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## Quality Health Information on the Internet: Developing a Diabetes Pathfinder for the Chinese Population

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### Abstract

A Web-based bilingual diabetes information pathfinder was created to help the Chinese population access quality health information on the Internet as part of a collaborative outreach project in the Dallas-Fort Worth area. A survey was conducted to identify the demographics, Internet usage, health information needs, and preferences for training sessions of the Chinese population. Breast cancer, diabetes, and breast cancer were the top three diseases of interest. The process of developing the pathfinder is described from start to finish, and it can serve as a model for the development of others. Pathfinder training sessions were held.

### Keywords

Bilingual Web site; Chinese population; diabetes; health information; Internet; pathfinders; training

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## INTRODUCTION

The Chinese population is the largest Asian group in the United States.<sup>1</sup> From 1990 to 2000, there was a 77.1% increase in the Asian population in the Dallas-Fort Worth area, and the Chinese population is one of the fastest growing groups.<sup>2</sup> Asian Americans, including the Chinese, are a typically underserved group in health care because of language and cultural barriers.<sup>3</sup> Many Chinese individuals are not familiar with the United States health care system.<sup>4</sup> The demographic changes and the health information needs of the Chinese population in the Dallas-Fort Worth area were the impetus for the development of a community online health information outreach project.

In May 2005, the National Library of Medicine (NLM), through National Network of Libraries of Medicine South Central Region (NN/LM SCR), awarded the Department of Library and Information Sciences (formerly the School of Library and Information Sciences), College of Information at the University of North Texas (UNT) and the UNT Health Science Center, Gibson D. Lewis Health Science Library a total of \$24,466 to develop an outreach project to teach Chinese health consumers in the Dallas-Fort Worth area how to access quality health information on the Internet. The College of Information provided matching funds in the initial amount of \$20,349 to support the project. The project involved collaboration with the Dallas Public Library, Richardson Public Library, Denton Public Library, and Fort Worth Public Library as well as stakeholders in the Chinese communities, including health care professionals.

The project team consisted of the principal investigator, project coordinator, project assistant, linguistic and cultural expert, outreach specialist, representatives from the four public libraries involved in the project, and two technical consultants. The project coordinator, project assistant, and linguistic and cultural expert are from mainland China.

One of the goals of the outreach project was to improve the Chinese population's ability to access online quality consumer health information on the Internet by developing Web-based health information pathfinders. This paper describes the development of a bilingual, Web-based diabetes health information pathfinder, Health Information for the Chinese Population <<http://chi.unt.edu>>, including the challenges faced throughout the process.

## LITERATURE REVIEW

Librarians have a strong role to play in the delivery of consumer health information, especially to diverse populations, which was demonstrated by the articles featured in the special 2004 issue of *Library Trends*.<sup>5</sup> This issue focused on consumer health issues, trends, and research in libraries. Alpi and Bibel outlined the process that librarians need to undertake to meet the health information needs of diverse communities as well as discussed the challenges librarians will face and how to overcome them.<sup>6</sup> This article provided guidance in creating the online quality health information outreach project to the Chinese community in the Dallas-Fort Worth area.

It was important to examine similar projects, and a search of the literature revealed another health information collaborative project in the state of Texas, Consumer Health Information for Asians (CHIA), based in Houston.<sup>7</sup> The goal of the project was to provide health information in the form of brochures and pamphlets via kiosks set-up in key Asian community locations in Houston. This project supported the concept of providing consumer health information to the Chinese community. In addition, the New York University Downtown Hospital created the Health Information in Chinese Uniting Patients, Physicians and the Public (HICUP) Web site that contained Chinese health information materials to fulfill the need of the Chinese immigrant population.<sup>8</sup>

Creating a Web-based health information pathfinder for the project was a natural fit since “eight out of ten Internet users have looked online for health information.”<sup>9</sup> Specifically, Asian-Americans are one of the most active groups on the Internet,<sup>10</sup> and “more than one-quarter of whites and Asian-Americans...said they used the Internet to obtain health information.”<sup>11</sup> The Internet gives consumers greater access to consumer health information, but the concern is that they do not always find information of high quality. Crespo's review of the literature showed that many users accept health information they retrieve from search engines without critically evaluating it, which further supported the need to provide the Chinese community with a source of high quality health information.<sup>12</sup> For the purpose of this project, high quality health information was indicated by the authorship, currency, accuracy, comprehensiveness, scope, and audience of the resource. In addition, the concept of using online pathfinders to deliver consumer health information was not a new idea; the National Network of Libraries of Medicine – Pacific Northwest Region developed HEALTHINFOQUEST <<http://nmlm.gov/archive/healthinfoquest>>, a pathfinder to commonly asked health questions, which is no longer being maintained.

In order to create the Web-based health information pathfinder for the Chinese community, an understanding of the barriers that Chinese individuals face in accessing health care and health information was essential. According to Ma, “the Chinese population remains one of the least understood, neglected, and invisible ethnic groups,” which highlighted the need to provide targeted outreach programs to this population.<sup>4</sup> Hall supported this notion by finding that “active outreach to the Chinese community was essential to improving access to and utilization of health and social services.”<sup>13</sup> It is not uncommon for the Chinese to hold tight to their cultural values, beliefs, and traditional health practices since the majority were born outside of the United States.<sup>4,14, 15</sup> Also, many Chinese have little understanding of Western medical terminology and modern health techniques.<sup>4</sup> Lu, Lin, Chan, and Chin also discussed Chinese consumers' terminology barriers when finding medical information.<sup>16</sup> In addition, there is a need for the Chinese to understand how to access the healthcare system in the United States.<sup>17</sup> It was important for the Web-based health information pathfinder to be bilingual (English/Chinese) in order to help the Chinese community better understand Western medical concepts by translating them into their own language.

## ASSESSING THE HEALTH INFORMATION NEEDS

In order to assess the health information needs of the Chinese population in the Dallas-Fort Worth area, the project team developed a survey and obtained approval from the University of North Texas Institutional Review Board to conduct the survey.

### Survey Instrument and Data Collection

The survey instrument was designed to be linguistically and geographically sensitive by being available in English (see the Appendix) and two forms of written Chinese, Simplified Chinese and Traditional Chinese. Simplified Chinese is used in mainland China and Singapore, whereas Traditional Chinese is used in Hong Kong and Taiwan. In the United States, Simplified Chinese is recognized as official written Chinese; however, both Simplified and Traditional Chinese have been used in Chinese communities. Therefore, it was important to provide the survey in both forms of the Chinese language as well as English to meet the needs of all Chinese community members.

The survey instrument consisted of four sections: (1) Demographics; (2) Internet Usage; (3) Health Information Needs, and (4) Training Sessions. In February 2006, the survey was distributed at the University of North Texas, Richardson Public Library, Denton Public Library-South Branch, Southwest Regional Public Library in Fort Worth, Texas, and a gathering of the Chinese population in Denton, Texas. In addition, the project team passed out

surveys at three churches with large Chinese memberships: Denton Bible Church – International Friendship Program, Denton Chinese Church, and North Texas Chinese Church in Flower Mound, Texas. These sites were selected for survey distribution because of the high presence of Chinese individuals and community stakeholders. The survey was completed by 101 individuals.

## Survey Findings

The survey results provided a basis for developing the health pathfinder and conducting training sessions for the Chinese communities.

**Demographics**—One hundred one individuals, 27 males and 74 females, participated in the survey, with 12.9% being ages 18-24, 42.6% ages 25-34, 29.7% ages 35-44, and 14.9% were over 45. The level of education of the participants was very high, with 31.7% holding Bachelor degrees, 47.5% holding Master's degrees, and 11.9% holding Ph.D. degrees. Just over half of the participants (50.5%) were from Mainland China. Other geographic areas reported were Taiwan (28.7%), Hong Kong/Macau (10.9%), and other (9.9%).

A large majority of the participants (81.2%) primarily spoke Mandarin Chinese at home, while 10.9% spoke Cantonese, 4% spoke English, and 4% spoke other languages at home. In addition, 40.6% believed they understood spoken English well, 52.5% believed they understood spoken English fairly well, and 6.7% believed they understood spoken English poorly. In comparison, 53.5% believed they understand written English well, 39.6% believed they understood spoken English fairly well, and 5.9% believed they understood spoken English poorly.

**Internet Usage**—Ninety-seven percent of the survey participants used the Internet, with 90.8% of the individuals using it daily and 89.8% having used it for more than three years. Only 3% had never used the Internet. The most popular uses of the Internet were for communication, news, online transactions, research, and entertainment.

**Health Information Needs**—To identify the participants' health information needs, they were asked to list the health topics, specific diseases, medical conditions, and medical procedures of interest to them, as well as the sources they used to find health information.

The top five health topics of interest to the participants were (1) nutritional information, (2) specific diseases or medical conditions, (3) fitness/exercise, (4) health insurance, and (5) alternative medicine/treatment. Having an awareness of the emphasis of wellness in the Chinese culture, the project team could understand the reason why nutritional and fitness/exercise information were ranked highly.

More specifically, the top five specific diseases and medical conditions or procedures of interest to the participants were (1) breast cancer, (2) diabetes, (3) hepatitis B, (4) heart disease, and (5) mammograms, which align with Tom's listing of prevalent diseases in the Chinese community.<sup>18</sup> The project team recognized that some of the health information needs that the participants listed, such as diabetes and hepatitis B, are very prevalent in China. The project team also speculated that breast cancer was ranked number one since the majority of the participants of the survey were female.

The top three information resources that the participants used to find health information were (1) the Internet, (2) magazines, and (3) television. More specifically, the participants listed search engines (such as Google or Yahoo!), MedlinePlus, and WebMD as the Internet resources they used to locate health information. The participants also used social sources to obtain health information, which included friends, doctors, and relatives. In support of the project, the

participants listed the Internet as the top location where they would like to find health information.

**Training Sessions**—Of the survey participants, 43.6% indicated that they were willing to attend health information training sessions. The participants preferred the training sessions to be offered at the UNT Denton campus, Denton Public Library, and public libraries in Dallas. Also, the majority of the participants wanted the training sessions to be conducted in both English and Mandarin Chinese.

## TOPIC SELECTION FOR THE HEALTH INFORMATION PATHFINDER

The project team started the initial work to create health information pathfinders for all three diseases/medical conditions found in the survey results: breast cancer, diabetes, and hepatitis B. After careful deliberation, only a health information pathfinder on diabetes was developed because of time constraints of the award and the general lack of health information on breast cancer and hepatitis B in Chinese. The project team could not overlook the statistical information about diabetes in the Asian-American community. According to the Centers for Disease Control and Prevention, 7.5% of Asian-Americans have been diagnosed with diabetes.<sup>19</sup> In addition, China and the United States rank second and third respectively as countries with the largest number of individuals with diabetes.<sup>20</sup> In the end, the project team decided that the diabetes health information pathfinder could serve as a model for other pathfinders to be developed at a later date.

## THE DIABETES HEALTH INFORMATION PATHFINDER

### Overview

A pathfinder is a well-designed quality map to information sources on specific topic. In this project, the health information pathfinder was developed to be an easy-to-use linguistically and culturally sensitive information tool specifically designed for the Chinese population and information professionals who serve Chinese patrons. Although the educational level of the survey participants was very high, the project team designed the pathfinder for a broader audience. The building, designing, deployment, and pathfinder training sessions will be discussed.

### Building the Pathfinder

The objective of the diabetes health information pathfinder was to provide Chinese health consumers with access to quality health information on the Internet. In constructing the pathfinder, the project team considered how to effectively organize the health information to the Chinese community. The preliminary task of developing the health pathfinder involved locating and analyzing the major health information Web sites and their site maps. The Consumer and Patient Health Information Section (CAPHIS) of the Medical Library Association's *Top 100 List: Health Websites You Can Trust* <<http://caphis.mlanet.org/consumer>> was a useful tool. A thorough examination of quality health Web sites helped the project team develop a better understanding of how consumer health information was organized. The commonly used categories for specific diseases included causes, diagnosis, symptoms, and treatments. It was found that health information on the Internet existed in various formats, including text, images, flyers, brochures, PowerPoint presentations, audio, video, and tutorials.

To build the pathfinder of Internet information resources on diabetes, the project team started with a search for information in English on the topic in MedlinePlus <<http://medlineplus.gov/>>, where the project team located major information resources. Other examples of sources used were MayoClinic.com <<http://www.mayoclinic.com/>> and the American Diabetes Association

Web site <<http://www.diabetes.org/>>. Search engines were used to identify any other potential resources on diabetes in English. After this step, the project team searched for information about diabetes in Chinese using search engines, such as Yahoo! Chinese <<http://cn.yahoo.com>>, Sina (Beijing) <<http://www.sina.com.cn>>, and Baidu <<http://www.baidu.com>>.

Once the information resources were collected, the project team used two major tools to select and evaluate both the English and Chinese resources before inclusion in the pathfinder, the Medical Library Association (MLA)'s User Guide to Finding and Evaluating Health Information on the Web <<http://mlanet.org/resources/userguide.html>> and Evaluating Internet Health Information: A Tutorial from the National Library of Medicine <<http://www.nlm.nih.gov/medlineplus/webeval/webeval.html>>. Once the list of information resources to be included in the pathfinder was finalized, the project team held several committee meetings to discuss the organizational structure and content of the annotations for the resources.

Based on the analysis of the sources, an organizational structure for the pathfinder was created. After much discussion and input from the Chinese community stakeholders, including health care providers, seven major categories were developed; six of the major categories have subcategories. See Figure 1 for a visual representation of the categories and their hierarchy.

Writing annotations for the information resources to be included in the pathfinder was more complex and time consuming than initially anticipated, especially due to the written versions of the Chinese language. Based on the needs of the Chinese community in the Dallas-Fort Worth area, the project team made the decision to use Simplified Chinese and English in the pathfinder. The project team developed a template to be used to annotate the information resources, which includes the title, URL, agency, description, and language of the resource. The annotations for English resources were written in English first and then translated to Simplified Chinese, and annotations for Chinese resources were written in Simplified Chinese first and then translated to English. All translations were verified for accuracy by the linguistic and cultural expert as well as by the other native Chinese and English speakers involved in the project.

### Designing the Web-based Pathfinder

After gathering the content and finalizing organizational structure, the diabetes health information pathfinder Web site, Health Information for the Chinese Population <<http://chi.unt.edu>>, was designed. See Figure 2 for a screen shot of the site.

**Language and Cultural Concerns**—Due to the bilingual nature of the pathfinder, the project team had to carefully consider the design of the Web site. The project team analyzed the design of numerous bilingual Web sites and used this information to make the final decisions about the layout of the diabetes pathfinder Web site. The final layout consisted of two side-by-side columns with identical content, with English in the left column and Simplified Chinese in the right column. Providing the annotations of the resources in English and Simplified Chinese side-by-side helps librarians assist users whose native language is Chinese, and in turn, helps native Chinese language speakers compare the English and Chinese annotations.

Another issue in the design of the site was creating a graphic to represent the project. Initially, one of the technical consultants created a graphic that included a lotus flower. However, the lotus flower symbolizes Buddhism in the Chinese culture, and the project team decided it was not appropriate for the project. The project team also had to be very careful in their choices of color. At one point, the graphic included black text on a white background. In the Chinese culture, white represents death, which would not be an effective message to portray to the



audience.<sup>21</sup> In the end, the project team decided to create a graphic that was a collage of Chinese individuals of all ages, as seen in Figure 3.

**Technical Issues**—In designing the Web site for the pathfinder, the project team had to consider Web browser compatibility and screen resolution. During the time of the project, the technical consultants researched statistics about Web browser usage and screen resolution to make sure the Web site was compatible for all users. They discovered that Microsoft Internet Explorer and Mozilla Firefox were the most commonly used Web browsers and screen resolutions of 800×600 or higher were the most used resolutions.<sup>22, 23</sup> The project team paid special attention to compatibility issues with Microsoft Internet Explorer and Mozilla Firefox and designed the Web site to be viewed on screen resolutions of 800×600 or higher.

One of the most complex aspects in designing the pathfinder was overcoming the technical challenges of encoding Chinese characters for the Web. The lead technical consultant conducted extensive research and studied Chinese Web sites. The research led to the decision to use Unicode to represent the Chinese characters. Unicode is a standard that maps characters from languages around the world to unique numeric values.<sup>24</sup> There are several different methods of encoding Unicode characters digitally. The methods investigated by the project team included Unicode Transformation Format (UTF)-16, Numerical Character References (NCRs), and UTF-8. UTF actually maps every character to a unique byte sequence using the Unicode standard. UTF-16 uses 2 - 4 bytes per character. NCRs allow characters from the Unicode standard to be directly referenced within the code of an HTML document – regardless of the character encoding of the file in which they exist. UTF-8 uses 1 – 4 bytes per character.<sup>24</sup>

When designing Web sites, UTF-8 has an edge over either UTF-16 or NCRs. Directly referencing characters from the Unicode standard using NCRs requires that each character from an extended character set be represented using a minimum of 4 bytes. This results in larger file sizes if more than just a few characters from extended character sets are included. Pages encoded using UTF-16 face the problem of byte order. If the user's Web browser tries to interpret the Web site text in the incorrect byte order, the page will not render properly. In UTF-16, each character in the underlying Hypertext Mark-up Language (HTML) code is represented using 2 bytes rather than just 1. Therefore, encoding with UTF-16 may result in significantly smaller file sizes than using NCRs for pages containing a large number of characters from an extended character set.

Equivalent pages encoded with UTF-8 did not face the byte order problem and were significantly smaller in size than those encoded using NCRs or UTF-16. UTF-8 only uses a single byte for each character in the underlying HTML code. Additional bytes are only added to encode characters from extended character sets as needed.

Even though UTF-16, NCRs, and UTF-8 are methods of communicating what a computer should display, the correct fonts are still needed by the user's Web browser. The problem then is, “How can we provide instructions on how to install these fonts to users who only read Chinese and who do not have the Chinese fonts installed?” To solve this problem, the project team included a link to an instructions page in an Acrobat PDF file on how to install the Chinese language package. The PDF file displays properly regardless of whether the user has Chinese fonts installed. Further, a graphic which will also display properly regardless of whether Chinese fonts are installed on the user's computer was created and used as a link to the instructions page.

## Deploying the Pathfinder

Once the pathfinder Web site was finalized, it was deployed on December 2, 2006. Google Analytics was used to gather data about the visits to the Web site. From December 2, 2006 to August 1, 2007, there were a total of 1,062 visits from 19 countries or territories. The most frequently visited page was “About Diabetes.”

## Pathfinder Training Sessions

The objective of five training sessions was to teach the Chinese community how to access quality health information on the Internet. In addition, they provided an avenue to introduce the pathfinder to the Chinese community and librarians in the Dallas-Fort Worth area. In each training session, the outreach specialist, project coordinator, and project assistant demonstrated the Web-based diabetes health information pathfinder and MedlinePlus and taught the participants how to evaluate health information on the Internet.

The training sessions were advertised via the following means: the University of North Texas Chinese student and faculty listserv, flyers, and the partner public libraries' Web sites. Also, Chinese newspapers, *World Journal*, *Sino-US Evening News*, and *Dallas Chinese News*, featured advertisements to publicize the training sessions. These newspapers are distributed at Chinese restaurants, churches, community centers, and supermarkets.

The first training session was held at the University of North Texas, and Chinese students and their families attended. The second and third training sessions were held at the Richardson Public Library and the Dallas Public Library. At the Richardson Public Library, two journalists from Chinese newspapers in North America, *World Journal* and *Chinese Weekly USA*, attended the training session. The fourth training session was held at Fort Worth Public Library Central, and the last session was held at the Denton Public Library-South Branch. A total of 60 participants attended the training sessions, which included members of the Chinese community as well as public librarians; 41.6% of the participants were aged 25-34, and the gender of the participants was split 50% female and 50% male.

At the end of each training session, participants were asked to complete an evaluation form (available in English and Simplified Chinese), which covered both the content of the training session as well as the diabetes health information pathfinder Web site. Forty-nine out of 60 participants completed the evaluation form, with 34 using the English version and 15 using the Simplified Chinese version. Ninety percent of the individuals that completed the form indicated that they understood how to use the diabetes information pathfinder and how to evaluate health information on the Internet. In addition, 86% learned how to effectively use MedlinePlus to find health information. In the evaluation, the participants suggested that the diabetes pathfinder should include a section on insurance companies and physicians. Also, the participants wanted to see more pathfinders developed on other medical topics. It was obvious that there was a need to assist the Chinese population in finding quality health information on the Internet.

## SUMMARY

Based on a survey of the Chinese population's health information needs in the Dallas-Fort Worth area, a Web-based diabetes health information pathfinder was constructed. The pathfinder is a linguistically and culturally sensitive information tool to help the Chinese population access quality health information on the Internet, and it can serve as a model for creating other similar pathfinders. The process of building the Web-based diabetes health information pathfinder was described from its initiation to deployment. Training sessions were conducted and provided an avenue for promoting the pathfinder. This project reinforces the need for developing tools for the Chinese community to access quality health information on

the Internet. The project provided a way to strengthen the collaboration among a department of library and information sciences, an academic health sciences library, and public libraries.

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## APPENDIX: SURVEY INSTRUMENT (ENGLISH)

Survey in English

University of North Texas School of Library and Information Sciences

HEALTH INFORMATION OUTREACH TO THE CHINESE POPULATION IN THE DALLAS/FORT WORTH METROPLEX

Teaching Chinese Health Consumers How to Find Quality Health Information on the Internet

This survey has 4 sections:

- Section I: Demographic Information
- Section II: Internet Usage
- Section III: Health Information Needs
- Section IV: Health Information Training Sessions

It will take you approximately 10–15 minutes to complete. All information provided will remain confidential.

Thank you for your participation!

Instructions: We appreciate your interest in this survey. Please read the following questions, and provide the appropriate answers. If you check “Other” as your answer, please write a specific response.

### Section I: Demographic Information

- 1 What is your gender?
  - Male  Female
- 2 What is your age group?
  - 18–24  25–34  35–44  45–54  55–64  65+
- 3 What is the highest educational level you have achieved?
  - High School Diploma
  - Associates Degree
  - Bachelors Degree
  - Masters Degree
  - Ph.D. Degree

- Professional Degree (i.e., M.D., J.D.)
  - Other (Please be specific) \_\_\_\_\_
- 4** What area do you come from?
- Mainland
  - Taiwan
  - Hong Kong/Macau
  - Other (Please be specific) \_\_\_\_\_
- 5** What language do you primarily speak at home?
- Chinese (Mandarin)
  - Chinese (Cantonese)
  - English
  - Other (Please be specific) \_\_\_\_\_
- 6** How well do you understand spoken English?
- Good  Fair  Poor  Not at all
- 7** How well do you understand written English?
- Good  Fair  Poor  Not at all
- 8** How long have you lived in the United States of America?
- Less than 1 year
  - 1 to 3 years
  - 3 to 5 years
  - More than 5 years

## Section II: Internet Usage

- 9** Have you ever used the Internet before?
- Yes
  - No (IF YOU ANSWERED ‘NO’, PLEASE SKIP THIS SECTION AND GO TO QUESTION 14.)
- 10** How long have you been using the Internet?
- Less than 6 months
  - 6 months to 1 year
  - 1 to 3 years
  - More than 3 years
- 11** How frequently do you access the Internet?
- Daily  Weekly  Monthly
- 12** What type of connection do you use most to access the Internet?
- Dial-up

- ISDN
- DSL
- Cable
- Wireless
- LAN
- Satellite
- Don't Know
- Other (Please be specific) \_\_\_\_\_

**13** Why do you use the Internet? (Please check all that apply.)

- Communication (i.e., email, chat, instant messaging, bulletin boards/forums)
- Entertainment/Fun (i.e., hobbies, games, music)
- News (i.e., financial, sports, politics, weather, current events)
- Research (i.e., work-related, school-related, travel, health)
- Online Transactions (i.e., shopping, banking, reservations, auctions)
- Other (Please be specific) \_\_\_\_\_

### Section III: Health Information Needs

**14** What resource(s) do you use to find health information? (Please check all that apply.)

- Magazines
- Medical Brochures/Pamphlets
- Newsletters
- Internet
- Video
- TV
- Radio
- Newspaper
- Public Library
- Medical Library
- Other (Please be specific) \_\_\_\_\_

**15** From whom do you find health information? (Please check all that apply.)

- Doctor
- Nurse
- Relatives
- Friends
- Co-workers

- Other (Please be specific) \_\_\_\_\_

**16** What is/are the reason(s) you do not use the Internet to look for health information? (Please check all that apply.)

- I am not concerned about any health issues right now.
- I do not have access to a computer.
- I do not know how to use a computer.
- I am satisfied with the health information I get elsewhere.
- I do not know how to look for health information on the Internet.
- This question does not apply to me.
- Other (Please be specific) \_\_\_\_\_

**17** If you experienced difficulties obtaining health information in the past, what were the problems you encountered?

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**18** What health topics do you look for?

- Specific disease or medical condition
- Health insurance information
- Clinical trials
- Immunization information
- Nutritional information
- Specific medical treatment or procedure
- Fitness/exercise Information
- Alternative medicines and/or treatments (i.e., herbal remedies, acupuncture, hypnosis)
- Drug information
- Other (Please be specific) \_\_\_\_\_

**19** If you search for health information on the Internet, what Internet health information resources do you use?

- MedlinePlus
- The 24 Languages Project
- ClinicalTrials.gov
- EthnoMed
- Centers for Disease Control and Prevention
- Selected Patient Information Resources in Asian Languages (SPIRAL)
- WebMD
- Health Information in Chinese Uniting Patients, Physicians and the Public (HICUP)

- Other Internet resources (Please be specific)
- 
- 

**20** Can you find a sufficient amount of health information resources on the Internet in Chinese?

- Yes  No

**21** What are the three specific diseases, medical conditions, procedures, or other health topics you would like to know more about? (Examples: Breast Cancer, Diabetes, Hepatitis B, Mammogram, Quit Smoking)

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

#### Section IV: Health Information Training Sessions

**22** Where would you like to find health information resources about specific health topics? (Please check all that apply.)

- Local Chinese Newspapers
- Internet
- Shopping Markets
- Restaurants
- Travel Agencies
- Churches, Temples, Mosques, etc.
- Mail
- Public Libraries
- Other (Please be specific)
- 

**23** Would you be interested in attending training sessions that teach you how to find quality health information on the Internet?

- Yes
- No (IF YOU ANSWERED "NO", YOU HAVE COMPLETED THE SURVEY.)

**24** What would be your preferred location for the training sessions?

- Public Libraries in the Fort Worth Area
- Public Libraries in the Dallas Area
- University of North Texas (Denton)
- Denton Public Library
- Internet
- Other (Please be specific)
- 

**25** When would you be available to attend the training session if interested? (Please check all that apply.)

|            | Mornings                 | Afternoons               | Evenings                 |
|------------|--------------------------|--------------------------|--------------------------|
| Mondays    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Tuesdays   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Wednesdays | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Thursdays  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Fridays    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Saturdays  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Sundays    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

26 In which language(s) would you prefer the training sessions to be held?

- English
- Chinese (Mandarin)
- Both English and Chinese (Mandarin)
- Either English or Chinese (Mandarin)
- Other (Please be specific)

27 Which form of written Chinese do you prefer for the training materials?

- Chinese (Simplified)
- Chinese (Traditional)
- Other (Please be specific)

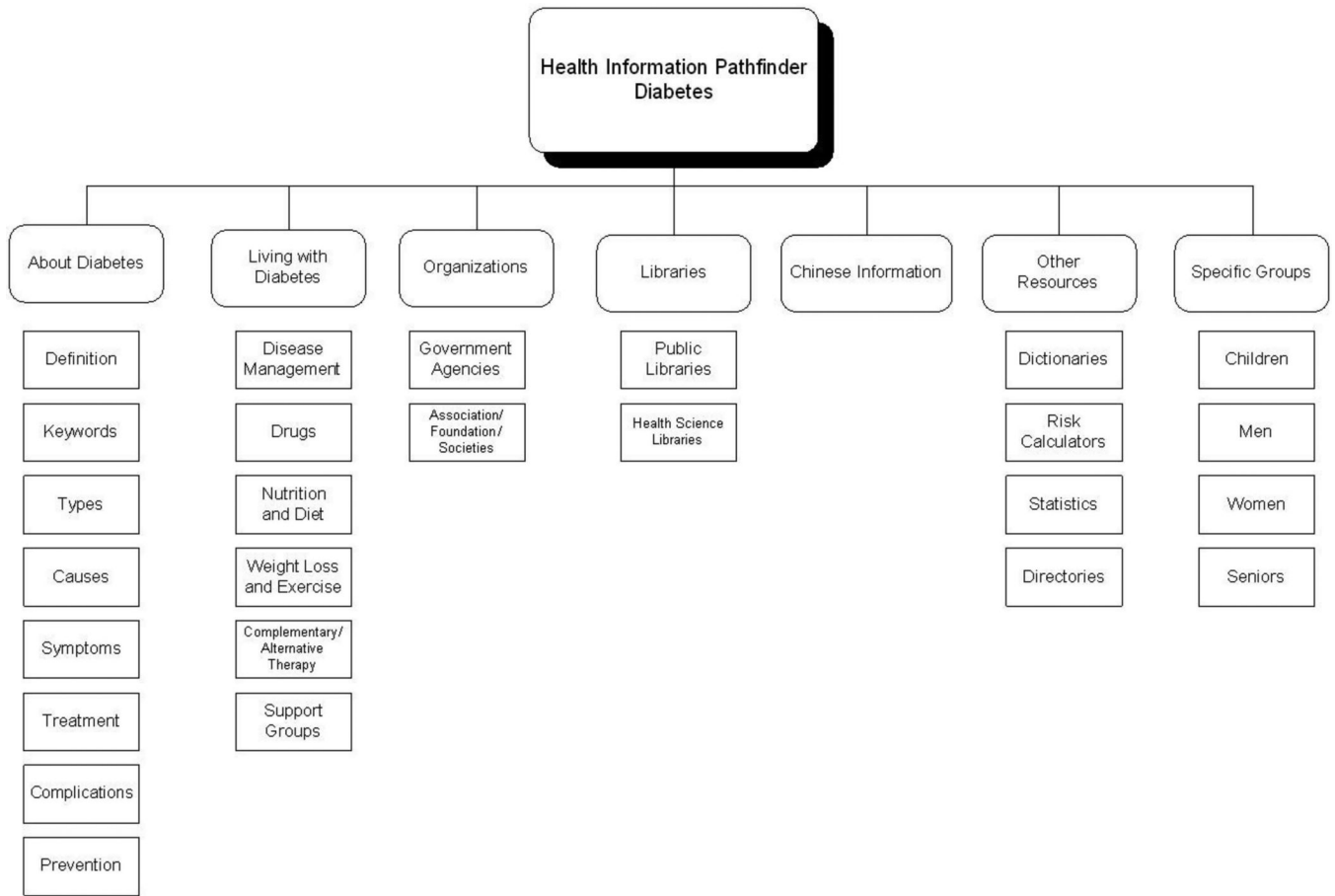
THANK YOU FOR YOUR PARTICIPATION!

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**FIGURE 1.** Organizational Structure of the Diabetes Health Information Pathfinder

**DIABETES PATHFINDER**  
糖尿病信息导航

Funded by the National Library of Medicine & the University of North Texas

Go back to main page

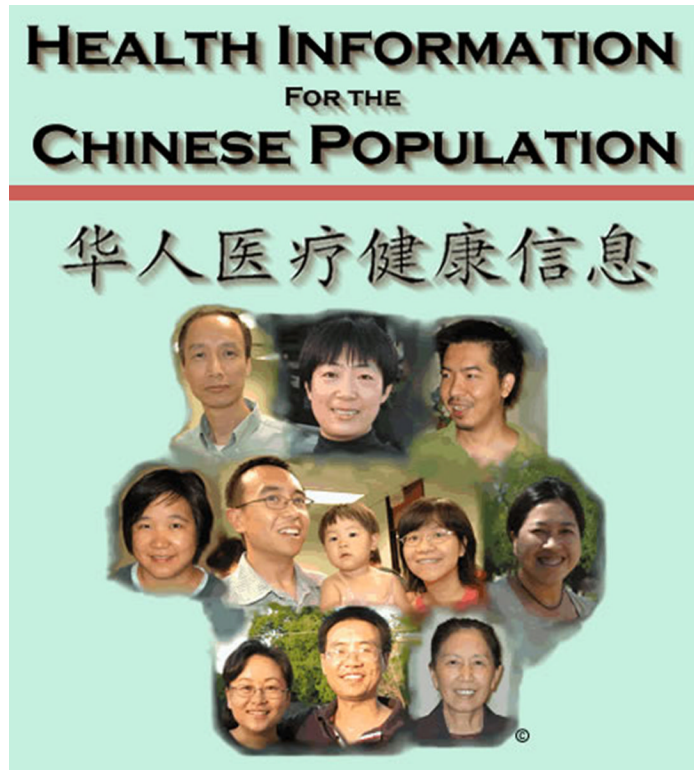
| Menu                          | Chinese Information Resources<br>中文信息资源   | 目录     |
|-------------------------------|---|--------|
| About Diabetes                | <p>If you see small boxes instead of Chinese characters, click here for instructions on how to install the Chinese Language Pack.<br/>若字体出现乱码, 请点击此处查看如何下载中文软件包。</p> <p><b>Agency:</b> 39.net<br/><a href="http://www.39.net">http://www.39.net</a></p> <p><b>Description:</b> Covers five areas of health information related to health care, living, medicine, interaction, and comprehensive knowledge. Provides health information services for the public, including health information resources, interaction with health professionals and experts, and concerns about consumer health. Includes the definition, diagnosis, treatment, medication, complications and patient support regarding diabetes.</p> <p><b>Language:</b> Chinese (simplified)</p> <p><b>Agency:</b> Asian American Diabetes Initiative<br/><a href="http://aadi.joslin.harvard.edu/index.asp">http://aadi.joslin.harvard.edu/index.asp</a></p> | 关于糖尿病  |
| Living with Diabetes          |   | 与糖尿病共存 |
| Organizations                 |   | 组织     |
| Libraries                     |   | 图书馆    |
| Chinese Information Resources |   | 中文信息资源 |
| Other Resources               |   | 其它资源   |
| Specific Groups               | 特殊人群  |        |

**Agency:** 深圳39数字健康网  
<http://www.39.net>

**说明:** 39数字健康网是由保健、生活、医药、互动、综合5个板块组成的内容丰富的频道体系。其主旨是通过资讯介绍、专业解读、专家互动、关注全民健康、聚焦健康热点, 为公众健康提供全面信息服务。糖尿病信息包括定义、诊断、治疗、药物和并发症, 以及家庭和医务工作人员对病患的支持。  
**语言:** 中文(简体)

**Agency:** 亚裔糖尿病研进会  
<http://aadi.joslin.harvard.edu/si/index.asp>

**FIGURE 2.**  
Diabetes Health Information Pathfinder Web Page



**FIGURE 3.**  
Health Information for the Chinese Population Project Graphic