

## FINAL REPORT OUTLINE FOR SUBCONTRACTS

Note: An electronic copy of the final report should be submitted with the paper copy. Electronic copies should be saved as a Microsoft Word document on a 3.5" disk.

### COVER SHEET

The cover sheet for the report (which should be on a separate page from the actual report) should include:

1. Title of the Project: Area Health Education Center of Southwest Oregon Cyber Camp: Providing high school youth and educators with regional health career and medical issues information repository using the Internet and online resources.
2. Identification of the project if it is an 2003 Access To Electronic Health Information subcontract: University of Washington Subcontract No. 467148 "Cyber Health Camp"
3. Name of Institution: Area Health Education Center of Southwest Oregon
4. Location of Institution: PO Box 2217, Roseburg, Oregon 97470
5. Name, Mailing and E-Mail Addresses, Voice and Fax Numbers, of Person Submitting Report: Brendan L. Ashby, MPH, CHES, Program Director, PO Box 2217, Roseburg, Oregon 97470, [bashby@healthyoregon.com](mailto:bashby@healthyoregon.com), 541.672.1945, 541.672.1848 (F)
6. Inclusive Dates of Final Report: February 2002-April 2003
7. Date Submitted: June 10, 2003

## REPORT OF ACTIVITY DURING LAST QUARTER OF THE PROJECT

This report should be submitted as a separate quarterly report following the Quarterly Report Outline.

### NARRATIVE DESCRIPTION

1. *Summary/Introduction:* The title of the proposed program is “Area Health Education Center of Southwest Oregon Cyber Camp: Providing high school youth and educators with regional health career and medical issues information repository using the Internet and online resources. “ The primary purpose of the proposed program is to increase knowledge of rural health opportunities through the development of an interactive web-based application for high school youth and educators. This application will allow students to access information on health careers, rural healthcare opportunities, healthcare calendar of events/programs, university and college healthcare related programs, scholarships, and regional healthcare institutions.

This application will assist students from disadvantaged backgrounds with opportunities to develop skills and access information necessary to become health professionals. It seeks to do this by responding to the identified need for the development of comprehensive, culturally appropriate educational resources for students and educators. Specifically this grant provides the resources to support the development of a comprehensive online resource for students and educators working with health career topics while also providing training and support necessary for these students and educators to access this valuable information. The proposed program is the culmination of multiple collaborative relationships including partners from high schools, universities, hospitals, and other community based organizations.

*Summarize your accomplishments on the project:* The AHEC had direct training outreach to 364 individuals, created a mobile display accessed by 522+ individuals, and created an online web page and component residing at <http://www.healthyoregon.com/cybercamp.html> <http://12.231.173.93/CareerCamp/>. Furthermore, the AHEC has designated Cyber Health Camp as a priority program with continued support and expansion.

2. *Geographic region/number of counties:* Six counties in Southwest Oregon (Coos, Curry, Douglas, Jackson, Josephine, and Lane)  
*List the geographic regions or all the counties that were impacted by the project.* Coos, Curry, Douglas, Jackson, and Lane
3. *Collaborations/Partnerships:*  
*Include names and types of organizations with which there was collaboration at any time during the project. Provide the status of the partnerships, challenges encountered, and lessons learned.*

Bill Duffy  
Health Occupational Instructor  
Roseburg High School  
547 W. Chapman  
Roseburg, OR 97470  
(541) 440-4141  
bduffy@roseburg.k12.or.us

Victoria Snow-Mountain  
ESL Instructor  
South Medford High School  
815 S. Oakdale Ave.  
Medford, OR 97501  
(541) 776-8661

Ellen Riley  
Director / Advisor  
Eastern Oregon University Distance Education  
1988 Newmark Ave., Tioga Hall #320  
Coos Bay, OR 97420  
(541) 888-7232  
Ellen.Riley@eou.edu

Frann Groseman  
Director of Education  
Curry General Hospital  
94220 Fourth St.  
Gold Beach, OR 97444  
(541) 247-6621  
[chdhealthcare@gb.wave.net](mailto:chdhealthcare@gb.wave.net)

Dr. Lois Banke  
Asante  
Director of Education  
691 Murphy Rd.  
Medford, OR 97504  
(541) 608-5904  
lbanke@asante.org

John Irwin  
Informatics Consulting Services  
6570 Old Stage Road  
Central Point, OR 97502

(541) 664-2456  
[jirwin3rd@home.com](mailto:jirwin3rd@home.com)

Cathleen Coontz, RN  
Health Careers Coordinator  
400 Ninth Street  
Florence, OR 97439  
(541) 997-8412  
[coontz@peacehealth.org](mailto:coontz@peacehealth.org)

Pedro Cabrera, R.R.T.  
Clinical Director  
202 S. Riverside Ave.  
Medford, OR 97501  
(541) 245-7582  
[PCabrera@roquecc.edu](mailto:PCabrera@roquecc.edu)

Shawn Jennings  
Indian Education Director  
Marshfield High School  
PO Box 509  
Coos Bay, OR 97420  
(541) 267-1499  
[shawnj@coos-bay.k12.or.us](mailto:shawnj@coos-bay.k12.or.us)

Steve Yeiter  
Instructor  
Gold Beach High School  
29516 Ellensburg Ave  
Gold Beach, OR 97444  
(541) 247-6647

Irene McRae  
Hyper Link Inc.  
501 Callahan Rd.  
Roseburg, OR 97470  
(541) 672-9803  
[Irene@hypernav.com](mailto:Irene@hypernav.com)

Steve and Shelley Dougherty  
Independent Web Developers  
[stevedougherty@attbi.com](mailto:stevedougherty@attbi.com)

North Medford High School  
South Medford High School  
Crater High School  
Gold Beach High School  
Marshfield High School  
Roseburg High School  
Siuslaw High School

The aforementioned partners are still actively involved in the AHEC Cyber Health Camp. The AHEC views the work to date as the initial foundation for future expansion and strengthening of the program. Funding is an ongoing challenge, but with increased visibility of the program and online resources, the AHEC is finding that more of our community partners are willing to explore possible sustainability efforts. The AHEC realized that for many individuals the concept was challenging to grasp until the actual online resources could be accessed and explored.

4. Training:

*Within two weeks of any training or demonstration session, complete a record of the event in the online outreach activity reporting system (<https://staff.nlm.gov/extra/>). In the final report, provide a summary of the training events and participants:*

- *Total number of sessions conducted as part of the project:* Twenty-two outreach sessions were conducted.
- *Total number of sessions in which half or more than half of participants were from minority populations:* Eleven
- *Total number of participants in the project's sessions:* 364
- *Breakdown of participants by:*
  - Health care or service provider: 2
  - Health sciences library staff member: 0
  - Public/other library staff member: 1
  - Member of the general public: 361 students

5. Training sites:

*Provide a brief description of training sites: The training sites included rural / urban high schools and university settings.*

North Medford High School  
South Medford High School  
Crater High School  
Gold Beach High School  
Marshfield High School  
Roseburg High School  
Siuslaw High School  
Oregon Health & Science University

6. Exhibits:

*List all the exhibits connected with the projects (if applicable). Include the meeting name, dates, location, estimated number of contacts made, demonstrations given and general impressions of success.*

- Oregon Rural Health Conference, Bend, Oregon, October 3-5, 2002 (estimated 75+ contacts)
  - Career Fair, Coos Bay, Oregon, January 24, 2003 (estimated 185+ contacts)
  - Science Outreach and Research (SOAR) Training, Roseburg, Oregon, February 8, 2003 (estimated contacts 8)
  - Brain Awareness Day, Roseburg, Oregon, March 15, 2003 (estimated 124+ contacts)
  - Multicultural Day, Medford, Oregon, April 25, 2003 (estimated 130+ contacts)
- The AHEC discussed the project and how it could affect training opportunities for rural and underserved populations. All contacts were very curious and most expressed enthusiasm about the project.

7. Resource materials:

*Provide a brief description of any materials that were developed for training or for promotion/marketing (include newspaper announcements, brochures, etc.). Include copies of materials developed. If web-based resources were developed, please provide the URL for the site where the materials are located. Please see attachment A for web resources. Attachments B & C contain PDF files of newsletter articles.*

<http://www.healthyoregon.com/cybercamp.html>

<http://12.231.173.93/CareerCamp/>

*URLs for all web-based training materials should also be sent the National Training Center and Clearinghouse (NTCC) for inclusion in the Educational Clearinghouse (<http://nmlm.gov/train/>). Provide verification that this has been done or provide a date by which it is expected that URLs of web-based training materials will be sent to the NTCC's Educational Clearinghouse. The AHEC expects to submit the URLs to the NTCC by June 16, 2003.*

8. Web sites:

*Detail the current status of web sites created as part of the project. Include URL, plans for future maintenance, and impact. The AHEC currently maintains Cyber Health Camp on two sites. The main Cyber Health Camp resides on the AHEC home page <http://www.healthyoregon.com/cybercamp.html> and a component resides on <http://12.231.173.93/CareerCamp/>. The AHEC is currently assessing the expansion of the main site to include additional features and functionality. The AHEC has identified an appropriate web master to place online course content as part of the future site expansion. The component piece is scheduled to receive regular updates for a period of three years. Moreover, the AHEC is in the process of identifying future funding sources for sustainability and expansion beyond AHEC funding*

sources.

9. Document delivery and reference services:

*If document delivery services and reference services were provided, please provide appropriate statistics.* NA

10. Approaches and interventions used:

*Describe the specific steps or activities used in the following areas: identifying and scheduling sessions; promotion/marketing; training; personnel/staffing; web site development.* After a regional needs assessment, the AHEC worked with rural/urban-underserved high school student populations within targeted schools in our region. Of the students that had prior exposure to health career options, the AHEC wanted to identify additional online resources for these students to explore. Regarding the students that had no prior experience with health careers training, the AHEC sought to introduce health care as an option for employment.

The sessions in Roseburg, Florence, and Gold Beach dealt with students that had prior knowledge of health careers, the outreach to those students was comprised of online resources, and more in-depth study of methods to access health careers training. The remainder of the sessions involved students that had a cursory interest in health careers and health information on the Internet. Moreover, training sessions regarding accessing appropriate online health related web sites were given to all students.

Students received surveys to complete and the AHEC utilized that information for the creation of the web site and related component. Marketing occurred through the AHEC newsletter, web site, and display booths accessed by over 522 individuals. Moreover, AHEC held informational sessions with students and their instructors before the release of the Cyber Health Camp online content. The AHEC held train the trainer sessions at all of the high schools and plans follow-up training as the site evolves. The individuals involved in training include the AHEC Program Director and the Assistant Program Coordinator.

Web site development consists of feedback from students involved in the AHEC Club Medical Education Development (Club M.E.D.) program and from the AHEC Program Director and web master. In addition, the AHEC Board members submit feedback regarding the program.

11. Evaluation:

*How was the project evaluated? What results were achieved based on the objectives of the project?* The evaluation utilized pre and post surveys. The AHEC also solicited student feedback on all aspects of the web site development. Student volunteers worked with AHEC staff to identify resources and share opinions on the program.

The following is a summarization of 50 complete pre / post survey results:

1. The Internet is an essential resource when searching for health information?

	1	2	3	4	5	6	7	Never Looked
Pre-				8	19	12	9	1
Post-				6	10	16	19	

2. On a scale of 1-5, how confident are you in your ability to find health information on the internet?

	1	2	3	4	5
Pre-	2	3	15	22	6
Post-	1	4	16	17	13

3. Please list three criteria for evaluating online health information web sites:

Pre Survey-

- 35 Don't know  
 job pay information; job listing  
 search engine  
 able to ask question and have them answered; background information;  
 easy to find what you are looking for  
 accuracy; quantity of information; clarity of information  
 vital information; search engine; visual aid  
 resources; organized  
 read it; search  
 name of site; reputation of site; information is agreeable with  
 magazines; research  
 reliable sites; up to date information; having detailed information  
 organized; good sources of information; good layout  
 typing the name; resources; dictionaries  
 vital information  
 area; pay; updates  
 lists requirements  
 references; contacts

Post Survey-

- 37 Credibility Content Disclosure  
 3 Content, interactivity, links  
 2 www.healthfinder.gov; gateway.nih.gov/gw/cmd; content.nejm.org  
 2 content, caveats; design who it's made by; how old the information is; associations  
 know where info is coming from; evaluate links on page compared to info; make  
 sure you can contact source where information comes from; how much  
 information; commercial sites abstracts; disclaimers; journals; Medline; ERIC;



CHID

4. NLM Gateway is a health information search engine?

	Yes	No	Don't Know
Pre-	2		48
Post-	43	1	1

5. Please list three federal government health information databases:

Pre Survey-

- 45 Don't know
- 2 www.healthyoregon.com
- National Library of Medicine
- federal health.com
- cdc.gov
- health clinic; school; internet

**Post Survey-**

- 35 Medline, AHRQ, ERIC, CHID, JAMA
- Government, university, medical institutions combined health information; agency for healthcare research and quality
- 8 www.child.nih.gov; www.ahyr.gov; www.ncbi.nih.gov/fubmed
- 2 www.ncbi.nih.bo/pubmed; www.eric.ed.gov; www.child.nih.gov
- nejm.com; healthfinder.com, jama.ama-assn.org; content.nejm.org; www.ajnb.org

6. The National Library of Medicine is the world's largest medical library.

	Yes	No	Don't Know
Pre-	8		40
Post-	42	2	7

7. MEDLINE contains bibliographic citations and author abstracts from more than 4,600 biomedical journals published in the US and 70 other countries?

	Yes	No	Don't Know
Pre-	2		46
Post-	39	1	11

8. Health information abstracts can be accessed at most online health professional journals.

	Yes	No	Don't Know
Pre-	9		39
Post-	44	2	4

9. The Area Health Education Center of Southwest Oregon's web site has health career information?

	Yes	No	Don't Know
Pre-	17		31
Post-	39	1	11

After accessing the AHEC informational session on *Health Information on the Internet*, more than 30% of the outreach students were able to identify appropriate online health information resources. More than one third of the students rated the Internet as an essential resource when searching for health information. More than one third of the students were able to identify appropriate evidence based literature web sites. At least one third of the students were able to identify the National Library of Medicine and Medline as appropriate health information web sites.

\*To view the surveys used please see attachments D & E.

12. *Problems or barriers encountered:*

*Provide details on problems encountered in the areas of promotion/marketing; training; equipment/telecommunications; personnel/staffing; and web site development.* Capturing completed surveys from the students was difficult. Data collection had a setback due to local school budget cuts and the restructuring of classes, which caused the students to be more mobile. Promotion was initially a challenge due to the geographic size of the AHEC region. However, by utilizing online methods, newsletters, promotional displays, and word of mouth the AHEC was able to market the program. Marketing is ongoing and the AHEC has additional plans to revisit several sites and assess marketing efforts to ensure that the program resources are properly accessed. The AHEC staff had the challenge of delivering the outreach and training throughout a 17,000 square mile region, often to rural and isolated locations. Nonetheless, the staff enjoyed bringing the program and resources to the rural and underserved populations and stressing the importance of online resources to those populations with access challenges to traditional learning modalities.

The actual web site development created the greatest challenge, in that there exists an unlimited number of quality resources through which to filter for appropriate content and relevance to the AHEC Cyber Health Camp. In addition, identifying superior and reliable web designers was a constant effort. The AHEC feels confident with the current web talent and have plans to work with those individuals for the future expansion of the Cyber Health Camp program.

13. *Continuation plans:*

*Report on how you plan to continue the project. Will all or some of the project's activities continue? Who will provide the funding and staffing to do so?* The AHEC

is invested in the process of increasing the efficacy of Cyber Health Camp and the utilization of the program by minority and underserved student populations in our region. The AHEC has expanded its approach to developing and sustaining programs such as this one through discovery of funding partners to share costs and seeking a broad range of funding resources. The AHEC will be constructing proposals for program continuation and will be seeking community partners who can provide financial support. In addition, the AHEC is able to leverage other state and federal funds.

The AHEC is currently planning on program expansion as the budget allows and is working with our board and community partners to deepen and strengthen the program for continued access by student populations. The AHEC has secured assurance from our current web masters to expand the program content to increase functionality. The AHEC Program Director will play a role in identifying appropriate online content and ensuring that the original program goals and objectives are realized.

14. *Impact:*  
*Include information on the perceived and actual impact of the project on the library, institution, or consortium. This can include the effect of the project on the library's image, increased utilization of the library, etc. Over 886 individuals had contact with the AHEC Cyber Health Camp. Through the collection of qualitative and quantitative results, the AHEC has surmised that the overall perception of the Cyber Health Camp and the National Library of Medicine (NLM) is very positive. The majority of the students surveyed had excellent comments and feelings toward the NLM and stated that the NLM was very beneficial in their search for health related information and that they would continue to utilize those online resources in the future.*
  
15. *Recommendations for improvement:*  
*Include suggestions for alternative methods, training materials, promotional materials, etc. Health occupation instructors would welcome pre-assessed online learning modules. The AHEC is exploring methods to increase the use of the Cyber Health Camp by instructors and parents. Moreover, joint marketing efforts with the library would increase credibility and expertise for some individuals.*
  
16. *Responses to follow-up questions (attached):*  
*If answers to the follow-up questions are contained elsewhere in your report, indicate where they are located.*

#### FOLLOW-UP QUESTIONS

1. *Were your original project goals and objectives met? If not, why not?* The goal of this project was to increase the impact of the Internet regarding educational and research skills that are necessary for success in health career and medical issue education among SW Oregon rural and underserved student populations with high poverty rates and access

issues. Through the AHEC, outreach and training sessions it is thought that the goal was accomplished and that the students increased their use of appropriate Internet resources for health and health care related web sites.

The process objectives included: 1) develop an online, web based, comprehensive, culturally competent resource of health career and medical issues information including easy and convenient access to information on health careers, rural healthcare opportunities, university and college healthcare related programs, scholarships, and regional healthcare institutions; 2) Provide a web site where participants will take health related, for-credit and non-credit course(s); 3) Develop opportunities for students and healthcare institutions to share dialogue and coordinate discovery sessions utilizing the www and Internet technology.

A web based health career component was developed and is currently online for students and others to access. The component has non-credit health course material for both students and instructors. However, the AHEC is exploring the possibility of having for-credit courses placed on the Cyber Health Camp. The AHEC is working with partners to develop additional functions to allow increased communication between students utilizing the Cyber Health Camp and ways to place direct communication with health professionals in a real time online setting. One major challenge is to expand the current sites through community funding. However, the AHEC is confident in our base funding and the ability to generate additional funds through other sources.

2. What significant lessons were learned which would be of interest or use to others conducting outreach projects? Which strategies were the most effective in implementing the project? Having similar missions and shared goals between partners. The initial partnerships were critical for the success of this project. Moreover, the shared development of the goals and objectives with the partners ensured that everyone had a complete understanding of the project's limitations and what exactly it was supposed to accomplish. Constant communication was imperative so that everyone involved knew the program status and could react accordingly with input and suggestions for change as required.
  
3. If you were to start all over again, what, if anything, would you change about your goals, project plans, etc.? It is possible that the scope of the project would be narrowed and more defined. The AHEC realized that we could not accomplish all of our objectives to the extent that we wanted to, but we felt that this program was an initial step that laid a solid foundation for future growth. The geographic area would also be narrowed to allow for additional outreach and training to specific student populations.

4. What advice or recommendations would you give to anyone considering a similar outreach effort? The NLM provided the AHEC with a wonderful learning opportunity in which to explore means to increase the utilization of online health related resources for diverse student populations in rural areas. The formation of solid partnerships is extremely vital for a successful program.

**Attachments:**

**Attachment A:**

# **The Area Health Education Center (AHEC) of Southwest Oregon**

## ***Health Information on the Internet***

### **Evaluating Health Information on the Internet**

- Credibility**: includes the source, currency, relevance/utility, and editorial review process for the information.
- Content**: must be accurate and complete, and an appropriate disclaimer provided.
- Disclosure**: includes informing the user of the purpose of the site, as well as any profiling or collection of information associated with using the site.
- Links**: evaluated according to selection, architecture, content, and back linkages.
- Design**: encompasses accessibility, logical organization (navigability), and internal search capability.
- Interactivity**: includes feedback mechanisms and means for exchange of information among users.
- Caveats**: clarification of whether site function is to market products and services or is a primary information content provider.

Assessing the Quality of Internet Health Information. Summary. Agency for Health Care Policy and Research, Rockville, MD, and Mitretek Systems, McLean, VA. <http://www.ahrq.gov/data/infoqual.htm>

### **Examples of Health Information Databases**

- Medline**- primarily contains medical journals. Available online as “PubMed” through the National Library of Medicine (NLM). <http://www.ncbi.nlm.nih.gov/PubMed>
- ERIC (Education Resource Information Center)** – contains journals related to school health, school-aged youth, and education in the broadest sense.  
<http://www.eric.ed.gov/>
- CHID (Combined Health Information Database)** – provides descriptions of health programs in process, abstracts of journal articles, and other reports.  
<http://www.chid.nih.gov>
- AHRQ (Agency for Healthcare Research and Quality)** – evidence-based information on health care outcomes; quality; and cost, use, and access. <http://www.ahrq.gov>

### **Examples of Health Information Search Engines**

- Federal Government’s Health Finder. <http://www.healthfinder.gov>
- The NLM Gateway: allows users to search in multiple retrieval systems at the U.S. National Library of Medicine (NLM). <http://gateway.nlm.nih.gov/gw/Cmd>

**Examples of Professional Journals**

- The Journal of the American Medical Association: <http://jama.ama-assn.org/>
- The New England Journal of Medicine: <http://content.nejm.org/>
- American Journal of Health Behavior: <http://www.ajhb.org>
- American Public Health Association: <http://www.apha.org/>

**Visit our web site at [www.healthyoregon.com](http://www.healthyoregon.com) or call 1.800. 501.1566 to learn more about AHEC and our programs.**



at Doc

Attachment C



at Doc

Attachment D

**AHEC Cyber Health Camp Education Initial Survey**

**(Please print)**

**Name:** \_\_\_\_\_ **Age:** \_\_\_\_\_ **Race/Ethnicity:** \_\_\_\_\_

—

**Address:** \_\_\_\_\_

—

**E-**

**Mail:** \_\_\_\_\_

**Please list five useful items/resources you would like to see at a health career web site:**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

5. \_\_\_\_\_

**Is online interaction with other students important in a web site experience?**

Yes    No

**Is online interaction with health care professionals important in a web site experience?**

Yes    No

**Please list five topics you would like to see addressed at a health career web site:**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

**Is an interactive health career assessment/information tool useful in a web site experience?** Yes    No

**Are health care knowledge quizzes useful in a web site experience?**

Yes    No

**Is health care career ladder information important in a web site experience?**

Yes    No

**Other suggestions for a health career web site?** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

*Thank You For Your Participation!*

*Attachment E*

## **AHEC Health Information Education Survey** (Cyber Health Camp

pre/post)

(Please print)

**Name:** \_\_\_\_\_ **Age:** \_\_\_\_\_ **Race/Ethnicity:** \_\_\_\_\_

**Address:** \_\_\_\_\_



E-Mail: \_\_\_\_\_

School: \_\_\_\_\_

**1. The Internet is an essential resource when searching for health information:**

**1      2      3      4      5      6      7**

Strongly Disagree

Strongly Agree

**2. On a scale of 1-5, how confident are you in your ability to find health information on the Internet?**

**1                      2                      3                      4                      5**

Not at all

Reasonably

Totally

Confident

Confident

Confident

**3. Please list three criteria for evaluating online health information web sites:**

**6.** \_\_\_\_\_

**7.** \_\_\_\_\_

**8.** \_\_\_\_\_

**4. Is the NLM Gateway (<http://gateway.nlm.nih.gov/gw/Cmd>) a health information search engine?     **yes**     **no**     **don't know****

**5. Please list three federal government health information databases:**

**a.** \_\_\_\_\_

**b.** \_\_\_\_\_

**c.** \_\_\_\_\_

**6. The National Library of Medicine is the world's largest medical library.**

**yes**             **no**             **don't know**

**7. MEDLINE contains bibliographic citations and author abstracts from more than 4,600 biomedical journals published in the United States and 70 other countries.**

**yes**             **no**             **don't know**

**8. Health information abstracts can be accessed at most online health professional journals.**

**yes**             **no**             **don't know**

**9. The Area Health Education Center of Southwest Oregon's web site has health career information.**

**yes**             **no**             **don't know**

***Thank You For Your Participation!***