01-MAY-11 – 30-APR-12
University of Utah
HHS-N-276-2011-00011-C
NTC Annual Report
Report Submitted: 31-MAY-2012

Table of Contents

Executive Summary

MAJOR ACCOMPLISHMENTS

In Base Year 1, NTC and NLM staff delivered 27 classes with 450 participants from 34 states. Class topics included PubMed®, TOXNET®, teaching and learning technology, and adult learning. Classes were delivered using a variety of formats, including in-person, synchronous online using the Adobe Connect web conferencing system, and asynchronous online using the Moodle course management system. Evaluation data (student satisfaction and skills assessment) were collected for the classes and used to improve the training.

The NTC also completed activities related to the NTC Web site, social media venues, the National Training Registration Page (NTRP), promotional materials, the MLA Educational Clearinghouse, and self-paced tutorial needs assessment.

CLASS DELIVERY AND DEVELOPMENT PUBMED TRAINING
The 1-day in-person PubMed class was phased out in December 2011, replaced by the hybrid "PubMed for Trainers" class. NTC and NLM staff taught 11 sessions of the PubMed class with 252 participants from June 2011 – December 2011.

NTC and NLM trainers taught the hybrid "PubMed® for Trainers" class 7 times from October 2011 – April 2012. The class consists of four sessions: three 2-hour online sessions using Adobe Connect and one 7-hour in-person session. Locations for the in- person classes were: Bethesda, MD; Los Angeles, CA; Houston, TX; Chapel Hill, NC; Chicago, IL; and Syracuse, NY. New topics not previously covered in the PubMed class include searching for drugs and chemicals, and searching for diseases from an indexer's point of view. The Moodle course management system organizes class information, participant biographies and discussions, homework assignments, quizzes, and pre- and post-tests in one place. Student satisfaction evaluation data are collected using a SurveyMonkey questionnaire. Class participants are eligible for 15 MLA Continuing Education credits.

NTC and NLM trainers began curriculum development for "PubMed for Librarians," a series of four 1-hour segments that will be taught online using Adobe Connect beginning in Option Year 1. Participants may attend any of the segments in any order. The class is intended for librarians who are new to PubMed or want to brush up on their PubMed skills.

TOXNET TRAINING

NTC and NLM trainers taught 8 sessions with 69 participants of the 6-hour in-person "TOXNET® and Beyond" class in Base Year 1. Student satisfaction data was collected via a SurveyMonkey questionnaire.

TEACHING WITH TECHNOLOGY: TIPS, TECHNIQUES AND TOOLS

Sharon Dennis, in collaboration with Kay Deeney, Educational Services Coordinator from the NN/LM Pacific Southwest Region (PSR), facilitated a pilot class called "Teaching with Technology: Tips, Techniques and Tools" from March 12 – April 16, 2012. The class was taught asynchronously using the Moodle course management system. Participants who completed the class received 8 MLA Continuing Education credits. The class covered adult

learning principles, options and best practices for asynchronous and synchronous distance classes, and online learning tools.

The pilot class was offered to PSR members. 17 out of 47 registrants completed the class. Evaluation results from the pilot will be used to improve the class and it will be offered nationwide in the summer of 2012.

NCBI DATABASE CLASSES

NTC, NLM, and NCBI staff began planning for an NCBI database 5-day in-person workshop, to be held at the NLM in Option Year 1.

OTHER ACTIVITIES

SELF-PACED TUTORIAL NEEDS ASSESSMENT

A self-paced tutorial needs assessment was released on January 24, 2012 and was open until February 21, 2012; 594 respondents filled out some portion of the questionnaire. The purpose of the assessment is to inform future topics, length and format for self- paced tutorials related to PubMed, TOXNET, and NCBI databases. The needs assessment asked respondents to rate the current tutorials available and to comment on topics, format and length for future tutorials.

The needs assessment was promoted through NTC and RML blogs; in addition, announcements were sent to listservs reaching health science librarians, public librarians, special librarians, public health workforce, nurses, and physician assistants. Respondents broken down by audience are as follows:

Health sciences librarians: 366 (62%)
Non-health sciences librarians (public and other librarians): 77 (13%) Medical professionals (Public Health Professionals, Physicians, Nurses and
Researchers/Scientists): 102 (17%)

Others (Health Sciences Faculty, Higher Education Faculty, K-12 Teacher and Students): 49 (8%)

The results showed that those who had used the existing tutorials in the past generally found them helpful in answering questions about the resources.

Topic suggestions for new PubMed tutorials included topics already available, indicating that improvement is needed in the promotion and organization of the existing PubMed tutorials. Respondents indicated a preference for short tutorials that they can find quickly.

Topic suggestions for TOXNET tutorials included search tips, real life examples, and differences between the TOXNET databases. Topic suggestions for the NCBI databases included how to get started with the NCBI databases, how to differentiate between the various databases, and a "train the trainer" tutorial for librarians.

NTC WEB SITE AND SOCIAL MEDIA

NTC staff developed and implemented a social media plan. The purpose of the NTC social networking activities is:

1) To offer timely short communications to our constituents related to NTC activities;
2) To offer links to useful resources related to PubMed, TOXNET, NCBI, adult learning principles and distance learning best practices;
3) To receive feedback and offer an interactive mechanism for communicating with our constituents.

The audiences for the NTC social networking activities are:

1) RML and Center staff;
2) NN/LM members;
3) MLA members;
4) Members of other groups, including public librarians, health educators, the public health workforce, and health science professionals.

Implementation of the plan began in September 2011.

In September 2011, the NTC web site was updated from static web pages to a WordPress-powered blog. Blog posts are added regularly so that visitors to the site always receive new information. WordPress also allows easier site management.

Blog posts include announcements of NTC classes as well as links to information about NLM databases, tools for online teaching, and adult learning principles. The blog averages two posts a week. NTC staff also created a Twitter page and Facebook page for shorter postings.

From September 7, 2011 – April 30, 2012, the NTC blog received over 7000 page visits. The NTC Twitter page has 53 followers and the NTC Facebook page received 18 "likes." NTC staff received positive comments from RML colleagues about the quality of the blog postings.

MLA EDUCATIONAL CLEARINGHOUSE

The NTCC Clearinghouse records were moved to the MLA Educational Clearinghouse in early May 2011. A Technical Bulletin article (http://www.nlm.nih.gov/pubs/techbull/mj11/mj11_ntcc_merger.html) published on May 5, 2011, described the changes. The NTC web site was also updated to point users to the MLA Educational Clearinghouse.

In order to assist the RMLs with the transition to the MLA Educational Clearinghouse, NTC staff created instructional videos and issued recommendations to connect the Clearinghouse information with the nnlm.gov course descriptions pages and the National Training Registration Page (NTRP) system. The recommendations were communicated to the RMLs through the Outreach and Education Coordinators teleconferences.

In addition, Michael Boer from Web-STOC created six pre-fabricated searches to search various subject categories of RML offerings within the Clearinghouse. The searches are available on the nnlm.gov training page.

NATIONAL TRAINING REGISTRATION PAGE

The National Training Registration Page (NTRP) system underwent many interface improvements and added features during Base Year 1. All regions, as well as the Outreach Evaluation Resource Center (OERC) and NTC, are now using the NTRP system for at least a portion of their classes. The NTC held two teleconferences to demonstrate the changes and to receive feedback from the regional representatives.

The NTRP now allows individual regions complete customization of their registration page and the messages they send to participants. Programming and HTML coding knowledge is no longer required; changes are made through a web form builder. Reports have been streamlined to provide the information requested by the regions. The back-end database structure and programming has also been streamlined for easier maintenance by the NTC web developer.

MARKETING AND PROMOTIONAL ACTIVITIES

NTC staff worked with a marketing consultant, Cyndy Salzmann, to develop promotional and marketing materials.

The marketing strategy and materials Ms. Salzmann developed for NTC were designed to:

*Target key audiences using unique communication strategies and materials;

*Enhance the planned utilization of Web 2.0 technologies with creative scripting, images and video;

*Provide NTC and sponsoring organizations with materials and guidance to promote scheduled training both internally and externally; and

*Ensure cost-effectiveness by producing materials that are easily adaptable for future needs.

Ms. Salzmann delivered the promotional materials for the PubMed for Trainers and TOXNET and Beyond classes in April 2012. The promotional materials were distributed to host sites offering in-person classes in Option Year 1 and will also be available for download from the NTC web site.

STAFF CHANGES

Sharon Dennis, formerly Technology Coordinator for the NN/LM MidContinental and Pacific Southwest Regions, was appointed as Assistant Director of the NTC and began work on May 1, 2011.

Sharon Brown was appointed Trainer / Curriculum and Content Specialist. Ms. Brown was formerly the Trainer for the National Training Center and Clearinghouse (NTCC) located at New York Academy of Medicine. Ms. Brown began work on May 8, 2011.

Rebecca Brown, formerly Technology/Kansas Outreach Coordinator for the NN/LM MidContinental Region, was appointed as NTC Trainer / Content and Curriculum Specialist. Ms. Brown began work on August 8, 2011.

Lindee Radtke was hired as the NTC Project Coordinator; she began work on July 5, 2011. Ms. Radtke has a wide range of experience with project management and accounting.

Matthew Steadman was hired as the NTC Web Developer on July 22, 2011. Mr. Steadman has experience with web development, PHP programming, and graphics and video design.

Joseph Nicholson, formerly a trainer for the NTCC, was hired as a consultant back-up trainer.

Jason Varghese, formerly a programmer for the NTCC, was hired as consultant to maintain the National Training Registration Page until an NTC web developer was hired.

Sandy Drollinger, Financial Analyst for the NN/LM MidContinental Region, assisted the NTC with budgets until an NTC Project Coordinator was hired.

STAFF ACTIVITIES

May 13, 2011: Sharon Dennis and Sharon Brown attended the NN/LM Director's Meeting in Minneapolis, MN.

May 14, 2011: Sharon Dennis attended the NN/LM Web-DEV meeting in Minneapolis, MN.

May 15-18, 2011: Sharon Dennis and Sharon Brown attended the annual meeting of the Medical Library Association (MLA) held in Minneapolis, MN.

June 6-8, 2011: Sharon Dennis visited NLM in Bethesda, MD. She met with Janet Zipser and Kate Majewski to plan the new PubMed for Trainers class. Ms. Dennis and Ms. Zipser met with Shannon Jordan and Laura Bartlett, TOXNET trainers from Specialized Information Services (SIS), to discuss future plans for TOXNET training. Ms. Dennis also attended the PubMed and TOXNET and Beyond classes taught at NLM.

June 15, 2011: Sharon Dennis presented an introduction to the NTC's plans at the NN/LM MidContinental region's monthly update, "Breezing Along with the RML."

June 21, 2011: Jean Shipman, Claire Hamasu and Sharon Dennis presented an introduction to NLM, NN/LM, NTC and TC4C at the Four Corners Telehealth Consortium/Northwest Regional Telehealth Resource Center Board of Director's Meeting. Attendees represented from the states of HI, AK, CA, AZ, and NM. We talked about our joint missions in offering training and promoted MedlinePlus Connect. Ideas were generated where they could promote the Network in the exhibit hall at meetings they attend. That evening we attended the dinner for the Utah Promontory HIE / Technology Conference. The presenter was Anthony Rodgers, Deputy Director, CMS and we learned all about putting together the criteria for implementing EMRs.

August/September 2011: Jean Shipman, Claire Hamasu and Sharon Dennis presented an overview of the NN/LM and the NTC to the staff of Utah congressmen and senators.

September 21-23, 2011: Sharon Dennis, Sharon Brown, and Rebecca Brown attended the annual meeting of the MidContinental Chapter of the Medical Library Association (MCMLA) in St. Louis, MO. All three participated in the RML Update held during the meeting.

September 23, 2011: Rebecca Brown and Sharon Dennis presented a paper entitled, "Exploring Hospital Librarians Use of Social Media" at the annual meeting of the MidContinental Chapter of the Medical Library Association (MCMLA) in St. Louis, MO.

November 14, 2011: The NN/LM NLM Fellows Orientation, held at NLM in Bethesda, MD, included remote presentations by NN/LM staff. Sharon Dennis presented the NTC's activities and plans.

November 16-18, 2011: The NTC staff gathered in-person in Salt Lake City, UT, to plan objectives, activities, and evaluation indicators for Option Year 1.

December 6, 2011: Sharon Brown attended "E-Science Day" held at the University of California, Davis, and sponsored by the Pacific Southwest Region.

December 9, 2011: Jean Shipman, Claire Hamasu, and Sharon Dennis attended the mid-year NN/LM Director's meeting.

March 30, 2012: Sharon Dennis attended "Introduction to Systematic Reviews," held at the University of Colorado in Denver, CO.

April 11-12, 2012: Rebecca Brown attended the 2012 National Training Conference on the Toxics Release Inventory and Environmental Conditions in Communities;

Understanding the Past and Promoting a Sustainable Future. The conference was co-sponsored by the United States Environmental Protection Agency, The Environmental Council of the States and the National Pollution Prevention Roundtable and held in Washington, DC.

April 12-13, 2012: Sharon Dennis attended two bioinformatics classes entitled "Foundations of Bioinformatics" and "Translation Bioinformatics," taught by Dr. Diane Rein at New York University in New York, NY.

Analysis

TRENDS IN ATTENDANCE

The hybrid or online classes had a lower class attendance rate than the in-person classes.

The NTC and NLM class attendance rates for Base Year 1 were as follows:

PubMed in-person course: 86% (11 classes, 292 registered, 252 attended)

TOXNET and Beyond in-person course: 73% (8 classes, 94 registered, 69 attended)

PubMed for Trainers hybrid course: 80% (7 classes, 140 registered, 112 attended all four sessions)

Teaching with Technology asynchronous online course, offered over 5 weeks: 36% (1 class, 47 registered, 17 completed all parts of the course)

In order to address the lower completion rates for online or hybrid classes, several changes will be implemented in Option Year 1. The order of the four sessions in the PubMed for Trainers class will change so that the in-person class is offered last. The Teaching with Technology class will add two synchronous sessions to help improve student interactivity and interest.

STUDENT SATISFACTION LEVELS

NTC and NLM student satisfaction results are summarized for each class below; in general, student satisfaction levels were high for all of the classes. NTC and NLM staff monitors the student comments for each class and make adjustments to improve the class as necessary.

PubMed (Based on 230 Completed Evaluations):

*Instructor's knowledge, preparation, presentation skills and responsiveness to questions: High (89%); Good (10%); Fair (1%)

*Instructional materials used effectively, relevant/useful; and hands-on exercises were useful: Agree (80%); Somewhat Agree (16%); Somewhat Disagree (4%)

*Course objectives met expectations: Agree (90%); Somewhat Agree (9%); Somewhat Disagree (1%)

*Course content well organized and length was appropriate: Agree (83%); Somewhat Agree (15%); Somewhat Disagree (2%)

*Participants rating of whether they acquired knowledge and skills they can use: Agree (93%); Somewhat Agree (6%); Somewhat Disagree (1%)

*Overall course grades: "A" (82%); "B" (17%); "C" (1%)

TOXNET and Beyond (Based on 58 Completed Evaluations):

*Instructor's knowledge, preparation, presentation skills and responsiveness to questions: High (90%); Good (10%)

*Instructional materials used effectively, relevant/useful; and hands-on exercises were useful: Agree (80%); Somewhat Agree (20%)

*Course objectives met expectations: Agree (90%); Somewhat Agree (10%)

*Course content well organized and length was appropriate: Agree (82%); Somewhat Agree (16%); Somewhat Disagree (2%)

*Participants rating of whether they acquired knowledge and skills they can use: Agree (86%); Somewhat Agree (14%)

*Overall course grades: "A" (82%); "B" (18%)

PubMed® for Trainers (Based on 106 completed evaluations):

*Instructor's knowledge, preparation, presentation skills and responsiveness to questions: High (83%); Good (16%); Fair (1%)

*Instructional materials used effectively, relevant/useful; and hands-on exercises were useful: Agree (78%); Somewhat Agree (21%); Somewhat Disagree (1%)

*Course objectives met expectations: Agree (79%); Somewhat Agree (19%); Somewhat Disagree (2%)

*Course content well organized and length was appropriate: Agree (79%); Somewhat Agree (17%); Somewhat Disagree (4%)

*Participants rating of whether they acquired knowledge and skills they can use: Agree (93%); Somewhat Agree (7%)

*Overall course grades: "A" (74%); "B" (25%); "C" (1%) Teaching with Technology (Based on 24 Completed Evaluations):

*Instructor knowledge, preparation, and responsiveness to questions: High (98%); Good (2%)

*Participants rating of whether they acquired knowledge and skills they can use: Agree (95%); Somewhat Agree (5%)

*Overall Rating: "A" (84%); "B" (16%) STUDENT SKILLS ASSESSMENT
A 28-question pre- and post-test was administered for the "PubMed for Trainers" class. The averaged scores for all NTC and NLM classes were 70% on the pre-test and 79% on the post-test. Composite scores for individual questions were analyzed in order to inform changes to the pre- and post-test for Option Year 1.

LOGIC MODEL INDICATORS

All but one of the class related logic model indicators were met. The results for NTC and NLM classes are as follows:

Indicator 1: Over 75% of the course participants indicate that they are "very satisfied" with the class (defined as an overall "A" rating). Results: PubMed: 82% out of 230 evaluations; PubMed for Trainers: 74% out of 106 evaluations; TOXNET and Beyond:
82% out of 58 evaluations; Teaching with Technology: 84% out of 24 evaluations. The lower rating for the PubMed for Trainers class is likely due to the fact that is a new class, as well some technology problems during on the online sessions.

Indicator 2: Over 75% of the course participants increased their skills and knowledge based on pre- and post-test scores. PubMed for Trainers is the only class where pre- and post-tests were administered; 89% of the participants increased their score between the pre- and post-test.

Attachment 1: Tabular report of AR activity data for contract year: NTC staff activities