

Response to RFP: "Access to Electronic Health Information 2004"

Lead Institution: Utah AIDS Foundation

Principal Investigator: Stan Penfold, Executive Director
Utah AIDS Foundation
1408 South 1100 East
Salt Lake City, UT 84105

Voice: 801-487-2323

Fax: 801-486-3978

Email: stan.penfold@utahaids.org

Project Narrative

Abstract

Individuals living with HIV/AIDS in Utah report that their top three barriers to “health education services,” including access to electronic health information, are “transportation,” “cost,” and “not knowing” where to find such services. The Utah AIDS Foundation (UAF) seeks to address this situation by installing four internet “Health Kiosks” in locations where individuals living with HIV/AIDS already congregate to receive HIV-related services (two HIV-specific medical clinics and one homeless day center). Health Kiosks will default to UAF’s HIV Resource Library website, which was developed with NLM funding, in partnership with a Regional Medical Library, the Spencer Eccles Health Sciences Library at the University of Utah. The HIV Resource Library website contains an extensive collection of electronic HIV-specific health related information, with particular emphasis on NLM-developed information resources including MedlinePlus and *clinicaltrials.gov*, as well as links to local HIV-specific services, information, and resources, like the state’s AIDS Drug Assistance Program and local Ryan White Title II and III providers. This project also seeks to implement an aggressive training program for users of the Health Kiosks. By training physicians and office staff at the proposed Health Kiosk locations to help consumers understand the resources available through the kiosks, as well as providing trained volunteers to assist consumers in spontaneous one-on-one sessions as they attempt to use the kiosks, this project seeks to arm consumers with the skills, tools, and confidence they need to use the Health Kiosks to seek out critical HIV- and health-related knowledge that can positively impact their lives and health.

Introduction and Background

In 1985 the Utah Department of Health reported a total of seventeen persons living with AIDS in Utah. The state and most citizens were unprepared to address the HIV/AIDS issue. The need for public information and for assistance for persons living with HIV/AIDS forced a community-based response that eventually became the Utah AIDS Foundation (UAF). The agency has grown rapidly over the past two decades from providing basic support service to seventeen people to a full range of professional client services to hundreds of people living with, and at risk for, HIV/AIDS throughout the state of Utah. The small committed corps of volunteers who began providing services has grown to almost 300 highly trained volunteers who work in a variety of educational, prevention, and supportive services throughout the state.

In 2000 the Utah AIDS Foundation realized that over the years it had amassed an extensive collection of books, videos, and other educational materials. UAF also became aware that although a vast amount of health and HIV-related information is widely available on the internet, our clients had significant trouble understanding how to navigate through this quantity of information in order to find quality, reputable HIV-related information they could use. Around the same time, the HIV-specific Highly Active Antiretroviral Therapy (HAART) medications that emerged in 1996 were allowing HIV physicians to give improved prognoses to individuals living with HIV/AIDS: for the first time, individuals living with HIV/AIDS were being told that with rigid adherence to medical care, they could expect to live relatively normal lifespans. This

allowed individuals living with HIV/AIDS to feel a greater sense of control over their illness, and they began to seek out HIV- and other health-related information in order to better understand and live with an HIV infection. In 2003, in response to this situation, the Utah AIDS Foundation secured funding from the National Library of Medicine to formalize its collection as a branch of the Spencer F. Eccles Health Sciences Library at the University of Utah. As part of this project, UAF also collected a number of internet-based resources, with particular attention to NLM-developed information sources like MedlinePlus and *clinicaltrials.org* as well as detailed information on local HIV-related resources for individuals living with HIV/AIDS in Utah.

Although teachers, students, and the general public have all used, and shown interest in, the UAF Resource Library, this project considers UAF clients, and other individuals currently living with HIV/AIDS as the primary target population. Individuals living with HIV/AIDS certainly have a vested interest in learning about HIV and having access to HIV-related information, and are tremendously interested in understanding medication interactions, the impact of nutrition on HIV disease, disease progression and transmission, and many other issues that affect the lives of those who are living with HIV/AIDS.

This project seeks to expand consumer access to online HIV-related health information through placing “Health Kiosks” in locations where individuals living with HIV/AIDS already gather in order to receive HIV-related services and/or medical care. The three partnering locations for this project all have long-standing relationships with the Utah AIDS Foundation. UAF has provided case management for Midtown Community Health Center patients for many years, and UAF case managers work closely with physicians at Midtown as they serve mutual patients/clients. Since HIV positive populations are very similar throughout the Intermountain Region, UAF and the HIV Services Clinic in Boise, Idaho, have been negotiating potential partnerships over the past year, focusing on ways to coordinate and integrate HIV-related services, and provide a comprehensive and coherent spectrum of services to patients and clients in this region. The Weigand Homeless Day center and UAF also share HIV positive clients, and UAF offers free HIV testing at the Weigand Center, as well as “AIDS 101” prevention education seminars for those at risk for HIV infection. This project extends these existing partnerships to include increased consumer access to electronic health information.

Target Population and Geographic Area

The target population for this project includes individuals living with HIV/AIDS in Utah and Idaho. All locations have been chosen because individuals living with HIV/AIDS already congregate in these offices to receive HIV-specific medical care or other support services. Each location is also a place where individuals living with HIV/AIDS feel safe and comfortable acknowledging their HIV status and seeking HIV-related information and services. Individuals living with HIV/AIDS throughout the intermountain region share similar characteristics. There are 1,046 reported HIV/AIDS cases in Idaho, and prevalence has increased over the past five years, due both to increasing numbers of new HIV infections, as well as increasing longevity for those who are infected with HIV. 88% of reported cases are male, 89% are between the ages of 20 and 49, 88% are non-Hispanic Whites, and 57% contracted HIV through male-to-male sexual contact (Idaho Department of Health, 2002). There are 2,029 Utahns living with HIV/AIDS, and the Utah Department of Health gives a similar overall picture of the predominant characteristics

of the Utah target population: 77% rely on some form of public assistance in order to finance HIV-specific medical care, 49% are unable to perform any work for pay, 61% were infected with HIV through male-to-male sexual contact, 76% are White Non-Hispanic, 56% have attended at least “some” college, and 76% are between 30 and 49 years of age (Utah Department of Health, HIV/AIDS Treatment and Care Needs Assessment, 2002).

Location 1: Utah AIDS Foundation, Salt Lake City, Utah

The Utah AIDS Foundation houses the HIV Resource Library that is a branch of the Spencer Eccles Health Sciences Library at the University of Utah, and is an affiliate member of the National Network of Libraries of Medicine. The Utah AIDS Foundation routinely serves 300 individuals living with HIV/AIDS throughout the state of Utah, providing case management, food and nutrition services, transportation assistance, housing assistance, therapeutic support groups, and other needed services. The demographic makeup of UAF clients is quite diverse, ranging from a single Hispanic father of five in Salt Lake City, to a young woman in an extreme rural area whose only social support is a tight-knit group of injecting drug users. Despite such demographic diversity, however, most UAF clients share similar financial challenges and struggle to afford medical care, housing, transportation, and food costs each month, and the majority of UAF clients live at or below the federal poverty level. The Utah AIDS Foundation is located in Salt Lake City, and most of our clients live in Salt Lake, Davis, and Weber Counties. UAF services are available to anyone living with HIV, however, and we regularly have clients who live in extreme rural areas of the state, and occasionally even in neighboring states. UAF currently has 20 computer workstations that are all connected to DSL internet. Three of these workstations are available to the public in our HIV Resource Library. HIV Resource Library workstations also provide subscription-service to several HIV-related electronic peer-reviewed journals. Aside from these journal subscriptions, UAF computer workstations are limited to no-cost online information resources. The UAF Resource Library website has also collected a significant amount of HIV-related online information that is especially relevant to individuals living with HIV/AIDS in Utah, particularly links to local services, resources, and policies, including Utah’s AIDS Drug Assistance Program (ADAP), and Ryan White services and providers. The UAF Resource Library also emphasizes NLM-developed online resources, especially MedlinePlus and *clinicaltrials.gov*.

Location 2: Midtown Community Health Center, Ogden, Utah

There are more than 250 individuals living with HIV/AIDS in Northern Utah, and Midtown Community Health Center offers them a full range of HIV-specific medical services. This project specifically partners UAF with Midtown’s HIV Services Clinic, which serves individuals living HIV/AIDS in Northern Utah. Most patients at Midtown rely on public assistance to finance their HIV-specific medical care, and many are of Hispanic origin and speak little, if any, English. Although the staff and physicians at Midtown are well connected to high-speed internet through dozens of computer workstations, no workstations are currently available for patient use.

Location 3: HIV Services Clinic, Boise, Idaho

The HIV Services Clinic, within the Family Practice Medical Center, is a Ryan White Title III Clinic in Boise, Idaho. It is the only location in Idaho dedicated to providing specialized primary medical care to individuals living with HIV/AIDS, and more than 300 receive primary medical care at this clinic. There are no AIDS Service Organizations in Southern Idaho that provide

support services for people living with HIV/AIDS. Although the HIV Services Clinic staff and physicians have access to more than a dozen computers with high-speed internet connections, the clinic does not currently provide any patient access to computers.

Location 4: Weigand Homeless Day Center, Salt Lake City, Utah

The Weigand Center serves 800 homeless individual in Salt Lake City on a daily basis.

Although Weigand Center clients are not necessarily living with HIV/AIDS, many are at high risk for HIV infection. Additionally, the nearby 4th Street Clinic provides medical care for several dozen homeless individuals living with HIV/AIDS, and the Weigand Center is where these individuals spend much of their time. The Weigand Center provides space for homeless individuals to relax indoors. Weigand Center staff have access to many high-speed internet workstations, but there are currently no computer workstations available to clients.

Identification of Need

Problem 1: Target population does not believe it has physical access to health education services and resources.

The most recent comprehensive statewide Utah HIV/AIDS Treatment and Care Needs Assessment was performed in 2002 by the Utah Department of Health. Of course, it should be noted that the primary intent of the state's Needs Assessment is not to assess respondents' information needs; it is an assessment designed to identify the concrete services to which individuals living with HIV/AIDS need improved access. As such, the Needs Assessment surveyed individuals primarily about the adequacy of their access to services like "medical care," "medication," "housing," "nutritional supplements," and "mental health care." But interestingly, in each service category, survey respondents noted that a major barrier to their ability to access the service is, quite simply "not knowing" where to go, what to do, or that such services are available to them. Essentially, the problem individuals living with HIV/AIDS across the state identify as a major barrier to receiving proper and critical care is a lack of *information*. In fact, the assessment indicates that not only are people living with HIV/AIDS unaware of specific services and assistance that are available to meet their health needs, they are also unaware that such services even exist. "Not knowing" appears as one of the top three barriers that Utahns living with HIV/AIDS report in *every single* service category the needs assessment measured (Utah Department of Health, HIV/AIDS Treatment and Care Needs Assessment, 2002).

The Needs Assessment did measure respondents' perception of access to one category of information services, which was called, simply, "Health Education Services." Respondents reported their number one barrier to this service was "transportation," while the second most-cited barrier was "cost," and the third barrier was "not knowing where to go." What is particularly interesting about this particular question is that respondents' answers indicate an even greater lack of information than the respondents themselves identify: there are no HIV-related health education services in Utah that require any payment at all, and yet respondents list "cost" as the number two barrier to this service. A number of different service providers offer health education services with various HIV-related emphases at no cost to clients.

That individuals report “transportation” and “cost” as the top two barriers to health education services indicates that they perceive such services as being removed from their daily lives and routines, and also suggests that clients anticipate, and fear, having to make special trips and financial sacrifices in order to access health-related or HIV-specific educational information and resources. No similar HIV/AIDS needs assessment is currently available in Idaho, but UAF expects that the situation is similar, if not worse for individuals living with HIV/AIDS in Idaho. The metropolitan area of Salt Lake City offers many HIV-specific services, including a variety non-medical supportive services to wrap around those living with HIV/AIDS. This is simply not the case in Idaho. Individuals can receive HIV-specific medical care at the HIV Services Clinic, but there is simply not a range of supportive wrap around services available.

Problem 2: Target population is not aware of health education resources, particularly online resources.

One of the reasons that individuals living with HIV/AIDS think they do not have access to health education resources is that they are simply not aware of informational resources that do exist. For example, in April 2004 UAF conducted a survey of foodbank clients who visit the UAF office regularly, averaging at least one weekly visit. The survey collected data on client awareness of the HIV Resource Library. Only 52% reported that they were aware of the HIV Resource Library located just upstairs, and only 16% had actually used the HIV Resource Library, even though 96% indicated that they were highly interested in accessing health information on a number of health-related topics, particularly nutrition, HIV medications, and general HIV information (Utah AIDS Foundation, 2004).

Problem 3: Target population does not have the skills to access UAF and NLM online resources.

Many individuals living with HIV/AIDS struggle with poverty. Of current UAF clients, 67% live at or below the federal poverty line, and an additional 25% have incomes between 101-200% of the federal poverty line. Only 8% of UAF clients have incomes that are 201% or more of the federal poverty designation (Utah Department of Health, 2004). UAF client demographics reflect a larger statewide situation. Other individuals living with HIV/AIDS in Utah who have received services directly from the state in the past year, 62% are at or below the federal poverty line and an additional 28% are between 101% and 200% of federal poverty (Utah Department of Health 2004).

Additionally, HIV infections are growing fastest among traditionally disenfranchised populations. For example, the Utah Department of Health notes that Hispanics make up only 5.9% of Utah’s general population, its 2002 HIV Surveillance and Community Epidemiological Profile indicates that Hispanics account for 17% of HIV/AIDS cases. The same source reports that while African Americans comprise only .9% of Utah’s general population, this group makes up an astounding 22.5% of new HIV infections reported in the state between 2000-2001, and that females account for more than half of the total infections among each of these two ethnic groups.

The Utah Department of Health also reports that 77% of individuals living with HIV/AIDS rely on some form of public assistance to finance their HIV-specific medical care and medications,

and an additional 5% report no health insurance/assistance at all (Utah HIV/AIDS Treatment and Care Needs Assessment Report, 2002).

All of these trends are particularly disturbing in light of research that indicates that individuals with low incomes are less likely to use computers or the internet (Bolt & Crawford, 2000), and therefore miss out on the substantial health benefits that research also indicates are related to accessing online health information (Kalichman, Benotsch, Weinhardt, Austin, & Luke, 2002).

The UAF foodbank survey on library use indicated that of clients who had used the HIV Resource Library, 60% had used the computers and electronic resources, while the rest had relied only on the library’s physical collections (Utah AIDS Foundation, 2004). This may indicate that some clients are intimidated by the computers, although UAF only has anecdotal evidence to support this claim. While UAF has not collected specific data on the number of clients with home computers, UAF staff who work directly and regularly with UAF clients are aware of only a handful who own or regularly use computers. The financial strain that financing HIV medical care can cause is often severe and many individuals living with HIV/AIDS simply cannot afford “extras” like computers or home internet access. Additionally, UAF experience with helping clients use the existing internet workstations in its HIV Resource Library has been that many clients who want to use the computers need significant assistance before they feel comfortable using the internet and browsing through electronic information resources on their own.

Project Objectives

<p>Problem 1: Target population does not believe it has physical access to health education services and resources.</p>	<p>Objective 1: Individuals living with HIV/AIDS will have increased physical access (and increased perception of access) to health education services, specifically online access to UAF and NLM health information and resources.</p>
---	---

Providing health information to individuals living with HIV/AIDS through the internet potentially solves the client-identified barriers to accessing health education services of “transportation” and “cost.” To provide health-related internet access, free of any charge to clients, and nested inside preexisting locations where clients already travel to receive critical HIV-related services, is the proposed solution to this problem. This is particularly important because of the long history of research that indicates that access to and effective use of health information empowers individuals living with chronic illness to actively participate in their health care, engage in health-promoting behavior, and ultimately to experience improved health status (Brody, Miller, Lerman, Smith, & Caputo, 1989; Greenfield, Kaplan & Ware, 1985; Jimison, Adler, Coye, Mulley, & Eng, 1998; Kalichman et al., 2002; Lorig, Mazonson, & Holman, 1993). At the same time, however, a substantial and growing number of people living with HIV/AIDS are not benefiting from online health information because of unequal access to information technology. Several groups, including the elderly, women, minorities, and people living in poverty represent the populations most likely to be cut off from information technology (Bolt & Crawford, 2000). Several of these same groups—women, minorities, and those living in poverty, also represent demographic groups that are among the fastest growing in new HIV

infections. As such, gaps in internet usage and access may serve as factors that could potentially limit entire groups of people living with HIV/AIDS from accessing advances in HIV-related health information that ought to be readily available to them (Kalichman, et al., 2002). It is critically important to provide the means for individuals to have ready access to the wealth of electronic HIV- and health-related information that is currently available.

<p>Problem 2: Target population is not aware of health education resources, particularly online resources.</p>	<p>Objective 2: Individuals living with HIV/AIDS will know about UAF and NLM online health information and resources.</p>
--	---

Even early in the AIDS epidemic, before online health information or multiple treatment options were available to consumers, it was recognized that greater knowledge of HIV, and HIV education resources, leads to a stronger sense of control over the disease and improved health behaviors (Cohen, 1988; Frierson & Lipmann, 1987). For individuals to benefit from health education resources, including electronic resources, however, they must be familiar with the existence of, and aware of their access to, such resources. To be aware of any health information resource is clearly a prerequisite to accessing it, and so a major objective of this project is to raise awareness of UAF’s HIV Resource Library and the electronic health information it contains among individuals living with HIV/AIDS. Information technology, particularly widespread internet use, provides opportunities for informing people living with chronic illnesses, like HIV/AIDS, about their condition, treatment options, and health improvement strategies. Because individuals can navigate through health information at their own speed, revisit the same source multiple times, and access sensitive information with a feeling of anonymity, electronic health information provides a uniquely appropriate venue through which individuals can access health information (Eng, Maxfield, Patrick, Deering, Ratzan, & Gustafson, 1998). This project will integrate referrals and explanations about the HIV-specific electronic health information resources available through UAF’s HIV Resource Library into standard sessions of case management, HIV test counseling, and foodbank services.

<p>Problem 3: Target population does not have the skills to access UAF and NLM online resources.</p>	<p>Objective 3: Individuals living with HIV/AIDS will have the skills they need to be able to effectively access UAF and NLM online health information and resources.</p>
--	---

Internet use for the purpose of accessing health information is so strongly correlated to better overall health for individuals living with HIV/AIDS that that they simply must have both access to online health information and the skills and ability to use such resources (Kalichman, et al., 2002). The availability of online health information resources is useless unless consumers have the skills that are necessary to understand and use the technology. Since information, motivation, and behavioral skills that associated with using the internet are related to actual internet use as well as increased health benefits among those living with HIV, is it becoming increasingly important to develop and support interventions that close the digital divide in

HIV/AIDS care (Kalichman, Benotsch, Weinhardt, Austin, Luke, & Cherry, 2003). In fact, individuals living with HIV/AIDS who use the internet for health-related information (as compared with non-health related internet use or no internet use) demonstrate a significant increase in adherence to their medications, and are more likely to know their CD4 counts and viral load, and are more likely to have an undetectable viral load (Kalichman, Benotsch, Weinhardt, Austin, & Luke, 2002). Clearly, these different aspects of health knowledge and behavior are related: increased knowledge of HIV quite possibly leads to increased adherence to medications, which, in turn is likely to produce lower viral loads and better CD4 counts, the major predictors of HIV-related health. The internet’s potential to open up vast stores of HIV- and health-related information cannot be ignored, particularly since it appears to assist individuals living with HIV/AIDS in maintaining their health. As such, this project’s third major objective is to extend the health benefits of online health information by assisting and training people living with HIV/AIDS to learn and understand how to use the internet to find HIV-related health information for themselves. Unfortunately, as much as 55% of online health information may be inaccurate or misleading (Berland, Elliott, Morales, Algazy, Kravitz, Broder, Kanouse, Munoz, Puyol, Lara, Watkins, Yang, & McGlynn, 2001), and so this project will specifically teach individuals how to find and use quality, reputable online information, particularly NLM-developed resources like MedlinePlus and *clinicaltrials.gov*. Accessing local information and service resources will also be emphasized.

Methodology

<p>Problem 1: Target population does not believe it has physical access to health education services and resources.</p>	<p>Objective 1: Individuals living with HIV/AIDS will have increased physical access (and increased perception of access) to computers connected to the internet, and specifically to UAF and NLM health information and resources.</p>
---	---

Methodology: In order to increase physical access for UAF clients to health-related online information, UAF will place internet “Health Kiosks” in four locations where individuals living with HIV/AIDS already gather to receive HIV- and health-related services.

Health Kiosk locations have been carefully selected as places where people living with HIV/AIDS already visit to receive HIV-related services, and feel comfortable and safe accessing HIV-related information. Health Kiosks will be set to default to the UAF HIV Resource Library website, which contains information about the physical HIV Resource Library and its holdings, and an easy-to-use collection of a number of different HIV-specific information resources, including both NLM-developed resources like MedlinePlus and *clinicaltrials.gov*, as well as concrete information about local HIV-specific services and assistance like Utah and Idaho’s AIDS Drug Assistance Programs (ADAP), local Ryan White providers, and HIV-specific public assistance resources and policies. UAF’s HIV Resource Library was developed through NLM funding, with the assistance of the Regional Medical Library, the Spencer Eccles Health Sciences Library at the University of Utah. The HIV Resource Library website connects individuals to a host of electronic HIV-specific health information in a user-friendly way.

Location 1: Utah AIDS Foundation Foodbank, Salt Lake City, Utah

Due to space limitations, the UAF Resource Library is located on the second floor of the UAF office, while most direct client services are delivered on the first floor of the UAF office. Even though UAF staff attempt to inform clients about the library, and welcome them to use it, the reality is that most clients simply do not make it to the second floor where the library is located. As such, we propose to place a Health Kiosk in first floor lobby of our building, where clients spend significant amounts of time waiting for services and socializing with each other. The major service that clients use in the UAF foodbank, and the kiosk will be placed in the entrance to the foodbank. Many UAF clients arrive at the foodbank several hours before it opens, and spend that time waiting and chatting in the lobby.

Location 2: Midtown Community Health Center, Ogden, Utah

Many individuals living with HIV/AIDS north of Salt Lake City receive their primary medical care from the physicians at Midtown Community Health Center in Ogden, Utah. A Health Kiosk will be placed in the waiting room of the HIV Services Clinic.

Location 3: HIV Services Clinic, Boise, Idaho

The Ryan White Title III HIV Services Clinic in Boise is the only source of HIV-specific primary medical care in Idaho. Individuals travel from all over the state to access medical care at the clinic. A Health Kiosk will be placed in the waiting room of the HIV Services Clinic.

Location 4: Weigand Homeless Day Center, Salt Lake City, Utah

The Weigand Homeless Day Center in Salt Lake City serves as a drop in day center for homeless Utahns during the summer months, and during the winter doubles as an emergency overflow night shelter. Although Weigand Center clients are not necessarily living with HIV/AIDS, many are at high risk for HIV infection. Additionally, the nearby 4th Street Clinic provides medical care for several dozen homeless individuals living with HIV/AIDS, and the Weigand Center is where these individuals spend much of their time. A Health Kiosk will be placed in the Weigand Center’s day room, where homeless individuals are welcome to spend time relaxing indoors.

<p>Problem 2: Target population is not aware of health education resources, particularly online resources.</p>	<p>Objective 2: Individuals living with HIV/AIDS will know about UAF and NLM online health information and resources.</p>
--	---

Methodology: UAF will incorporate referrals to the UAF Resource Library and online NLM resources into standard case management sessions and HIV testing/counseling sessions, and will encourage other HIV-related services providers to do the same.

This project seeks to increase the number of UAF clients, as well as individuals living with HIV/AIDS more generally, who are aware of online HIV- and health-related information resources. This project will incorporate referrals to the UAF Resource Library into a number of HIV-related services.

Case Management

UAF provides case management to more than 100 individuals living with HIV throughout the state of Utah. Part of standard case management procedure is to discuss the clients' awareness of HIV-related issues, including transmission, nutrition, medical care, medication, legal issues, and to assess the stability of the client's housing, financial, and mental situations. UAF will incorporate referrals to the UAF Resource Library in standard case management sessions.

HIV Testing and Counseling

UAF provides HIV testing to more than 1,000 individuals each year. One of the greatest values of HIV test counseling is that the counseling session functions as an individualized prevention education encounter between the test counselor and the client. The client can ask any questions he/she wants. UAF will incorporate a referral to the UAF Resource Library into all HIV Test Counseling sessions, whether the client's test result is positive or negative.

UAF Foodbank

The one Health Kiosk to be placed within the UAF office will be placed in the UAF foodbank. As such, a special effort will be made in the foodbank to introduce clients to the new kiosk, to encourage them to seek HIV- and other health-related information online in the UAF Resource Library. In the foodbank, UAF will especially promote the nutrition-related resources on MedlinePlus.

Other Service Providers

Clearly, UAF will partner with the service providers at its four other kiosk sites (IHC, Midtown Community Health Center, Weigand Center, and Boise's Ryan White Title III clinic) to ensure that their clients are aware of the UAF Resource Library and the new internet kiosks in these locations. UAF will also work with other HIV-service providers, with whom this project does not place kiosks, to introduce them to the UAF Resource Library, and encourage their clients to use it as well. For example, many individuals living with HIV/AIDS also seek therapeutic support: UAF will notify local Ryan White mental health providers of this resource and encourage them to refer their clients to it, as appropriate. Many individuals living with HIV/AIDS seek the assistance of HIV-specialist nutritionists: UAF will encourage these nutritionists to refer their clients to the UAF Resource Library.

<p>Problem 3: Target population does not have the skills to access UAF and NLM online resources.</p>	<p>Objective 3: Individuals living with HIV/AIDS will have the skills they need to be able to effectively access UAF and NLM online health information and resources.</p>
--	---

Methodology: Because many individuals targeted by this project have extremely low income levels, and may have little experience using computers and/or the internet, UAF, in conjunction with the Eccles Health Sciences Library, will provide significant training in effectively accessing online information resources.

There are two basic training components to this project: 1) training service providers at kiosk locations on how to use the online HIV Resource Library and NLM resources (and how to help their clients/patients use these resources), and 2) directly training consumers themselves on how to use these online resources. Although the Utah AIDS Foundation has significant expertise in

HIV-related work, it is also relatively new to library and information sciences. As such, all training UAF will give during this project will be developed with the assistance of the Library Outreach staff at the Eccles Health Sciences Library at the University of Utah, in order to ensure its effectiveness and appropriateness as training in accessing information resources.

Training Service Providers

UAF will provide training to the service providers at each of the five proposed kiosk locations in this project. All staff at these locations will be encouraged to attend the training, although the attendance of the staff person who directly supervises the lobby where the kiosk is placed and where clients/patients congregate will be most critical to the success of the project. This training has several objectives:

- Trainees will become familiar with the array of resources available through the HIV Resource Library website.
- Trainees will understand how to use various NLM resources, including MedlinePlus and *clinicaltrials.org*.
- Trainees will develop tools and techniques to assist and teach others to use HIV Resource Library and NLM information resources.

Training Consumers

Training will also be offered directly to consumers. At the Utah AIDS Foundation, this training will be offered during several scheduled training sessions that coincide with UAF foodbank services when large groups of clients are already congregating at the Utah AIDS Foundation. The Weigand Center environment will also be conducive to group trainings. Unfortunately, the physicians' offices where Health Kiosks will be placed will be inappropriate for scheduled group trainings, and so training will also be offered one-on-one to patients/clients as they attempt to use the new kiosk or the existing library workstations. During times of high traffic, volunteers will be available to assist UAF clients in using the Health Kiosk and the HIV- and health-related resources available through it. At other kiosk locations, staff will assist consumers as they learn to use the Health Kiosks, and UAF will also make volunteers available at these sites to assist consumers, as needed.

Consumer trainings, whether scheduled group trainings or spontaneous one-on-one sessions, have several objectives:

- Consumers will be familiar with using the internet.
- Consumers will be familiar with the information resources available through the HIV Resource Library website.
- Consumers will understand how to find HIV-related information using various NLM resources, including MedlinePlus and *clinicaltrials.org*
- Consumers will understand how to navigate through the local HIV-related resources section of the HIV Resource Library

For a detailed time schedule of project activities (integrated with evaluation activities), please see the chart at the end of this proposal's "Evaluation" section.

Evaluation Plan

Evaluation plans, as outlined below, are organized into sets of activities that correspond to project objectives.

Objective 1: Individuals living with HIV/AIDS will have increased physical access (and increased perception of access) to computers connected to the internet, and specifically to UAF and NLM health information and resources.

Measurements:

- Changes in patient/client awareness, use, and perceptions of access, to online health information resources.
 - Method: collection of baseline data through survey distribution at the Health Kiosk sites before kiosks are placed.
 - Method: repeat survey at end of project period, and determine changes in client/patient awareness and perceptions of access to online health resources
- Placement of Health Kiosks at the four proposed sites
 - Method: completed/not completed

Objective 2: Individuals living with HIV/AIDS will know about UAF and NLM online health information and resources.

Measurements:

- Changes in consumer awareness of UAF and NLM online health resources
 - Method: comparison of same baseline and end-of-project survey data at kiosk locations that is outlined in the measurements for Objective #1 above.
- Number of clients referred to Resource Library online materials through integration of referrals into standard UAF client encounters.
 - Method: UAF staff will make note of client referrals to Resource Library in client charts. Charts and referrals will be reviewed and tabulated at end of project period.

Objective 3: Individuals living with HIV/AIDS will have the skills they need to be able to effectively access UAF and NLM online health information and resources.

Measurements:

- Baseline (pre-kiosk) data on Resource Library website traffic patterns and usage
 - Method: generate and analyze weekly/monthly reports from SiteTracker web statistics application during time before Health Kiosks are placed
- Comparison of baseline data to end of project data on Resource Library website traffic patterns and usage
 - Method: generate and analyze weekly/monthly reports from SiteTracker web statistics application throughout project period, specifically examining changes in website traffic volume, ease and efficiency with which consumers navigate through website over time (with special attention to the periods immediately

following scheduled group trainings), and identifying which information resources are most used/sought out by consumers.

- Comparison of pre- and post-training levels of confidence and knowledge for individuals who receive online health information training (both formal group sessions and informal one-on-one sessions).
 - Method: distribute pre- and post-training skills assessment surveys to all training recipients
- Changes in consumers’ perception of their ability to efficiently use Health Kiosks.
 - Method: distribute consumer satisfaction survey near the end of the project period that elicit information on consumers’ perceptions of their ability to use Health Kiosks, and their satisfaction with Health Kiosk sessions.
- Consumer satisfaction and/or perception of continued unmet needs despite Health Kiosks
 - Method: at end of project period hold a focus group of 6-8 consumers from various kiosk sites to determine which information resources consumers find most helpful, identify difficulties or frustrations they have with the Resource Library website and online health resources, and collect general feedback on the Health Kiosk project.

Note: One of the major methods used to determine the effectiveness of this project and the ease with which consumers are using the HIV Resource Library website will be monitoring website traffic generated at each of the Health Kiosks. UAF currently uses a website traffic tracking system only records very basic statistics, such as total number of visit, number of repeat visits, pages at which visitors enter and leave the website, referring search engines, documents downloaded from the website, and other such general information. This current service will not be adequate to perform the detailed website tracking the evaluation of this project requires, and UAF will need to upgrade its current web tracking service.

The following chart is an integrated timeline of project and evaluation activities. Numbered column headings indicate “month 1,” “month 2,” etc., of the 12-month project timeline.

Activity	1	2	3	4	5	6	7	8	9	10	11	12
Evaluation: Collect baseline data on consumer awareness and use of online health info at kiosk sites	X	X	X									
Activity: order SiteTracker web tracking service	X											
Evaluation: Collect baseline (pre-kiosk) data on Resource Library website traffic and use	X	X	X									
Activity: Develop training for service providers		X	X									
Activity: Develop training for consumers		X	X									
Activity: order/purchase			X									

computers/equipment												
Activity: Train volunteers to use, and teach consumers to use, Health Kiosk resources			X	X								
Activity: Install Health Kiosks in Utah locations				X								
Activity: Provide Health Kiosk training to service providers at Utah kiosk locations				X								
Evaluation: Pre- and post-tests to training recipients				X								
Activity: Install Health Kiosk training to Idaho kiosk location					X							
Activity: Provide Health Kiosk training to service providers at Idaho kiosk location					X							
Evaluation: Pre- and Post-tests to Idaho training recipients					X							
Activity: Provide spontaneous one-on-one Health Kiosk training to consumers				X	X	X	X	X	X	X	X	X
Evaluation: training surveys to one-on-one trainees				X	X	X	X	X	X	X	X	X
Activity: Provide scheduled group trainings to consumers at UAF and Weigand Center					X		X		X			
Evaluation: Pre- and Post- tests to scheduled training participants					X		X		X			
Activity: Integrate Resource Library and kiosk referrals into standard UAF case management, HIV test counseling, & foodbank						X	X	X	X	X	X	X
Activity: meet with other (non-kiosk location) HIV-service providers to demonstrate Resource Library functions and encourage referrals to it							X	X				
Evaluation: analyze (post-kiosk placement) Resource Library web usage data from SiteTracker				X	X	X	X	X	X	X	X	X
Evaluation: focus group of consumers to discuss satisfaction with Health Kiosk resources											X	
Evaluation: Collect end-of-project data from all kiosk locations on consumer awareness and use of online health information resources												X

Publicity/Promotion

UAF's HIV Resource Library website is already registered with all the major internet search engines. Additionally, in July, 2004, 10,000 bookmarks promoting UAF's HIV Resource Library website and the online health information available through it, will be distributed to

individuals living with HIV/AIDS, HIV- and other health-related service providers, physicians' offices, schools, and public libraries throughout the state. These promotional bookmarks are funded under UAF's current contract with NLM (RFA-LM-02-001) and are not included in this application's project plan or budget, although they will promote the same electronic health resources.

Aside from these publicity efforts, most of the promotion for this project will be conducted through word-of-mouth and face-to-face referrals. Since the target population for this project is relatively narrow—individuals living with HIV/AIDS who already receive services at the proposed Health Kiosk locations—informing consumers about this project will largely happen through conversations at the Health Kiosk locations, and through the integration of referrals to the Resource Library into existing UAF services and programs. UAF staff and volunteers, as well as the physicians and staff at kiosk locations, will make special efforts to inform patients and clients about the Health Kiosks, and to encourage and assist them in using the kiosks. Additionally, UAF will work with other service providers who will not have kiosks, but work with the same set of HIV positive clients. These service providers will be equipped with promotional bookmarks and encouraged to refer clients to the HIV Resource Library.

Personnel

Stan Penfold, *Executive Director, Principal Investigator*

The Principal Investigator conceived the initial idea for UAF's HIV Resource Library and has led the library project from the very beginning. He is the Principal Investigator on UAF's current contract with the National Library of Medicine under RFA-LM-02-001. He has been employed at the Utah AIDS Foundation for 10 years, and has been the Executive Director for the past five years. For this specific project, the Principal Investigator will oversee all activities, and will be responsible for computers and equipment, as well as maintaining partner relationships on an administrative level. As Executive Director of the Utah AIDS Foundation, the Principal Investigator also oversees and approves the planning and evaluation process for all UAF programming, and will be significantly involved in guiding the integration of referrals to the Resource Library into other areas of UAF programming, including case management, HIV test counseling, and the foodbank. He has worked extensively with the United Way of Salt Lake and serves on the local United Way Program Outcomes Mentoring Team training other non-profit agencies and staff in the use and implementation of Outcomes Measurements and Program Logic Models. The Principal Investigator directly supervises the Programming Director.

David Ferguson, *Programming Director*

The Programming Director has been with the Utah AIDS Foundation for nearly five years. Before taking on the Programming Director position he was UAF's HIV Prevention Specialist for men who have sex with men (MSM). As the MSM HIV Prevention Specialist he adapted the MPowerment Model to develop the "Village" HIV prevention model which is now the basis of all UAF prevention programming. Currently, his general responsibilities as Programming Director include overseeing and supervising all client services and prevention services at UAF. He has been a member of Utah's CDC-directed Community Planning Committee, and has served on Utah's Housing Opportunities for People With AIDS Advisory Committee. The Programming Director's directly supervises the Resource Library Coordinator, and as such, his

participation in this project will largely be in an advisory capacity to the Resource Library Coordinator. He will be particularly involved in the development of the training sessions for service providers and consumers at Health Kiosk locations.

Aaron Hansen, Resource Library Coordinator

The Resource Library Coordinator has been employed at UAF for three years, and has been involved with UAF's HIV Resource Library project since June 2003. He led the cataloguing efforts to integrate UAF's library materials into the Eccles Library's online catalogue and circulation system, and has developed and maintains the Resource Library website. He performs the daily duties and activities associated with Resource Library, completes NLM reporting and billing, recruits and trains Resource Library volunteers, and participates in project evaluation efforts. He will be responsible for all daily activities associated with this project, including purchasing equipment, coordinating technical support for kiosk locations, training and supervising library volunteers, working with the Executive and Programming Directors to integrate Resource Library referrals into other UAF services, and coordinating evaluation efforts with the UAF Research Coordinator. He will also work extensively with the outreach librarians at the Eccles Health Sciences Library in developing the trainings for service providers and consumers, and will conduct these trainings once they are developed.

Corina Segovia-Tadehara, Ph.D., Research Coordinator

Dr. Segovia-Tadehara has developed, implemented, and supervised many research projects while at the Utah AIDS Foundation, including work on Public Sex Environments, gay, lesbian, bisexual, and transgender health access, and sexuality education in public schools. She has presented at various national and local conferences, and had an abstract published in the XIV International AIDS Conference 2002, in Barcelona, Spain on her work with public sex environments. The same abstract was expounded upon and has been accepted for publication by the Journal of HIV/AIDS and the Social Sciences. Dr. Segovia-Tadehara continues to conduct/supervise all research and evaluation projects at the Utah AIDS Foundation. She supervises the development of evaluation plans for UAF programming, assists program coordinators in developing specific survey instruments from which to collect data, and performs all complex data analysis herself. Dr. Segovia-Tadehara has been with the Utah AIDS Foundation for four years. Her primary role on this project will be to oversee the evaluation components of this project, and analyze data collected.

Volunteers

5-10 volunteers will spend a total of 10 hours each week assisting with this project. Major volunteer functions will include being very familiar with all the online health information available through the HIV Resource Library website and assisting individuals living with HIV/AIDS as they attempt to use the Health Kiosks. Volunteers will complete UAF's standard training requirements, including New Volunteer Orientation and AIDS 101. Volunteers will also be required to attend project-specific training on how to assist clients in using the Health Kiosks in spontaneous one-on-one sessions. Volunteers will be stationed primarily at the UAF office, but will also visit other Health Kiosk locations as needed and appropriate.

Please see attached resumes for UAF staff to be involved in this project.

Personnel	Hours	% Total Project Hours
Stan Penfold, Principal Investigator	208	11%
Aaron Hansen, HIV Resource Library Coordinator	1040	55%
David Ferguson, Programming Director	104	5%
Corina Segovia-Tadehara, Ph.D., Research Coordinator	100	5%
Volunteers	520	24%

Facilities/Institutional Support

The Utah AIDS Foundation is a 501(c)(3) organization governed by a volunteer Board of Trustees. UAF has two decades of experience in providing various services to individuals living with HIV/AIDS. Current direct client services include case management, transportation assistance, housing assistance, therapeutic support groups, food and nutrition services, and holiday assistance. UAF also has a long history of providing HIV prevention and awareness services, including educational presentations at schools, detention facilities, and community groups, displays of the NAMES Project AIDS Memorial Quilt, an HIV information hotline, outreach to bars, nightclubs, and public sex environments, HIV testing, and a regional Gay Men's Health Summit. Since January 2003 UAF has been working closely with the Eccles Health Sciences Library at the University of Utah to develop its experience in managing its physical library and online information resources and services. The two basic services this project proposes—placing Health Kiosks and training consumers to use them—are an important extension of the Resource Library goal to increase public access to critical HIV- and health-related information. The HIV Resource Library, and the project outlined in this proposal, are strongly supported by UAF executive officers and its Board of Trustees.

Please also see the attached letters of commitment from each participating institution.

Continuation of Activities After Project Completion

The activities that are initiated during this project period will be continued after the initial funding period is over. The major ongoing costs associated with this project are personnel expenses, although as the Health Kiosk computers get older, they will require more maintenance and will eventually need to be replaced. UAF plans to seek funding for these ongoing project components through a number of different sources: local private foundations are being considered to support the project, as are larger national funders with whom UAF has a strong history of support, including the B.W. Bastian Foundation and the Gill Foundation. Public support will also be sought, if it is identified as appropriate to this project. After the initial 12-month project period is over, each Health Kiosk location will absorb the internet connection costs associated with the Health Kiosk it hosts. We anticipate it should be fairly easy and inexpensive for partner locations to integrate the new DSL costs into their existing technology infrastructures. Volunteers will continue to be recruited and trained to assist clients/patients use the Health Kiosks, although since intensive training is planned during the initial project period, we also anticipate that demands on volunteer time will decrease somewhat as time goes on. UAF also plans to hold annual “refresher” trainings with staff at each Health Kiosk location to update them on any new information resources that are available.

Other NLM or NN/LM Support

The Utah AIDS Foundation HIV Resource Library is currently funded under NLM's RFA-LM-02-001. This funding has functioned as start-up support during the initial two years of this project. This extended funding period will end in September 2004, although UAF expects to finish the work and expend all funds by the beginning of August 2004. No other applications for NLM or NN/LM funding are currently pending review.

References

Berland, G.K., Elliott, M.N., Morales, L.S., Algazy, J.L., Kravitz, R.L., Broder, M.S., Kanouse, D.E., Munoz, J.A., Puyol, J.A., lara, M., Watkins, K., yang, H., & McGlynn, E.A. (2001). Health information on the Internet: Accessibiligy, quality, and readability in English and Spanish. *Journal of the American Medical Associatin*, 285, 2612-2621.

Bolt, D., & Crawford, R. (2000). *Digital Divide: Computers and our children's future*. New York: TV Books.

Brody, D. S., Miller, S.M., Lerman, C.E., Smith, D.G., & Caputo, G. C. (1989). Patient perception of involvement in medical care: Relationship to illness attitudes and outcomes. *Journal of General Internal Medicine*, 4, 506-511.

Cohen, S. (1988). Psychosocial models of the role of social support in the etiology of physical disease. *Health Psychology*, 7, 269-297.

Eng, R.R., Maxfield, A., Patrick, K., Deering, M. J., Ratzan, S., & Gustafson, D. (1998). Access to health information and support: A public highway or a private road? *Journal of the American Medical Association*, 280,1371-1375.

Frierson, R. L., & Lippmann, S.B. (1987). Psychological implications of AIDS. *American Family Physician*, 35, 109-116.

Greenfield, S., Kaplan, S., & Ware, J. (1985). Expanding patient involvement in care: Effects on patient outcomes. *Annals of Internal Medicine*, 102, 520-528.

Idaho Department of Health & Welfare, STD/AIDS Program (2002). *Epidemiological Profile of HIV/AIDS in Idaho*.

Jimison, H., Adler, L., Coye, M., Mulley, A., & Eng, T.R. (1998). Health care providers and purchasers and evaluation of interactive health communication applications. *American Journal of Preventative Medicine*, 16, 16-22.

Kalichman, S. C., Benotsch, E.G., Weinhardt, L., Austin, J., & Luke, W. (2002). Internet use among people living with HIV/AIDS: association of health information, health behaviors, and health status. *AIDS Education and Prevention*, 14(1), 51-61.

Kalichman, S. C., Benotsch, E.G., Weinhardt, L., Austin, J., Luke, W., & Cherry, C. (2003). Health-related internet use, coping, social support, and health indicators in people living with HIV/AIDS: preliminary results from a community survey. *Health Psychology*, 22(1), 111-116.

Lorig, K.R., Mazonson, P.D., & Holman, H.R. (1993). Evidence suggesting that health education for self-management in patients with chronic arthritis has sustained health benefits while reducing health care cost. *Arthritis and Rheumatism*, 36, 439-446.

Utah Department of Health, Bureau of Communicable Disease Control, Ryan White Services (2004). *Supportive Services AAR Report By Provider*.

Utah Department of Health, Bureau of Communicable Disease Control and the Center for Health Data (2002). *HIV Surveillance Report and Community Epidemiological Profile*.

Utah Department of Health, Bureau of Communicable Disease Control, HIV/AIDS Treatment and Care Program (2002). *Utah HIV/AIDS Treatment and Care Needs Assessment Report*.

Utah AIDS Foundation (April 2004). *Client Survey on Resource Library Use*.

Cost Proposal

Cover Sheet

Lead Institution: Utah AIDS Foundation

Principal Investigator: Stan Penfold, Executive Director
Utah AIDS Foundation
1408 South 1100 East
Salt Lake City, UT 84105

Voice: 801-487-2323

Fax: 801-486-3978

Email: stan.penfold@utahaids.org

Budget Form

Submitted by: Utah AIDS Foundation

Date Submitted: June 4, 2004

Period Covered: 8/1/04 – 7/31/05

EXPENDITURE CATEGORY	AMOUNT
Personnel	\$26,674.79
Equipment	\$9,944.00
Supplies	
Communications	\$1,259.64
Reproduction	
Other Costs	\$527.40
TOTAL	\$38,405.83

Budget Narrative

Personnel

Stan Penfold, *Executive Director, Principle Investigator, 10% FTE* \$5,800.00

The Principal Investigator will oversee this project as a whole and the equipment installation and maintenance. He will be particularly heavily involved in supervising the incorporation of Resource Library referrals into standard UAF case management, foodbank, and HIV test counseling sessions.

Aaron Hansen, *Resource Library Coordinator, 50% FTE* \$12,740.00
The Resource Library Coordinator oversees the daily operations of the UAF resource library and will be responsible for all daily duties associated with this project. He will also be significantly involved with the development and delivery of training modules and will work closely with each of the four participating locations in placing and supporting library kiosks. He will also work with the Programming Director to develop protocols for integrating Resource Library referrals into standard UAF case management and HIV test counseling sessions.

David Ferguson, *Programming Director, 5% FTE* \$2,000.00
The Programming Director is the direct supervisor of the Resource Library Coordinator and will spend approximately 5% of his time overseeing the Resource Library Coordinator's work on this project. The Programming Director oversees all client-centered programs at UAF and will be particularly heavily involved in the development of the training modules associated with this project. The Programming Director is directly supervised by the Principal Investigator.

Corina Segovia-Tadehara, Ph.D., *Research Coordinator* \$2,258.97
Dr. Segovia-Tadehara will be responsible for the evaluation of this project. She oversees all evaluation of UAF programming, including developing survey instruments, supervising data collection, and analyzing data. Evaluation costs for this project are estimated at 7% of the total project budget.

Benefits \$3,875.82
Standard healthcare benefits for Utah AIDS Foundation employees are calculated at 17% of staff salaries.

Equipment

Computers \$9,944.00
Includes 4 ADA-compliant sit-down kiosk enclosures with 17-inch CRT monitors and power reboot/timeout devices at \$1370 each. Because of security issues associated with placing kiosks in high-traffic public areas, kiosk enclosures are necessary to protect equipment. Also includes 4 Dell Optiplex GX270 CPUs at \$1,116 each.

Communications

Internet Service \$1,259.64
Includes DSL service, at \$34.99 per month, for the project's initial year at each of the three remote locations (DSL charges at UAF will not increase due to this project and are not included in this budget). After the first year, remote locations will take on the ongoing DSL costs to maintain the kiosks.

Other Costs

Web Tracking \$107.88
An upgraded web traffic tracking system will be necessary to collect website usage data for the evaluation of this project. This cost includes a subscription to SiteTracker Premier web statistics package at \$8.99 per month for one year.

Travel \$419.52

Includes one trip to Boise to train staff at the Ryan White Title III Clinic. Mileage reimbursement at \$.32 per mile for 686 miles (round trip), lodging at \$50 per night for two nights, and per diems at \$25 per day for two days for two people.

Total: \$38,405.83