy, discrimination, and legislative compliance. During these training sessions a variety of health information resources are demonstrated. These classes have been approved by the Medical Library Association.

In recent developments, *Libraries for the Future* has announced an expansion of the Fit for Life (FFL) program, a national initiative to help public libraries promote lifelong health and wellness through community responsive programs (Vargas, 2008). Libraries for the Future is a national nonprofit organization that supports innovation and investment in America's libraries. The FFL program focuses on both physical and brain health, designed for broad audience application. In addition, Libraries for the Future will implement community-wide public awareness campaigns to promote the importance of health, fitness, and general nutrition. Each participating library will collaborate with at least five community organizations, to expand possibilities for community outreach and programming.

Summary

The FEL consumer health information resources can be displayed in a more user friendly format and could be expanded to include some of MLA's recommended free and online resources. Functionality and usability testing would likely assist in making these resources more findable, easier to navigate, and more usable.

User circumstances stemming from issues such as traditional literacy, health literacy, information literacy, and Internet access position librarians and libraries as providers for consumer health information. Public and school librarians might require training on the FEL and on library issues that relate to consumer health information resources, e.g. PHR. Libraries could also perform outreach to groups with health issues and establish partnerships with health organizations to promote the use of the FEL's consumer health information resources.

The State Library of Florida may need to work more actively to help make librarians and Florida residents aware of FEL's consumer health information resources through marketing activities. No matter the resources selected or type of training implemented, the success of the FEL's consumer health information resources will depend on librarians and/or other Florida residents thinking of the FEL when they receive or have consumer health information questions. A prepared FEL with better consumer health information resources will assist all Florida librarians and citizens with health-related queries. Nearly two trillion dollars are spent each year in the U.S. on health care. Public libraries stand to benefit by embracing their role as information providers of valuable and vital consumer health information (NCLIS, 2006).

INTERVIEW RESULTS

Interview questions focused on consumer health information at the local library level. More specifically, the interviews covered MLC directors' perspectives on consumer health information services and resources, the FEL as a portal to the services and resources, training related to use of the services and resources, and the possibility of a consumer health information certificate for public librarians.

In addition, the interviews addressed issues such as support from MLCs for increased provision of consumer health information and use of the FEL, promotion/advertising for availability of health resources and reference support through local public libraries and the FEL, and other local library issues. Results of interviews in this section are presented by topic instead of by question asked. In addition, this section contains a brief overview of key points related to the MLC director interviews.

General Demographics

The initial interview questions for each director were related to their experience with consumer health information issues and training. The MLC directors have been in their positions from one to sixteen years, with an average length of service of nine years. All the MLC directors have an MLS degree. Five of the six directors have not taken a course related to consumer health information and it has been a few years since the one had received training.

Overall, the directors indicated they do not have direct knowledge of the types or percentage of health related questions their MLC public libraries receive or how the libraries handle consumer health information, primarily because they are removed from library staff members who work at reference desks. Primary contact with library staff members for most MLC directors is with the library directors. Anecdotally, the MLC directors are aware patrons ask consumer health related questions but they were unsure of how many or of what percentage of all reference questions are health related, e.g. related to specific conditions, particular medications, rating of doctors, medical related procedures, etc. The directors also thought the questions were increasing because people are locating health information on the Internet; however, the directors were not sure what information individuals were locating via the Internet. In addition, the directors mentioned they knew E-Government health related questions concerning forms and procedures are increasingly asked in libraries.

Questions Related to the FEL

Interview questions related to the FEL address personal usage and awareness of the health resources in FEL, the use of FEL resources inside libraries, and how to improve the FEL. As mentioned earlier, the directors are typically removed from day-to-day library operations and use the FEL resources infrequently; although, a few mentioned the FEL is accessed from the administrative level for training purposes in MLC member libraries. Despite the lack of personal use, the directors are aware of FEL's Gale health databases. For personal health questions, however, some directors prefer other, more consumer-oriented sources, such as MedlinePlus.

An issue identified by the directors is the FEL interface. One issue with the interface, as identified by the directors was logging on to the home page and the corresponding difficulty of finding and accessing needed/desired databases. A second issue with the interface is related to the use of the search and retrieve interface, MetaLib/SFX. [Note: a process to remove Metalib/SFX was in progress at the time of these interviews and Metalib/SFX is no longer the search/retrieve interface]. Even with these issues, FEL is promoted during MLC training sessions and some FEL databases are included as part of the training; however, training session leaders typically skip discussion of the FEL interface. As a result of these issues, the directors felt most entry into the FEL throughout the state bypasses the FEL home page.

[The FEL interface has a] misleading front page. The first thing that I usually do in my [training] class is, quite honestly if I show them, what the patrons are likely to do if they come to the front page; and I show them how to get around it and actually do what they need to do.

In library systems that have IT staff, another director pointed out, there is an “active effort so that they are connecting people directly through to the Gale products rather than going through [the] FEL page.”

Overall, however, the directors praised the FEL resources. In terms of database use, the directors also pointed out that “most of the libraries participate in large county systems; and those public libraries, as well as school...systems have their own e-resources that they use for various questions, before using any other potential source,” including the FEL.

Some directors thought librarians used “other things” to answer consumer health information questions and not the Gale databases. In some areas, however, “they really are being used.” One director added, “I do think that the FEL is being utilized.” Even if the libraries are avoiding the interface of the FEL, the general consensus from the directors is that libraries do use FEL resources. Directors also stated that the State Library should “provide resources that can be branding local interfaces because that is the primary interest.” The concern is that users visit their local libraries and the library web site sends them away from the local libraries homepage to the FEL. “Sending patrons away from the library web site does not promote usage of the local library.”

The participants offered a variety of suggestions on how to improve the FEL, such as making the interface transparent and increasing FEL promotion efforts. The interface issues were mentioned by all directors. Overall, the directors thought the FEL could benefit from more databases and resources; however, without easing the initial logon and identification of available databases, some thought simply adding more resources without addressing the transparency logon issues would be inadequate.

The directors also mentioned increased “public awareness” to promote FEL use. The directors “push those [FEL] products” during “a hundred or so training sessions in a year for people that staff librarian desks.” This promotion during the trainings results in “internal marketing and promotion for those products.” Directors pointed out, however, the limited

promotion outside libraries to the public in that “the idea that consumer health information is available through a library” would help increase usage of these services”.

Role of the MLC in Terms of the FEL

The directors offered several ideas on improving the FEL. They also realize the role of the MLCs is important in the FEL’s overall success as well as the provision of consumer health information. It was unclear to them, however, how MLCs could assist with improving the FEL interface or promote the FEL beyond training. The directors viewed their role to support the FEL and consumer health information as trainers for the FEL and its resources. “That’s one of the things that the MLCs do well, is that we’re able to get together pretty easily, and effectively put together training at the local level” which helps “the front line reference librarians get training” to help end users.

Directors also recognize that support in the provision of consumer health information by the MLCs is mostly related to training, but could include other types of support, such as support beyond training that includes equipment needs (i.e., more public access computers) and encouraging collaboration between libraries and health organizations. Related issues for some libraries include the need for equipment and encouraging collaboration between health organizations and libraries. A director provided an example of the lack of equipment issue, “We have 500 books, you can have 500 people using these books, if you have only 10 machines, only 10 people can use them.” Limited numbers of computers in libraries limit the number of in-library users that can utilize electronic resources. Many libraries can offer computers for their users to access the FEL, but the demand always outweighs the supply. Access to consumer health information faces that same barrier, but the barrier is amplified because users rely on computers and Internet access for much information beyond consumer health information.

Another point made by the directors is that MLC training focuses on training only librarians. Directors do not want to train the public because “if we trained [the] public, we are stepping on members’ territory.” Therefore, the MLCs are limited to only training librarians. Some directors were not involved with coordinating training and could not discuss the specifics of the course offerings; however, several directors “make sure we are providing periodic training that would seem to align with their needs” where the trainings include consumer health information topics in some MLCs. One director said, “We have outside organizations that we have come [in] to do consumer health training for reference staffs.” For example, the National Library of Medicine and Medical Library Association have provided training in some MLCs. In one MLC, the director stated they offer health information training once a quarter. For those without specific health information trainings, “Gale trainers come in” to train librarians in all MLCs on Gale products. In addition, most directors said all training sessions include several databases and the Gale Health and Wellness product is usually one of them.

One director thought statewide training for consumer health information was a good idea because MLCs often duplicate the “same training.” Despite some health information training and interest from some directors for a statewide training, when asked for suggestions, the directors mentioned that librarians infrequently request training sessions related to consumer health information. New technology is the most popular request for training, especially Web 2.0 related

topics, and children's services or customer service are usually the second most requested trainings. "We send out surveys at the end of our evaluation forms and we say what classes would you like? And I don't think it [consumer health information] ever came up" is how one director responded to the lack of demand for consumer health information training. The role of the MLC, one person commented, is to provide training that librarians in their area want to have, not to provide training in areas that the MLCs think they should have.

Directors do think that libraries conduct some consumer health training for patrons, but it was unclear how often or with how many patrons. One director specifically noted, "We don't know exactly what the libraries are doing with their patrons." For this reason, the focus groups and survey findings of this study provide more detailed insight on the training that occurs inside libraries.

MLCs thought they could encourage "opportunities for networks or networking where librarians are part of collaborative efforts to promote consumer health information" with health organizations. MLCs might facilitate "dialogue with agencies" and in the past MLCs have "invited in agency representatives to talk and teach class" related to E-Government issues. Certainly, persons from health organizations would also be good guest speakers at MLC trainings; however, since "some rules are different county by county" each MLC should offer a localized workshop because "one workshop developed for the entire state just wouldn't work." Directors felt local health organizations might provide librarians and users with tips on accessing health information better than an outside entity, since outsiders lack local knowledge.

Consumer Health Information Training Certificate

Most directors thought that librarians would have little interest in a consumer health information training certificate. While some librarians might find a certificate program for training in consumer health information useful, such a certificate will not help public librarians gain salary increases or other benefits from the library.

Key points

Despite directors' concerns about a transparent interface, local branding and use, and certification of librarians in consumer health information, most directors understand that receiving some type of training in consumer health information would help their librarians better answer health related questions. To improve the FEL, directors suggest having an easier logon and identification of databases and transparent access to FEL that allows local libraries to brand their access to the FEL resources.

In addition to training, other support from the MLCs includes encouraging collaborations between libraries and health organizations. Representatives from health organizations could help train librarians and users in regards to consumer health information.

FOCUS GROUP RESULTS

The study team asked participants of the six focus groups open-ended questions probing the topics of the types of consumer health questions they receive as well as how many, who ask the questions, who answers, and how. Other topics discussed include: special health programs offered by libraries, FEL usage, improving access to health resources, and training for librarians. Results are reported by question asked with a bulleted list of themes from the responses and a brief discussion of each set of responses. The focus group results section concludes with a summary of key points from the survey findings.

Findings

1. *What types of health-related questions do you get from your patrons?*

Questions relate to:

- Medical Conditions
- Physician/Hospitals Information
- Medications
- Access to health information
- Research

Health-related questions include diseases, diagnosis, medications, and procedures and although a variety of illnesses are discussed, the top three are heart disease, diabetes, and cancer. Patrons want to know about malpractice suits for physicians, how to check credentials, and infection rates at hospitals. Drug interactions, side effects, and alternative medicine are many of the medication related questions. Access to all social services, benefits, health insurance, and specifically Medicare Part D are also a substantial percentage of health-related questions. Research oriented health questions include students, both secondary and postsecondary, who ask questions related to the completion of class projects.

2. *From whom do you usually get health-related questions (e.g. women, senior citizens, etc.)? OR, of all types of questions you receive from your patrons, what percentage is health-related?*

- Senior Citizens
- Females
- Students
- Immigrants
- Others

The majority of health questions come from women 55 and older. Senior citizens of both genders were largely the most common response to Question 2, although some did answer that students, caregivers, and immigrants also ask health-related questions.

3. *Do you have any idea about the number of health-related questions you get on average from your patrons (i.e. have they increased, decreased, or remained the same)?*

The responses varied on Question 3. Despite a slight majority thinking that the need for health information will continue to increase, many thought the questions were remaining steady because health providers give more consumer health information than these providers have offered in the past.

4. *Who typically answers health-related questions on your staff? What resources do you usually use to answer health-related questions from your patrons? Do you direct patrons to any specific health resources? If yes, what are these?*

Questions are answered by:

- Other libraries
- Our librarians

Resources used:

- Print choices
- Electronic choices
- Both (print and electronic resources)

Most participants indicated that their librarians answered health-related questions. Whoever is staffing the desk answers the questions, but in some instances a particular librarian is needed, e.g. medical reference librarian. In one instance, the librarian said they direct people to more appropriate libraries for health information. Most librarians indicated that print and electronic resources are used to answer questions, but some patrons prefer one format over the other. Some older people are not comfortable with computers and persons prefer print because of its portability, i.e. you can take it home to show your family. Some libraries encourage the use of electronic resources and teach users how to locate and use them, especially at smaller branches where their print collections are limited.

5. *Does your library have any special programs for providing health information to your patrons?*

Several participants indicated they cyclically offer courses on using databases, or other computer classes, and a few offered courses directly related to health topics. In other instances, the training for patrons occurs on demand at the reference desk during a transaction related to health. ACHA did a program on smoking recently at one library and the National Library of Medicine is another external agency that has offered health related courses in the past at libraries. Many said “no” they did not offer any health-related programs, but would if they had the resources and training.

6. *Are you aware of the Florida Electronic Library? How often do you use the FEL resources in general? Who typically uses them?*

All librarians in the focus groups were aware of the FEL, but several indicated they would not use it or refer patrons to it. Those that did not use it had locally branded products they felt were

better than those available from the FEL and others had their IT people let patrons bypass the FEL interface to reach the local databases. Most thought the FEL interface was too confusing for the layperson. Those that did use it feared losing it, because it was the only electronic resources available to their library.

7. *Are you aware of the health resources available on FEL? If yes, please name the top 2-3 health resources available through FEL. Who typically uses them? How often do you use these resources?*

Many were not aware of the FEL's health resources and for those who were, Gale's Health and Wellness Resource Center was mentioned the most frequently. There were no responses for who typically uses the health resources.

Frequency of mentioned FEL health resources

- Gale's Health and Wellness Resource Center (8)
- Medline Plus (5; not actually in the FEL)
- Center for Disease Control (1; not actually in the FEL)

8. *As the demand for health information grows, FEL managers have considered a plan to add databases and resources to the FEL web site – what do you think about this approach? (Examples – ACHA databases – data collected at state level)*

Responses include:

- Disagree because of overwhelming or duplicating information
- Need better organization
- I like the idea

Those participants that disagreed with the suggested plan mentioned that “more is not always better” and that most free online resources could just as easily be added to any individual library's web site. The participants that agreed with the suggested plan thought having a centrally organized and updated site would save individual libraries time and resources in creating a finding aid. One added the caveat, “as long as the search is directed” and avoids having too much information in the same place.

9. *What are the most important issues that need to be addressed to improve access and use of FEL medical and consumer health information resources?*

Issues that need to be addressed include:

- Better usability, such as ease of access to information
- Organization to improve search strategy, usability
- Marketing (advertising/PR)
- Easy link to print

Patrons need simple consumer-oriented information and user-friendly information systems. The FEL needs to increase usability of its interface and databases. A better organized site would increase access and the “information overload” factor needs to be fixed in the FEL. In addition,

several participants suggested better marketing to librarians and the citizens of Florida to let them know what resources, etc. are available. A few mentioned users' need to print online items and that some FEL resources make printing items difficult.

10. *What medical and consumer health information resources and services, other than those already provided on FEL should be considered for purchase or development?*

Additional resources and services that should be purchased or developed include:

- Step by step manuals
- Medical service information (insurance, etc.)
- Information about physicians
- Consumer level information (not professional or academic)
- Medical test information

The answers to Question 10 include useful information resources written at multiple literacy levels and on the topics received by libraries: diseases, diagnosis, medications, and procedures.

11. *What type of training might public librarians and schools need to improve the use of medical and consumer health information through the FEL?*

Training needed includes:

- Development of search strategy
- Patron training
- Librarian training

Information literacy skills need to be taught to patrons as well as specific search strategies related to particular resources. Librarians need training on how to help patrons with health questions and the legality and privacy issues related to the provision of health information.

12. *Have you had any training related to providing health information? OR, does your library offer any programs for librarians for providing health information?*

Responses range from:

- Yes, in our library
- Yes, from external sources
- No, self training

Many local libraries, systems, MLCs, and other external sources have trainings on a variety of topics, and one of the rotating topics is health information. Several librarians reported they are self-taught.

13. *In general, what type of support do you think would be valuable to increasing public libraries' capacity to meet the consumer health needs of patrons?*

Support that would be valuable to increasing public libraries' capacity to meet consumer health needs of patrons includes:

- Maintain current databases (budget cut issue)
- Training opportunities
- Marketing/promoting available resources
- Better accessibility to print functions

Several librarians feared losing FEL resources because of budget cuts. The FEL resources are crucial for smaller public libraries and systems with small print collections and no other electronic resources. The other support types mentioned include more training on use of the FEL and its resources, more marketing of the types of resources available through the FEL, and easier printing of electronic resources to increase the usability of the FEL.

14. *Do you think a library training certificate in Consumer Health Information might be useful for public librarians? If yes, what specific topics might be useful to you? For example, search strategies, tutorials for each health information resource, E-Gov (e.g. Medicare Part D)*

Participants who thought a certificate would be a good idea listed several reasons for it including: patrons might care that they are being helped by someone with ‘real’ training, and better search strategies would help everyone. Nearly half of the comments, however, were negative and those participants thought there was no incentive for any certification and there was no time to learn anything new.

15. *What delivery methods would be most useful for you? Onsite training? Webinars? Web-based tutorials?*

Responses of most useful training methods include:

- Face to face sessions
- Online – webinars
- Web tutorials
- Other combinations

Largely, face to face was preferred by participants. Although many understand the benefits of webinars, many complained that webinars were difficult because interruptions occur often in the library. If anything were to be offered online, participants request that it could be paused and restarted at their convenience.

16. *As a follow-up, does your library have the resources to support the following related to training delivery methods.*

Resources mentioned to participants include:

- Training for your staff
- Training for your patrons
- Database funding
- Infrastructure support

A negative tone resonated in all focus groups related to any activity that required resources from individual libraries.

17. *Please provide us with any additional comments or suggestions you might have regarding the provision of consumer health information at your institution.*

“Google answers everything” sums the responses to this question.

Key points

Most focus group participants understand that receiving training in consumer health information would help them answer the increasing number of health related questions patrons ask. Although face-to-face training is the preferred method, participants felt online options were necessary in some instances. If the online instruction were not streaming, participants could train themselves during times convenient for them.

Most participants felt the most useful training would relate to popular topics, such as specific diseases, diagnosis, medications, medical procedures, and E-Government health-related questions. Participants felt the FEL was necessary for some smaller libraries to have access to any databases, but largely the participants criticized the FEL for not offering more consumer-oriented information and user-friendlier access to databases and resources.

SURVEY RESULTS

The survey instrument began with two questions about a participant's name and place of employment. The responses to these questions are not included in this analysis. Survey questions presented below address a number of issues that include: participant's education, the types of consumer health information training participants had received, the participant's primary function in his library, types of health questions received in the library, and the types of health programs offered in the library.

In addition, responses to survey questions assess the types of training librarians would like to receive, preferred training format, and the amount of interest from participants for a consumer health information certificate for librarians. Results from the survey are presented by survey question, include where possible a graph or table of the results, and include a brief discussion of the results. The survey results section concludes with a summary of key points from the survey findings. Appendix B is a copy of the web-based survey.

Findings

3. *Highest education attained:*






High School Grad		7	3%
Some College		14	7%
College Grad		43	21%
MA / PhD		129	62%
Other		16	8%
Total Respondents		207	

Figure 2: Highest education attained.

Of the 210 surveys, 207 participants responded to question three. Of those respondents, 80% have some college and 62% have at least a graduate degree.

4. *Do you have a Master's degree in library science?*

Yes		143	68%
No		58	28%
Currently in MLS Program		10	5%
Total Respondents		209	

Figure 3: MLS status.

All survey respondents answered their MLS status except one. Only 28% of participants did not have an MLS. 73% either have an MLS degree or are working towards completion of a degree.

5. *Have you had any training related to providing health information?*

No		116	57%
Yes		91	45%
Total Respondents		203	

Figure 4: Training received to provide health information.

Two hundred and three of the survey responses responded and of those 45% had received some type of training related to providing health information. The types of training are included in Table 5 below.

Type of Training	Number of responses
Continuing Education, Seminars on Online Medical Resources	20
Graduate Courses	16
Looking at Online Sources, going through tutorials, Webinars	10
MLA Courses, CAPHIS Courses	8
Previous Employment	7
Database Vendor Training	4
SEFLIN Training workshops	4
Red cross first aid	4
Position as Medical Reference Librarian	4
PUBMED, NLM Training	4
TBLC Training workshops	3
NIH Web Training	3
National Library of Medicine	2
CFLC Training workshops	1
NEFLIN Training workshops	1

Table 5: Types of health training

6. Was this ...

Formal Coursework		31	34%
Formal e.g. workshops,		56	62%
Informal Training		33	36%
Online Training		24	26%
Total Respondents		91	

Figure 5: Training received to provide health information.

Note that respondents could choose multiple categories, so the percentages add up to over 100 percent. Despite multiple answers, the majority of respondents classified their training as formal. In addition, only 26% of respondents had received online training.

7. *Have you been awarded any continuing education units (CEUs) related to health information?*

Yes		33	16%
No		171	85%
Total Respondents		202	

Figure 6: Continuing education units received.

Nearly all (202) respondents answered question 8. Although 91 people have had some sort of health training, only 33 earned CEU credits for their efforts.

8. *What is your **primary** function at the library?*










Administration		33	16%
Reference		125	61%
Circulation		30	15%
Collections		12	6%
Technical Services		12	6%
Children/Youth		25	12%
Technology		12	6%
Medical Librarian		12	6%
Other		20	10%
Total Respondents		202	

Figure 7: Primary function at libraries.

Of the 204 respondents, 61% stated their primary function in the library was reference followed by administration (16%), circulation (15%), and children/youth (12%). Note: participants could select more than one primary function.

9. *Do you receive health information questions from your patrons?*

Yes		136	87%
No		21	13%
Total Respondents		156	

Figure 8: Number of respondents that receive health information questions.

Of the 204 respondents, 87% receive health information questions from their patrons.

10. *If yes, what kind of questions do you typically receive and how often do you receive these questions?*

Type of Question	Never	1-3 per month	4-10 per month	11-19 per month	> 20 per month
Local health care services	0%	73%	21%	5%	1%
Health insurance	0%	71%	21%	4%	5%
Medications	0%	52%	30%	9%	10%
Government health services	0%	56%	26%	10%	9%
Health on the web	0%	51%	34%	9%	6%
Medical research/trials	0%	77%	14%	8%	2%
Specific health topics	0%	33%	33%	23%	11%

Table 6: Types of health question received and frequency

Respondents chose from the types of questions listed in table 6 above. Note that every type of question listed occurred at least once a month in all participant libraries.

For the 1-3 per month category, participants indicate a greater percentage of local health care services, health insurance, and medical research trials questions asked. As the frequency increased to 4-10 per month, health on the web, specific health topics, and medication questions received the highest number of responses. For the highest frequency categories, 11-19 and greater than 20 per month, the most frequent categories of questions asked in participant libraries were specific health topics, government health services, and medications.

In addition to the types of questions listed above, participants were asked to select frequencies of *specific health topics* asked by patrons. Table 7 below presents frequencies of specific health topics selected by participants. In addition to topics listed below, participants indicated an additional 62 other specific health responses (not shown in table). For the two highest question frequencies, 11-19 per month and greater than 20 per month, diabetes and pregnancy questions appeared as the most frequently asked.

Specific topic	Never	1-3 per month	4-10 per month	11-19 per month	> 20 per month
Cancer	0%	67%	24%	6%	3%
Diabetes	0%	66%	20%	10%	4%
Heart disease	0%	69%	23%	4%	4%
Influenza/pneumonia	0%	84%	9%	5%	2%
Respiratory diseases	0%	83%	12%	4%	1%
Alzheimer's	0%	67%	24%	6%	3%
Rheumatism/Arthritis	0%	76%	18%	4%	2%
STD/HIV	0%	81%	15%	3%	1%
Pregnancy	0%	55%	32%	10%	4%
Substance abuse	0%	63%	29%	5%	4%
Mental health	0%	64%	30%	4%	3%

Table 7: Specific health questions received and frequency

11. Does your library offer any programs for providing health information to your patrons?

No		91	61%
Yes		58	39%
Total Respondents		148	

Figure 9: Libraries offering health information programs.

Of the total respondents, only 148 answered the program question and of those respondents only 58 (39%) said their library offered a health information program. Guest speakers, programs, and lectures from health care professionals as well as wellness programs for specific illnesses are some of the examples of programs provided by respondents.

12. Name the 5 **MOST USEFUL** print titles on health information that you refer to patrons:

Some trends appear in the top four choices librarians made; however, after the top four there is no pattern. The most frequent choices offered by participants of the most useful print titles were Physician's Desk Reference (66), Merck Manual (40), Gale Encyclopedia of Medicine (21), and the Mayo Clinic Family health book (25).

13. Name the 5 **MOST USEFUL** online health information titles that you refer to patrons?

For the most useful online titles, the most frequent choices of most useful online titles were Medline Plus (52), Gale's Health & Wellness Resource Center (48), WebMD (31), Medline (18), Mayo Clinic (15), Gale's Health Reference Center Academic (10), and PubMed (6).

14. How **FREQUENTLY** have you visited the Florida Electronic Library (<http://www.flelibrary.org/>)?






Never		32	20%
Rarely/once per month		44	28%
Sometimes/2-5 times per month		47	30%
Often/6-10 times per month		20	13%
Very Often/ More than 10 times per month		14	9%

Figure 10: Frequency of visits to the FEL

Of the 157 respondents, 78% of them visited the FEL less than 6 times per month and 52% visit the FEL more than twice a month.

15. Do you use any health resources on the Florida Electronic Library?

Yes		44	29%
No		110	72%
Total Respondents		153	

Figure 11: Use of FEL health resources

One hundred and fifty-three participants responded to Question 17 and 29% of those have used health resources available through the FEL.

16. Please name the MOST USEFUL health resources available through FEL that you are familiar with:

A relatively small number of respondents (48) answered this question (see question 15 above). Of those that did respond, 21 said Gale's Health & Wellness Resource Center was the most useful resource available through the FEL.

Other resources noted by participants include: Gale's Health Reference Center Academic (9), Medline (8), AMA Journals/E-Journals (6), Pubmed (1), Alternative Health (1), Ebsco Health (1), and Gale's Virtual Reference Library (1). Note participants listed some resources not available through the FEL as responses to this question.

17. If the Florida Electronic Library were to provide a portal with links to useful health information from their site, how often would you point patrons to this resource in a month?






Never		12	8%
2-5 times/month		70	44%
6-10 times/month		45	28%
11-19 times/month		19	12%
More than 20 times/month		15	8%
Total Respondents		161	

Figure 12: Use of FEL portal as health information portal

One hundred and sixty participants responded to Question 19 and only 8% would never point their patrons to a FEL consumer health information portal. Ninety-two percent of participants would recommend the FEL two or more times per month, and 20% of the respondents would point patrons to the resource at least 11 times per month.

18. In which of the following topics do you have the greatest interest in receiving training?

Topic	No Interest	Interest	Very Interested	No Opinion	Total Interest
Health literacy	22%	59%	17%	2%	76%
Evaluating quality of health resources	22%	46%	30%	3%	76%
Becoming familiar with health resources available	7%	50%	42%	1%	92%
How to search general health information databases (e.g., Medline Plus; PubMed, etc.)	18%	50%	29%	3%	79%
How to access specific online health resources (e.g, Genome project, etc.)	17%	51%	30%	3%	81%
How to practice evidence-based medical librarianship	44%	23%	21%	12%	44%
Becoming familiar with drug information resources	15%	47%	35%	3%	82%
Accessing eGovernment resources related to health (E.g., Medicare Part D)	15%	49%	33%	3%	82%
Accessing state health resources	8%	53%	35%	3%	88%
Accessing local health resources	10%	48%	40%	2%	88%
Understanding health information privacy issues (.e.g, HIPAA)	33%	46%	16%	5%	63%
Understanding Personal Health Records	37%	39%	19%	5%	58%

Table 8: Interest in training topics

Table 8 above indicates participants' interest in receiving training for the topics listed. The column to the right contains the combined totals (total interest) of the "interest" and "very interested" columns.

Based on the combined responses in the right-hand column, respondents show the most interest in becoming familiar with available health resources (92%). Participants show over 75% total interest in all topics except understanding privacy issues (63%), understanding personal health records (58%), and practicing evidence-based librarianship (44%). Practicing evidence-based librarianship is the only topic with less than 50% total interest and is evenly split between interest (44%) and no interest (44%) with 12% offering no opinion.

19. Please rate your interest in receiving a training certificate in Consumer Health Information?

Not interested		56	35%
Interested		64	40%
Very Interested		30	24%
No Opinion		2	1%

Figure 13: Interest in receiving a training certificate

Sixty-four percent of the 161 respondents to Question 21 were either “interested” or “very interested” in receiving a training-certificate in Consumer Health Information.

20. Please rate your interest in receiving training on topics that would help you address health-related questions from patrons?

Not interested		17	11%
Interested		81	50%
Very Interested		60	38%
No Opinion		2	1%

Figure 14: Interest in receive training on health-related topics

Of the 160 respondents to Question 22, 88% of them were either “interested” or “very interested” in receiving training on topics that would help address health-related questions from patrons. This is similar to the findings of question 18 above where participants indicated over 75% total interest in most of the individual training topics.

21. Rate your interest in receiving consumer health information training in the following formats:

	No Interest	Interest	Very Interested	No Opinion	Total Interest
Conferences	47%	37%	13%	3%	50%
Workshops	16%	59%	24%	1%	83%
Onsite training	17%	51%	30%	2%	81%
Online training/Webinars	24%	40%	35%	1%	75%
Face-to-face university courses	61%	27%	7%	5%	34%
Online university courses	51%	33%	13%	3%	46%
Self-paced online instructional modules	29%	40%	30%	1%	70%
Web-based small group mentoring	55%	32%	11%	2%	43%

Table 9: Results of preferred training formats

Table 9 above indicates participants’ interest in receiving training by format of training. The column to the right contains the combined totals (total interest) of the “interest” and “very interested” columns. (Continued next page)

In response to Question 21 above, workshops (83%), onsite (81%), online (75%), and self-paced training formats (70%) are preferred formats for receiving consumer health information training. Fifty-percent of participants indicate interest in receiving training at conferences. Least preferred formats are online university courses (46%) and web-based small group mentoring (43%) with the least favorite format as face-to-face university courses (34%).

22. *Do you anticipate an increase or decrease in health questions at your library in the next 2-3 years at your library?*


Strong Increase		27	17%
Increase		77	48%
No Change		56	35%
Decrease		0	0%
Strong Decrease		0	0%
Total Respondents		160	

Figure 15: Anticipated increase in number of health questions

Of the 160 respondents to Question 24, 35% thought there would be no change and zero percent responded there would be a decrease or strong decrease. In contrast, 65% responded that there would be an increase or strong increase in the number of health questions at their library.

23. *If your answer is yes, what might limit the library in addressing that need?*

Several trends appeared in these responses, e.g. budget reduction, staffing reduction, resources reduction, and users that will turn to the Internet to answer all their questions.

24. *How appropriate do you think the Ask A Librarian service is for delivering health information?*

Not appropriate		19	13%
Seldom appropriate		53	35%
Mostly appropriate		73	49%
Always appropriate		5	3%
Total Respondents		150	

Figure 16: Appropriateness of Ask-a-Librarian service for delivering health information.

One hundred and fifty respondents answered question 26 and 52% thought Ask A Librarian was an appropriate service for delivering health information. Forty-eight percent, however, thought that the service was seldom on never appropriate.

25. *What type of support to your library do you think would be valuable to increasing public libraries' capacity to meet the consumer health needs of patrons?*

In response to this question, training for librarians on locating and evaluating consumer health information resources appeared most frequently in conjunction with subsequent training for library users on the available resources. Another popular comment was access to more user-friendly, accurate, and continually updated consumer health information resources, in particular local resources. In addition, librarians suggest partnerships with health organizations, state agencies, and medical librarians to assist public libraries in providing consumer health information by offering workshops or trainings related to their areas of expertise.

26. Please provide us with any additional comments or suggestions you might have regarding the provision of consumer health information at your institution (Use space provided below).

A few librarians thought all health questions should be answered by doctors and nurses and not librarians. The fear of providing the wrong information and privacy of users were cited as a few reasons libraries should stay away from these types of questions. The majority of general comments reflect responses to other questions for increased training and access to better consumer health resources. Marketing and advertising of library services also appeared as a need in this section.

Key Points

Findings from the survey show that there is a significant amount of public librarian involvement in providing Florida residents with a broad range of medical and consumer health information. Some 52% of respondents visit the FEL two times a month or more; 29% visit the FEL two times a month or more specifically for consumer health information; and 92% of respondents would recommend the FEL two times a month or more for consumer health information if additional useful consumer health information were to be made available on the FEL.

A primary key point from the survey results is the need for more training on consumer health information for librarians. Librarians need to know more about the extent to which they can assist users, what resources to consult, and where to locate quality information. This key point reflects the need for better access to online resources than the current FEL databases offer.

Librarians in the survey prefer training via workshops and onsite formats and are most interested in becoming familiar with available health resources as well as accessing state and local health resources. The most frequent categories of health questions asked in libraries were specific health topics, government health services, and medications. Training and resources should reflect these perceived user needs.

CONCLUSIONS

The findings establish that Florida residents utilize public library consumer health information resources and services by asking questions on a range of topics such as diseases, diagnosis, medications, medical procedures, and E-Government health-related questions. For example, 87% of respondents to the survey indicate users ask them health related questions. To improve the provision of consumer health information resources and services, the following themes materialized from the needs assessment: increased consumer health information training for librarians, more health resources included in the FEL, additional FEL marketing and advertising, and improved collaborations between libraries and health organizations.

Despite Florida public libraries' significant involvement in the provision of consumer health information resources and services, public librarians are not in agreement as to specific roles and responsibilities for this effort. While some would embrace additional responsibilities and activities in the provision of consumer health information, others are not as certain as to the extent to which public libraries should be taking on additional responsibilities – especially when there are currently significant spending cuts from both state and local levels that affect public libraries.

Participants in both the focus groups and web surveys understand the benefits of receiving training in consumer health information to answer users' questions. Expert interviewees think a statewide consumer health information training program would be useful for librarians in different regions of the state and that MLCs could facilitate such a training program.

The majority of participants think the knowledge gained during training is valued more than any type of certificate associated with training and most participants, i.e. 70% from the web survey prefer face-to-face trainings. Further, 50% of web survey respondents indicated an interest in having trainings at a conference. The most useful training would relate to popular topics of questions from library users, e.g. diseases, diagnosis, medications, procedures, E-Government, etc.

Participants also indicate that the FEL could include more consumer health information resources through its interface. The most useful resources would relate to the same popular health topics as those requested for training sessions. The FEL, in some instances, is the only electronic resource offered by public libraries and in any case the inclusion of more consumer-oriented information in the FEL would benefit all librarians and potential FEL users.

Many participants in the study think more marketing and advertising for the FEL would increase its use. Many participants report they enjoy the benefits of accessing FEL resources but want to retain local branding for their libraries. Local branding promotes local libraries at the community level and study participants perceive that local libraries are reluctant to send their users away from their web sites to a state web site.

Several focus group participants and expert interviewees encouraged collaborations between libraries and health organizations. Representatives from health care providers could help train librarians and library users on consumer health information topics with a level of expertise

beyond the capacity of most librarians. Aside from local health care providers, local libraries and the State Library of Florida would also benefit from collaborations and active partnerships with state agencies like ACHA and national health organizations like the NLM.

RECOMMENDATIONS

The findings from the various data collection activities, the review of recent literature related to public libraries and the provision of consumer health information and the study team's knowledge of public libraries and the provision of consumer health information nationally and in Florida suggests a number of recommendations.

1. Clarify public library roles in the provision of consumer health information services.

The State Library should lead a discussion about the appropriate roles, responsibilities, and activities for Florida public libraries in the provision of consumer health information. While certainly each local public library is likely to have unique situational demographics and settings, a discussion about the levels or types of roles that public libraries might assume (i.e., from significant effort and activities to very limited effort and activities) may be useful to assist librarians better understand the extent to which such services can or should be provided/supported in their particular community. The discussion could also consider the extent to which other resources (e.g., the FEL) can support these efforts.

2. Develop a comprehensive public librarian consumer health information training program.

According to participants, a consumer health information training program would assist librarians faced with increasing health related questions. The six state MLCs and the State Library of Florida could facilitate a series of trainings offered face-to-face, as this was the preferred method by participants in the study, that focus on user issues in today's health care environment.

Another option is to hold a consumer health-information pre-conference at the Annual Meeting of the Florida Library Association, or other conference in Florida. Any successful training program is contingent on libraries allowing their librarians to receive training by taking necessary time away from work and libraries committing to providing specific consumer health information assistance to users in their libraries. Training programs are also dependent upon public libraries and their parent organizations maintaining the travel budget to allow librarians to travel to conferences or other workshops. The same issues arise when libraries consider what types of health related trainings they would offer users.

3. Make available more consumer health information resources available via the FEL.

The FEL already includes Gale's Health and Wellness, Health Reference Center Academic, Professional Collection, Academic OneFile, General OneFile, Encyclopedia of Alternative Medicine, Encyclopedia of Cancer, and the Encyclopedia of Genetic Disorders and Medline via OCLC. These current databases could be augmented by a few additional resources from the Medical Library Association's Consumer and Patient Health Information Section (<http://caphis.mlanet.org/consumer/index.html>) top 100 list of consumer health information web sites that are free and online. MedlinePlus, KidsHealth.org, Healthfinder.gov, and NIH Senior Health (<http://nihseniorhealth.gov/>) are only a few examples of consumer-oriented electronic resources that might be added to a health section of the FEL.

The current FEL has an alphabetical list of all the electronic resources; however, creating a health section of resources might reduce confusion for users searching information on a specific topic. Since several health-related questions involve insurance, health providers, and E-Government information, the inclusion of some state web sites might also be helpful, for example state agencies such as the Consumer Complaint, Publication and Information Call Center (http://www.fdhc.state.fl.us/Consumer_Resources/index.shtml).

4. Increase FEL marketing and advertising.

More marketing and advertising of the FEL resources is needed to increase its overall use. Some Florida citizens might not realize the library is a place to locate consumer health information or that such electronic resources exist through the State Library of Florida and other state agencies to answer some of their health related questions. Marketing and advertising options are endless, but do not have to be expensive or traditional. For example, the recent Ask A Librarian's Director's Chair video contest for Florida high school students produced advertisements at low cost and raised awareness of the service.

Local branding on web sites promotes local libraries in a community and several study participants think local libraries are reluctant to send their patrons away from their web sites to the FEL. Through dynamic web design, libraries' patrons could access the FEL and still view local branding if local logos appear on the FEL web site.

5. Encourage collaborative partnerships between public libraries and health care organizations.

As detailed in the literature review, NLM funded a partnership between the Halifax Medical Center and the Volusia County Public Library System (<http://www.nlm.nih.gov/nno/hipprojects.html>). The project objectives included an increase in the ability of public librarians to use NLM's information resources, an increase in the opportunities for the public to learn to use and evaluate health information resources on the Internet, an increase in the public's awareness of the library as a source of health information, and strengthen the existing bond between the Halifax Medical Center and the Volusia County Public Library.

The Volusia example could be duplicated with other Florida libraries and systems. Florida libraries could serve to bridge the gap between consumers and health care providers in the provision of consumer health information for underserved populations and all other Florida citizens (Goytia, et al., 2005). Financial incentives would be required to increase the number of partnerships; however, librarians could make the case to local governments and health care providers that improved provision of consumer health information enhances overall community quality of life and reduces the costs associated with consumer health misinformation.

6. Encourage collaborative partnerships between public libraries, other libraries, and government agencies.

Efforts should be made to determine if there are ways to better leverage the medical and consumer health information resources and services available in the state from the six academic medical libraries, various federal (e.g. NLM) and state (e.g. ACHA) medical agencies. The academic medical libraries and a number of federal and state agencies have significant expertise, resources, and experience in the provision of consumer health information that public libraries might better access and use. A statewide steering committee to explore the possibility of a Florida Consumer Health Information Network (FCHIN) is currently investigating the feasibility of such a network (see Appendix C).

7. Develop Web 2.0 and Ask A Health Librarian Services.

Web 2.0 technologies, e.g. wikis and blogs, have been utilized to increase the interactivity between librarians and users in other areas of librarianship. Implementing more interactive services through the FEL, might allow users, health care professionals, and librarians statewide to all share information in the same virtual location. Taking advantage of these collaborative and dynamic tools to improve exchange of information could improve the FEL and provision of consumer health information by Florida citizens.

In addition, specialized Ask A Health Librarians could assist in the improvement of users access to consumer health information through the statewide virtual chat reference service. Some users might prefer the anonymity of chat reference to ask health related questions. Also, since virtual service extends the availability of librarians beyond their local library hours, use of health librarians for virtual reference could expand the pool of potential FEL users and increase access to consumer health information library services. Training library participants of the Ask A Librarian service in consumer health information could also improve the overall Ask A Librarian service.

8. Conduct Additional Research.

The findings reported here offer a first step in better understanding the role and involvement of public libraries in general and Florida public libraries more specifically, in the provision of consumer health information services and resources. A more comprehensive study covering users, government officials, medical professionals, academic health science libraries and others regarding the statewide provision of medical and consumer health information should be undertaken.

Such a study could explore in depth a number of topics that were not the focus of the present study such as:

- What might be the structure and organization of a statewide consumer health information network?

- What specific population groups are using public libraries to access consumer health information resources and services and which are not? And if not, why not?
- How can the FEL interface to medical and consumer health information resources be improved?
- How might Florida state government better leverage and make available the range of medical and consumer health information available?
- What are the costs and benefits to state government as well as Florida residents for having improved access to and use of medical and consumer health information?

These are but a few of the topics identified by the current study that could benefit from additional research.

INCREASING ACCESS TO AND USE OF CONSUMER HEALTH INFORMATION SERVICES AND RESOURCES

With increased expectations from Florida citizens for access to and quality of consumer health information coupled with the changing policies and practice of the health care and insurance industries, as well as a push towards open E-Government in the state, librarians face new challenges in the provision of consumer health information. The FEL may serve as an excellent resource for users and librarians seeking answers to health-related responses, but the FEL should be considered as one option (although a very important one), among others, for building a statewide consumer health information network. Other options, e.g. Go Local or a statewide network are discussed at length in the literature review. Regardless of the statewide consumer health information network chosen, public library services and resources will continue to be a key factor in the provision of consumer health information.

Comprehensive training of librarians, and potential training of library users, would improve the ability and capacity of local libraries to meet new consumer health information needs. Improved resources retained within the FEL and more marketing and advertising of the FEL might also assist in improved access to consumer health information provision for Florida citizens. Encouraging collaborations between various health organizations and libraries may allow library users greater access and understanding of health care through projects and programs. Use of Web 2.0 technologies and additional specialized Ask A Health Librarians could assist in the improvement of users' access to consumer health information.

A number of these strategies may leverage existing consumer health information services and resources such that they are better known and accessed by Florida residents. But for many of these recommendations, the continued development of such services and resources requires additional funding and support for the State Library of Florida and Florida's public libraries. Investment, however, in Florida residents having greater knowledge of and access to consumer health information is likely to pay significant dividends in a healthier population and possibly reduced overall health care costs for the state.

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Appendix A: Interview/Focus Group Questions

Participants: Representative sample of public librarians in six major regions of Florida.

Purpose: To gather general perceptions from public librarians on the following:

1. Awareness and use of existing FEL medical and consumer health information resources.
2. What are the most important issues that need to be addressed to improve access and use of FEL medical and consumer health information resources?
3. What competencies and skills do public librarians have to develop to adequately address the medical and health information needs of Floridians?
4. What type of resources/tools might public librarians find useful in addressing the medical and health information needs of Floridians?
5. What recommendations would you offer to improve Florida residents' access to and use of consumer health information through public libraries?

Appendix B: Survey (Print and Electronic Format)

Florida Electronic Libraries' Medical and Consumer Health Resources Survey

Background:

1. Name (optional):
2. Place of employment:
3. Highest education attained:
 High School Grad Some College College Grad MA/PhD
4. Do you have a Master's degree in library science? Yes No
5. How many years have you worked as a public librarian?
6. Have you had any training related to providing health information?
 Yes No (If No, skip to question #9)
If yes, please specify?
7. Was this ...
 Formal Coursework
 Formal Post-school training, e.g. workshops, etc.
 Informal Training, e.g. one-on-one training
 Online Training
8. Have you been awarded any continuing education units (CEUs) related to health information?
 Yes No
9. What is your **primary** function at the library?
 Administration
 Reference
 Circulation
 Collections
 Technical Services
 Children/Youth
 Technology
 Other, please describe:

IF YOU DO NOT ANSWER PUBLIC SERVICE QUESTIONS SKIP TO Question #20

Public Service Information:

10. Do you receive health information questions from your patrons? Yes No

11. If yes, what kind of questions do you typically receive and how often do you receive these questions?

QUESTIONS <i>I receive questions about ...</i>	Never	1 to 3 per month	4 to 10 per month	11 to 19 per month	More than 20 per month
	1	2	3	4	5
a. Local health care services					
b. Specific health topics:					
• Cancer					
• Diabetes					
• Cardiovascular Disease					
• Influenza/Pneumonia					
• Other Respiratory Diseases					
• Alzheimer's					
• Rheumatism & Arthritis					
• STDs/HIV					
• Pregnancy					
• Substance Abuse (e.g., Smoking, Drug Abuse, Alcoholism, etc.)					
• Mental Health					
c. Health Insurance					
d. Medications					
e. Government health services (e.g., Medicare etc.)					
f. Health resources on the Web					
g. Medical research and clinical trials					

12. What other types of health-related questions do you receive from patrons (briefly note topics not already mentioned above):

13. Does your library offer any programs for providing health information to your patrons? Yes No

If yes, please describe briefly:

14. Name the 5 **MOST USEFUL** print titles on health information that you refer to patrons:

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

15. Name the 5 **MOST USEFUL** online health information titles that you refer to patrons?

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

16. Have **FREQUENTLY** have you visited the Florida Electronic Library (<http://www.flelibrary.org/>)?

Never	Rarely, 1/month	Sometimes, 2-5/month	Often, 6-10/month	Very often, more than 10/month
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17. Do you use any health resources on the Florida Electronic Library? Yes No
(If your answer is No, skip to question #19)

18. Please name the **MOST USEFUL** health resources available through FEL that you are familiar with:

19. If the Florida Electronic Library were to provide a portal to useful health information from their site, how often would you point patrons to this resource in a month?

- Never
- 2-5 times/month
- 6-10 times/month
- 11-19 times/month
- More than 20 times/month

Training:

20. In which of the following topics do you have the greatest interest in receiving training?

TRAINING DELIVERY TOPICS	Not interested at all	Interested	Very Interested	NOT APPLICABLE
	1	2	3	0
21. Health literacy				
22. Evaluating quality of health resources				
23. Becoming familiar with health resources available				
24. How to search general health information databases (e.g., Medline Plus; PubMed, etc.)				

TRAINING DELIVERY TOPICS	Not interested at all	Interested	Very Interested	NOT APPLICABLE
	1	2	3	0
25. How to access specific online health resources (e.g, Genome project, etc.)				
26. How to practice evidence-based medical librarianship				
27. Becoming familiar with drug information resources				
28. Accessing eGovernment resources related to health (E.g., Medicare Part D)				
29. Accessing state health resources				
30. Accessing local health resources				
31. Understanding health information privacy issues (.e.g, HIPAA)				
32. Understanding Personal Health Records				

21. Please rate your interest in receiving a training certificate in Consumer Health Information?

- Not interested at all
 Interested
 Very Interested
 Not applicable

22. Please rate your interest in receiving training on topics that would help you address health-related questions from patrons?

- Not interested at all
 Interested
 Very Interested
 Not applicable

23. Rate your interest in receiving consumer health information training in the following formats:

POSSIBLE FORMATS	Not interested at all	Interested	Very Interested	NOT APPLICABLE
	1	2	3	0
a. Conferences				
b. Workshops				
c. Onsite training				
d. Online training/Webinars				
e. Face-to-face university courses				
f. Online university courses				
g. Self-paced online instructional modules				
h. Web-based small group mentoring				

Additional Information:

24. Do you anticipate an increase or decrease in health questions at your library in the next 2-3 years at your library?

Yes No

25. If your answer is yes, what might limit the library in addressing that need?

26. How appropriate do you think the Ask A Librarian service is for delivering health information?

Not appropriate	Seldom appropriate	Mostly appropriate	Always appropriate
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27. What type of support to your library do you think would be valuable to increasing public libraries' capacity to meet the consumer health needs of patrons?

28. Please provide us with any additional comments or suggestions you might have regarding the provision of consumer health information at your institution (Use space provided below).

THANK YOU

Appendix C: Florida Consumer Health Information Network (FCHIN)

Overview

A goal of Governor Charlie Crist, the Florida Legislature and the Agency for Health Care Administration (AHCA) is to improve care and reduce health care costs by providing comparative data on hospitals, ambulatory surgery centers, health plans and retail prices of commonly prescribed drugs. One outcome of this goal is a recently redesigned AHCA website (www.FloridaHealthFinder.gov) where information on quality, pricing and performance is delivered to Florida residents. In addition to this information, Florida has a wealth of consumer health information services and resources that are not coordinated in a way that provides easy identification and access.

To coordinate and build on these services and resources, the Florida Consumer Health Information Network (FCHIN) steering committee composed of 18 members of the Florida healthcare and library communities started meeting in July 2007. Members represent all medical schools in Florida, major Florida healthcare organizations including library organizations, the State Library and Archives of Florida, the Florida AHEC programs and the colleges of library and information science at the University of South Florida and Florida State University.

This planning initiative has been funded by the National Network of Libraries of Medicine Southeastern/Atlantic Region (NN/LM SE/A) for one year beginning October 1, 2007. The award is funding a series of meetings with the steering committee and other stakeholders to develop a plan for the delivery of consumer health information resources and services to the residents of Florida and to explore a number of strategies, including partnering with state and local healthcare providers, state agencies and regional organizations.

Since the residents of Florida will have better access to higher quality health information, they will be better able to participate in the process of maintaining a healthier and higher quality of life. Impacts from FCHIN initiatives and other consumer health information projects may also include lower overall health care costs for both the state of Florida as well as for individuals. Other states have shown evidence that state-based health information networks can result in outcomes such as avoiding acute health conditions, selecting optimal treatment options, making local connections best suited for individuals seeking health services and smoking cessation, among others.

FCHIN Goals for a Statewide Information Network

- Increase Florida residents' knowledge of consumer health information resources and services available statewide and from local communities;
- Partner with existing agencies, organizations and libraries in order to improve access to existing consumer health information resources and services available from local communities;
- Identify and organize available consumer health information resources and services available statewide;
- Create a website that meets the consumer health information needs of Florida residents;

- Coordinate and strengthen a network of librarians, healthcare providers and organizations in Florida to increase knowledge, skills and awareness of quality consumer health information resources;
- Identify funding resources from a variety of federal, state, local and private sources to carry out the plans of the steering committee; and
- Establish an organizational structure for coordinating and planning for improved access to consumer health information resources and services.

Progress

FCHIN members Kaye Robertson, Director, Health Professions Division Library, Nova Southeastern University; Pat Clark, Library Director, All Children's Hospital; Mark Flynn, Director, Florida Electronic Library; and Barbara Shearer, Director, Maguire Medical Library, Florida State University College of Medicine have been appointed to AHCA Work Groups charged with "develop(ing) a strategy to inform consumers about transparency and the health care information available on the Agency website and to develop feedback procedures through which consumers can communicate their information needs to AHCA."

(http://www.fdhc.state.fl.us/schs/chistwg_pr.shtml)

A group including FCHIN members is preparing a plan for educating librarians and library staff about consumer health information resources.

A Communications Subcommittee is being formed to communicate about FCHIN efforts and Florida consumer health information resources to librarians, health care practitioners, and the residents of Florida.

The Information Institute at the College of Information, Florida State University expects to have the results from a statewide needs assessment of public librarians regarding their access to and use of consumer health information by June 15, 2008. The study is funded by the Florida State Library.

For More Information contact Barbara Shearer, Chair, FCHIN Steering Committee, (850) 644-8970, Barbara.shearer@med.fsu.edu

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