# Final Report

## COVER SHEET

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| Title of the Project: | Outreach Program to Underserved Speech-Language Pathologists and Audiologists in Southeastern Idaho |
| Name of Institution: | Idaho Health Sciences Library |
| Project Leader's Name: | Ruling Guo, Health Sciences Librarian, AHIP |
| Project Leader's Mailing Address: | 921 South 8$^{th}$ Avenue<br>Pocatello, ID 83209-8089 |
| Project Leader's Email: | guoruil@isu.edu |
| Project Leader's Phone: | 208-282-3104 |
| Time Period Covered: | 01/08/2007 - 03/15/2008 |
| Date Submitted: | 03/15/2008 |

**NARRATIVE DESCRIPTION**

1.  Executive Summary: Summarize the project's major accomplishments.

    The major accomplishments of this project are:

    - The project investigators designed and implemented the training program to speech-language pathologists (SLPs) and audiologists in the southeastern region of Idaho using a logic model;
    - Two 10-hour workshops on evidence-based practice (EBP) in speech-language pathology and audiology were taught in July and September, 2007. See Attachment I: Teaching Notebook;
    - This project recruited 16 participants who were from medical centers, public schools, Idaho State University, and private clinics which covered 5 counties in the southeast region of Idaho (See Section 4. List of Participants' Name and Working Settings);
    - All the participants who attended the training received 1 CEU credit from the American Speech-Hearing Language Association (ASHA) (See Attachment II: ASHA CEU Participant Form);
    - The project investigators conducted pre and post tests, overall workshop evaluations, and a follow-up survey 3 to 6 months following the workshops (See Attachment III: Samples of Pre-Test and Post-Test and Attachment IV: Workshop Evaluation Form);
    - The data from the survey, tests, and workshop evaluations were analyzed descriptively and analytically using the Statistical Package for the Social Sciences (SPSS);
    - A poster presentation was given at the Medical Library Association (MLA) Joint Meeting in Las Vegas on February 7, 2008. The title of the presentation was Evidence-Based Practice Training Program to Underserved Speech-Language Pathologists and Audiologists. It was well received. This poster will also be presented on Research Day organized by the Kasiska College of Health Professions on April 4, 2008. See Attachment V: Poster Presentation;
    - A poster presentation has been accepted for presentation at the MLA Annual Meeting in Chicago in May 2008 and Research Day organized by the Kasiska College of Health Professions on April 4, 2008. The title of the poster is Applying a Logic Model to an Evidence-Based Practice Outreach Training Program. See Attachment VI: Poster Presentation;
    - The principal investigator joined with the Regional Medical Library Outreach Librarian at the ASHA annual convention and shared the teaching materials of EBP training program with SLPs and audiologists across the nation.

2.  Geographic region/number of counties: List the geographic regions or all the counties that were impacted by the project.

    This project was conducted in the southeast region of Idaho. Participants were from 5 counties of this region (Caribou, Power, Bannock, Bonneville, and Bingham).

3. Collaborations/Partnerships: Include names and types of organizations with which there was collaboration at any time during the project. Provide the current status of the partnerships, challenges encountered, and lessons learned.

The partnerships below were established during the project:

- Idaho Speech-Hearing Association
- School District #25
- Portneuf Medical Center

The challenge to recruit SLPs and audiologists was more difficult than we expected.

4. Training: *NOTE: If you haven't already done so, please complete a record of Training/Demonstration Sessions using the form at http://nnlm.gov/evaluation/datacollection/ActivityInfo.pdf and fax to your PNR staff contact at (206)543-2469. In this final report, provide a summary of the training events and participants:

Two 10-hour workshops were taught by the project investigators on July 25-26 and September 12, 19, and 26, 2007. Each workshop included 3 sections. Section I was presented by Dr. Barbara Bain and included an introduction and overview of EBP, determining levels of evidence, specific instruction on critical appraisal formats, how to complete the formats, and a list of resources and selected references. Session II, EBP information searching was taught by Ruiling Guo, Health Sciences Librarian. The content included an introduction to PubMed and other EBP resources, guides for using databases, and a list of EPB practice resources. The third session was presented by Janene Willer and focused on the application of EBP principles and steps with specific case studies. Finally, Dr. Bain summarized, provided conclusions and gave charges to the participants. See Attachment I: Teaching Notebook.

A total number of sixteen participants attended the workshops. They are working from medical centers, public schools, Idaho State University, and private clinics, which covered 5 counties in Southeast Idaho. The following is a list of participants who attended the two workshops.

Shari K. Goode, SLP
School District #150
780 Pioneer Drive
Soda Springs, ID 83276
208-547-4669
goodshar@sodashcools.org

Brindie Henderson, Audiologist
Blackfoot School District # 55
270 E. Bridge
Blackfoot, ID 83221

208-785-8800 (home) 208-757-7278 (cell)
hendb@d55.k12.id.us

Patty Taylor, SLP/A
Portneuf Medical Center
515 E. Benton
Pocatello, ID 83201
208-239-1425
patriciat@portmed.org

Leann Smith, MS, CCC-SLP
Portneuf Medical Center
515 E. Benton
Pocatello, ID 83201
208-239-1490
leans@portmed.org

Sarah Knudson, Clinical Assistant Professor
Department of Communication Sciences & Disorders,
And Education of the Deaf
Idaho State University
921 South 8th Avenue
Pocatello, ID 83209-8116
282-2219
knudsara@isu.edu

Krista Rudd, SLP
Portneuf Medical Center
515 E. Benton
Pocatello, ID 83201
208-239-1490
kristar@portmed.org

Holly Cree, SLP
School District #25
3115 Poleline Rd.
Pocatello, ID 83201
208-234-4289
joncree@cableone.net

Greg Smith, Educational Audiologist
School District #25
911 N. Grant Ave
Pocatello, ID 83201
208-233-3435

smithgr@d25.k12.id.us

Julie McDermott, SLP
Portneuf Medical Center
515 E. Benton
Pocatello, ID 83201
208-239-1490
juliem@portmed.org

Erick Goodwin, SLP
Eastern Idaho Regional Medical Center (EIRMC)
PO Box 2077
Idaho Falls ID 83403-2077
 rolf.goodwin@HCAHealthcare.com

Margaret Albiston, SLP
Idaho Falls School District # 91
1730 Del Mar Dr.
Idaho Falls, ID 83404
208-529-6575
albimarg@d91.k2.id.us

Kerrie Guard, SLP
Pocatello School District #25
1563 Sun Valley Way,
Pocatello ID 83201
208-238-3052
jguard@allidaho.com

Jody O'Donnell, SLP
American Falls School District # 381
355 Bannock
American Falls, ID 83211
208-226-5203 (work)
jodyo@sd381.k12.id.us

Sheryl Perrine, SLP
Pocatello School District #25
5827 Hilo Drive
Pocatello, ID 83204-4621
208-233-4643
perrinsh@d25.k12.id.us

Angela Stites, SLP
Pocatello School District #25

11888 Whitaker Rd.
Chubbuck, ID 83202
208-237-4742
stitesan@d25.k12.id.us

Debbi VanVooren, SLP
Pocatello School District #25
Syringa Elementry,
388 E. Griffith Rd.
Pocatello, ID 83201

Total # of sessions for the Project:                                                                2
Total # of sessions in which half or more of participants were from minority populations:  0
Total # of participants for the Project:                                                            16

Breakdown of the count of participants by:

Health care or service provider, with a subtotal for public health personnel         16
Health sciences library staff member
Public/other library staff member
Member of the general public

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5.  Training sites: Provide a brief description of training sites.

    The training site was at Idaho State University Eli M. Oboler Library and Idaho Health
    Sciences Library. The Libraries have subscribed to many databases related to medicine
    and speech-language pathology and audiology, such as Cochrane Library, ERIC,
    PsycINFO, CINAHL with Full Text, Communication & Mass Media, etc. The Libraries
    provided an electronic classroom with 25 seats for the purpose of educational training.
    The classroom provided 25 computer stations with updated software and Internet access.

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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. *NOTE: If you haven't already done so for all exhibits, please complete
    an exhibit report found at http://nnlm.gov/pnr/funding/ExhibitReportOutline09-12-02.doc and
    submit with this report.

    No exhibits were conducted.

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.  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://nnlm.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.

A training notebook was developed and distributed to each participant (See Attachment I). The notebook included an introduction, program agenda, information about teaching faculty and participants, and three sections for the handouts from the presentations. The three sections included EBP: an introduction and overview; EBP information searching; and EBP application. NLM resource, MedlinePlus and PubMed, ERIC and resources from the ASHA were introduced as the main EBP information searching resources.

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8. Web sites: Detail the current status of web sites created as part of the project. Include URL, plans for future maintenance, and impact.

A web site will be considered for development in the future.

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9. Document delivery and reference services: If document delivery services and reference services were provided, please provide appropriate statistics.

Document delivery and reference services have not been used by the SLPs and audiologists participants following the workshop although the services were offered by the Idaho Health Sciences Library.

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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.

Identifying and scheduling sessions:
Our team discussed options for determining convenient times for SLP's and audiologists to attend the EBP workshops. We looked at the interest in a weekend workshop format, a workshop scheduled over several evenings or a two-day summer workshop.

Promotion and marketing:
To promote the workshops and request information regarding convenient times for professionals in speech-language pathology and audiology to be involved in this outreach program, Janene Willer arranged several site visits. First, she discussed the project with Tammy Grunig, MA, Speech-Language Pathology Director at Protneurf Medical Center, and also Linda Steenrod, MS, Special Education Director at School District #25. Both facilities were partners who supported the proposal. The directors announced to the staff at the hospital and also at School District # 25 that Janene would present information about the EBP content, topics of interest, and application of searching practice. Ruiling Guo contacted Kathy Fatkin, Health Sciences Librarian to try to recruit the speech-language pathologists and audiologists at the Eastern Idaho Regional Medical Center (EIRMC).

An brochure for promoting the workshops was designed by Ruiling Guo and received the input from the other investigators. See Attachment VII.

The professionals were asked to sign a list with their email address and phone numbers if they were interested in attending the workshops. Next an email was sent to members of the Idaho Speech, Language, and Hearing Association in Region III which included most of the professionals in the southeastern area of Idaho.

The response from the email provided us with a list of professionals who were interested in attending the EBP workshops, the preferred dates, as well as areas of interest to search for evidence.

Personnel/staffing:
The team reviewed the feedback from the first workshop, made revisions and increased the opportunities to practice searching sites and using the strategies taught. We also added practice to compare the results from different sites depending on the topic.

11. Evaluation: How was the project evaluated? What results were achieved based on the objectives of the project?

   Evaluation methods:

   - The investigators administrated pretests and posttests prior to and following educational experiences;
   - An overall workshop evaluation was administered after each workshop;
   - A follow-up survey was conducted three-six months after the workshops.

   Objectives achieved:

   Some objectives of the project were achieved and some were not. The detailed information is described in the following:

   1. 63.8% of participants who received training on evidence-based practice understood evidence-based practice, the PICO model, and the level of evidence by the end of their training sessions.

   2. 100% of participants indicated that they would be able to search EBP resources efficiently.

   3. 75% of participants indicated that they were confident in using PubMed to locate EBP information.

   4. 83% of participants who received training on EBP indicated that they were confident in implementing EBP.

5.  100% of participants attending the workshops indicated that the training materials were useful.

6.  61.5% of the participants who responded to the follow-up survey (8/13) reported that they were employing EBP in their practices.

7.  69% of the participants who responded to the follow-up survey (9/13) reported that they had shared information with a colleague.

In addition, significant increases were found in participants' knowledge scores, self-assessment of knowledge, and confidences ($p<.001$) between the pre and post test scores. Overall, participants were satisfied with the workshops (See Attachment VIII: Workshop Evaluation Feedback from Participants).

5.  Problems or barriers encountered: Provide details on problems encountered in the areas of promotion/marketing; training; equipment/telecommunications; personnel/staffing; and web site development.

    a.  Given the limited population in the state of Idaho, the investigators encountered problems in recruiting speech-language pathologists and audiologists to attend the workshops;
    b.  The funding was not enough to provide participants with follow-up services such as visits to the participants in their working sites by the investigators. One fourth of the funding was applied to indirect cost of the University;
    c.  In order to implement the project, the project investigators volunteering time for which they were not paid. More specifically at this time, Guo volunteered 87 extra hours, Bain 43 extra hours, and Willer 22 extra hours.

6.  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 future plan of this research is to disseminate the teaching materials across the state and the nation through conferences and publications. The activities of the project will be continuing if funding is provided by the Regional Medical Library or some other agency.

7.  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.

    Through this project, participants became aware that Idaho Health Sciences Library is the only designated resource medical library for the state of Idaho. It provides the library information services to the health professionals in the community such as document delivery and interlibrary loan. In addition, health professionals can access many health online resources in person at the library. Reference services are provided free by the Library. The

participants learned that PubMed, ERIC, and related online sources are accessed at no cost. Some of them did not know that PubMed developed by NLM is a free resource to the public before the training program.

8. Recommendations for improvement: Include suggestions for alternative methods, training materials, promotional materials, etc.

If possible, a web site should be developed to place the teaching materials on the Internet to sharing with other SLPs and audiologists across the state and nation.

FOLLOW-UP QUESTIONS

If answers to the follow-up questions are contained elsewhere in your report, indicate where they are located.

1. Were your original project goals and objectives met? If not, why not?

Some of the original project objectives were met and some were not (See Section 11). The project employed multiple ways to assess whether or not the objectives were met. The participants demonstrated a statistically significant difference between their pre and post test scores. Overall, the participants indicated that they were very satisfied with the workshop content. Assessment of specific content of the workshops indicted that some of the objectives were not met. Those objectives assessed specific knowledge and did not rely on the participants perceptions.

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?

We think that planning, collaborating closely, being enthusiastic, being willing to spend extra hours on the project, and taking advantage of each investigator's expertise, motivating learners to continue to use to implement EBP and searching information resources in EBP were the most effective in implementing the project.

We learned the difficulty in recruiting participants and that we underestimated the time needed to plan and implement the project.

3. If you were to start all over again, what, if anything, would you change about your goals, project plans, etc.?

If you were to start all over again, we would think more about how to recruit more professionals and how to better estimate the time needed to implement the project. Additional practice time for participants might also be beneficial.

4. What advice or recommendations would you give to anyone considering a similar outreach effort?

   Enthusiasm, obtaining support from administrators, and having a positive attitude are key to accomplishing similar outreach efforts.

5. Please describe plans for disseminating lessons learned and other information about the project, such as through a conference presentation or publication. In accordance with the NIH Public Access Policy (http://publicaccess.nih.gov), project directors are asked to submit voluntarily to the NIH manuscript submission (NIHMS) system (http://www.nihms.nih.gov) at PubMed Central (PMC) final manuscripts upon acceptance for publication.

   a. The Principal Investigator presented a poster entitled Evidence-based practice training program to underserved speech language pathologists and audiologists at MLA Joint Meeting in Las Vegas on February 7th, 2008 and it was well received. The investigators are planning to present this poster on Research Day organized by ISU Kassiska College of Health Professions;
   b. The project investigators plan to present another poster presentation entitled Applying to a Logic Model to an Evidence-Based Practice Outreach Training Program on Research Day by ISU Kassiska College of Health Profession on April 4, 2008 and at the MLA Annual meeting in Chicago in May 2008 to share the lesions learned about the project;
   c. The project investigators plan to submit a manuscript about the project to the Journal of Medical Library Association;
   d. Share the teaching materials with interested health sciences librarians and health professionals in allied health across the nation if funding is available.
   e. Proposals to IMASH (Inter Mountain Area Speech and Hearing Convention) and ASHA (American Speech-Hearing Association) convention are in process.