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**University of Utah**  
**HHS-N-276-2011-00011-C**  
**NTC Quarterly Report**  
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## Executive Summary

### STAFF CHANGES

There were no staff changes this quarter.

### Classes Taught

#### PUBMED CLASSES

NTC delivered one series of the online class PubMed for Librarians in December 2015. PubMed for Librarians consists of five 90-minute segments taught via Adobe Connect; participants can choose to attend any of the segments that interest them. The five segments are: "Introduction to PubMed"; "Medical Subject Headings (MeSH)"; "Automatic Term Mapping (ATM)"; "Building and Refining Your Search"; and "Customization - My NCBI."

NTC trainers taught two sessions of the hybrid class PubMed for Trainers; the in-person locations were Seattle, Washington; and Miami, Florida.

NTC trainers continue to collaborate with NLM trainers to adjust and improve the class before and during each iteration.

Modifications made during this quarter include:

- Small adjustments to the Core Competencies discussion (Session1) with a number of variations in the Moodle assignment and also the "discussion" during the synchronous session of Session 1;
- Revisions and updates to scripts and PowerPoint presentation to insure currency and relevancy;
- Modifications to agenda for in-person session to increase participation by attendees and relevance of activities based on evaluations and instructor feedback.

NTC trainers taught one session of Advanced PubMed Tips, Tricks & Tools: MeSH. The class is 90-minutes, and was held on December 3, 2015. The class covered the topics: MeSH updates, commonly confused headings and subheadings, filters, free floating subheadings and more. It was taught as a live webinar with demonstrations and practice quizzes, as well as pre- and post-tests.

#### TOXNET CLASS

NTC delivered one session of the online TOXNET class, "Discovering TOXNET." The class is taught asynchronously over 4 weeks. The class consists of 13 independent modules. The "Introduction to TOXNET" module is required, but the remaining 12 modules are optional. Participants can choose the databases or resources that interest them and receive MLA CE credit based on the modules they complete.

Students have responded very positively to the modular self-paced nature of the class. Several modules were updated to reflect changes in the databases or interfaces, particularly REMM and ChemIDPlus. The pre- and post-tests and discovery exercises continue to be fine-tuned based on student feedback.

#### NCBI DATABASE CLASS

A committee consisting of Kate Majewski from NLM, Peter Cooper and Eric Sayers from NCBI, Diane Rein (consultant to the NTC), and Jessi Van Der Volgen from the NTC reviewed 25 applications for the 2016 offering of the "Librarian's Guide to NCBI" in-person 5-day workshop and the online pre-course "Fundamentals of Bioinformatics and Searching." Three applicants were not accepted based on incomplete materials. Two

accepted applicants declined their spot in the class before it began.

“Fundamentals of Bioinformatics and Searching” is an asynchronous online course worth 25 hours of continuing education credit. The course consists of video lectures, exercise assignments that must be turned into the instructor, required readings, and optional readings.

The course was taught from October 26 – December 11, 2015 via Moodle. The class had 20 new students earn CE credit, and one graduate auditing the course. Completion of the pre-course is required for participants to attend the in-person workshop. The 5-day workshop will be taught in Bethesda, MD from March 7-11, 2016.

#### TECHNICAL CHALLENGES

During Session 2 of PubMed for Trainers Seattle, the instructor lost audio connection, but was quickly able to resume. Removing the telegroups from PMT has alleviated challenges of working with the audio in groups, and creates a smoother experience for students.

In the Fundamentals of Bioinformatics and Searching class, Dr. Rein continues to experience difficulty with Moodle displaying previous versions of files. The NTC and Web-STOC have worked with her in attempt to resolve and prevent these issues, but they persist.

#### OTHER ACTIVITIES

##### PUBMED FOR TRAINERS OFFICE HOURS

Two sessions of online PubMed Office Hours were held during the third quarter. Attendees continue to send their search questions in advance of the session and Rebecca Brown follows-up each session with a link to the recording and a breakdown of the questions and responses.

The January session featured Thomas Rindfleisch, Principal Investigator for the Semantic MEDLINE project. Dr. Rindfleisch is a Linguist who works for the National Library of Medicine. He conducts research in natural language processing methodology and develops innovative applications for advanced access to information in MEDLINE citations. He demonstrated Semantic MEDLINE. In addition to Dr. Rindfleisch, graduates of the Librarian’s Guide to NCBI were invited to attend.

- November 17, 2015; 30 attendees
- Office hours were not held in December because of holiday schedules
- January 13, 2016; 51 attendees

##### PUBMED UPDATE FOR GMR

On January 21, 2016, Rebecca Brown gave a PubMed update during the Greater Midwest Region’s monthly Lake Effects webinar. The update focused on the recent implementation of MeSH 2016. There were 47 attendees and CE was available to those who completed the evaluation. The recording has been posted on GMR’s website and anyone who watches the recording and completes the evaluation within 2 weeks of the live session is eligible for CE credit as well.

## Training Events

TABLE 1. Training Sessions

Session Content	Start Date	End Date	City/State	Trainers	Activity Conducted In-person	Activity Conducted Remotely	# Participants
PubMed for Librarians - MeSH	12/8/2015 12:00:00 AM	12/8/2015 12:00:00 AM	Online	Jessi Van Der Volgen	N	Y	42
PubMed for Librarians - Automatic Term Mapping	12/9/2015 12:00:00 AM	12/9/2015 12:00:00 AM	Online	Rebecca Brown	N	Y	42
PubMed for Librarians - Building and Refining Your Search	12/10/2015 12:00:00 AM	12/10/2015 12:00:00 AM	Online	Cheryl Rowan	N	Y	47
PubMed for Librarians - Customization	12/11/2015 12:00:00 AM	12/11/2015 12:00:00 AM	Online	Rebecca Brown	N	Y	49
PubMed for Trainers	1/7/2016 12:00:00 AM	1/28/2016 12:00:00 AM	Miami, FL	Jessi Van Der Volgen, Rebecca Brown, Cheryl Rowan	Y	Y	13
Fundamentals of Bioinformatics and Searching	10/26/2015 12:00:00 AM	12/11/2015 12:00:00 AM	Online	Diane Rein	N	Y	20
PubMed for Librarians - Introduction	12/7/2015 12:00:00 AM	12/7/2015 12:00:00 AM	Online	Cheryl Rowan	N	Y	41
Discovering Toxnet	10/5/2015 12:00:00 AM	11/2/2015 12:00:00 AM	Online	Jessi Van Der Volgen, Rebecca Brown, Cheryl Rowan	N	Y	60
PubMed for Trainers	10/22/2015 12:00:00 AM	11/10/2015 12:00:00 AM	Seattle, Washington	Jessi Van Der Volgen, Rebecca Brown, Cheryl Rowan	Y	Y	25
Advanced PubMed Tips, Tricks, and Tools: MeSH	12/3/2015 12:00:00 AM	12/3/2015 12:00:00 AM	Online	Jessi Van Der Volgen, Rebecca Brown, Cheryl Rowan	N	Y	58

**Cancellations**

None

## Self-paced e-learning Products

The NTC continues to create videos which bring attention to or highlight available NLM resources and tutorials, as well as other relevant resources. One new video was created and posted to YouTube during this quarter: TOXMAP: Working with Demographic Data Features.

Matt Steadman has upgraded the NTC's Guide on the Side to the current version, which adds accessibility and security, includes new features, and has eliminated several bugs that occurred with the old system.

### PubMed for Librarians

A short three or four question pre and post-test was administered for each "PubMed for Librarians" class. The average scores are listed below.

\*Pre-test: 68%

\*Post-test: 92%

\*Knowledge gained: 24%

### PubMed for Trainers

A 20-question pre and post-test was administered for the "PubMed for Trainers" class. The average scores for all classes are listed below.

\*Pre-test: 60%

\*Post-test: 80%

\*Knowledge gained: 20%

### Advanced PubMed Tips, Tricks, and Tolls: MeSH

A four-question pre and post-test was administered for the "Advanced PubMed – Tips, Tricks and Tools: MeSH" class. The average scores are listed below.

\*Pre-test: 75%

\*Post-test: 92%

\*Knowledge gained: 17%

### Discovering TOXNET

A 2 – 4 question pre and post-test was administered for each module in the "Discovering TOXNET" class. The average scores are listed below.

\*Pre-test: 62%

\*Post-test: 91%

\*Knowledge gained: 29%

## NTC PUBMED FOR LIBRARIANS EVALUATION RESULTS

NTC taught one series of the PubMed for Librarians online synchronous class during the third quarter. The class was taught in five independent segments. The classes had an average attendance rate of 72%. A total of 309 participants confirmed their registration in at least one segment; 221 participants attended the segment they registered for; and 189 filled out the evaluation questionnaire for the segment.

The evaluation results for the third quarter are as follows:

Instructor knowledge, preparation, presentation skills, and responsiveness to questions: High (95%); Good (5%)

Participants rating of whether they acquired Knowledge and skills they can use:  
Agree (94%); Somewhat Agree (5%); Somewhat Disagree (1%)

Most Helpful Parts of the Course:

\* The instructor was phenomenal - very clear, very precise, easy to understand. Awesome! So effective! An outstanding presenter!

\* Jessie has a great teaching approach - loved the pacing and examples as well as her calm demeanor. You've got a voice for radio, Jessie!

I found the conveyor belt analogy used to describe how automatic term mapping was helpful in framing how that system works. Thanks!

\* Today's exercises were very effective in putting the training into practice. I like how this week's work has built up from one lesson to the next.

\*I customized my MyNCBI account a long time ago, so this was a great refresher AND directed me to some features that are new. Hopefully I can translate some of today's content into either a brown bag sessions for faculty development or for the doctoral students.

Least Helpful Parts of the Course:

\* It was interesting (but not essential) to include the history of Medline and Pubmed.

\* I would have like that after a hands-on example that we did that she went back and SHOWED where she went to find the answer and explained why it was that way again. I feel like it wouldn't have been redundant, it would have just solidified what she was saying. It wasn't helpful to just say that we were correct and move on. The presentation was great though!! Nicely done. This is just how I learn best.

\* I expected a quick basic definition or summary of what ATM is and how it works prior to getting started with the session.

\* The presentation felt rushed, but she did the best she could. Also, I would have really appreciated having the answers given at the very end so I would have known if I was doing it right. It's hard to follow up later--and most times I don't know where you are going to post those answers.

\* It was a lot of NEW material to take in and it was kind of hard keeping up. She did do a good job, but it probably could be broken down into AT LEAST two more presentations. I also would have liked more hands on work. I know how to do the search now, but I would like to see how it applies better to every day life. Good job overall. Just crammed in material.

Additional Comments:

\*I know this may be a matter of expense, but I do not have a headphone to fit my phone and must use the handset. This makes it very difficult to do the hands-on exercises because the handset keeps falling out of the crook of my neck. If there is any way to get computer audio, that would be terrific. Always enjoy the NLM training!

\* I liked the pace and intervals of quiz, yet going to second screen is not really doable for me personally do to equipment setup. Thanks.

\* Great class. It was very well-paced. It's great to learn from the experts!.

\* There was a LOT of information here and very useful. I can see I need much practice with Advanced Searching and NLM Catalog. If there are classes for that I will take, thanks.

\* What a week.. I'll miss these classes, especially as a new solo librarian. Thanks for sharing your knowledge and experience with all of us!

Overall Rating: "A" (86%); "B" (14%)

## NTC PUBMED FOR TRAINERS EVALUATION RESULTS

### PubMed Content

NTC taught two sessions of the PubMed for Trainers class during the third quarter. The classes had an attendance rate of 90%. A total of 42 participants confirmed their intent to take the class; 38 participants attended the class; and 35 filled out the evaluation questionnaire.

### Instructional Design Content

Thirty-six people attended at least one session of the Instructional Design content. Thirteen of those participants completed all the material and earned the additional CE credit.

The evaluation results for the third quarter are as follows:

Instructor knowledge, preparation, presentation skills, and responsiveness to questions: High (94%); Good (6%)

Participants rating of whether they acquired Knowledge and skills they can use: Agree (98%); Somewhat Agree (0%); Somewhat Disagree (2%)

### Most Helpful Parts of the Course:

\* Every part! I was engaged throughout the process and wouldn't sacrifice a single piece of what I learned.

\* The instructors really had a lot of good tips, took the time to bring them to our attention and communicated their relevancy. The team exercise at the white board was fun and very helpful! The comments given on my instructional design exercises were very helpful and constructive!

### Least Helpful Parts of the Course:

\*Some of the lectures were packed with information that I should go back and review. A more detailed handbook or outline might make that easier. Information is somewhat dispersed over handouts, lectures and the NCBI website, rather than all being in one place.

\*Would like in the future a course with pearls, tricks on how to better teach PubMed. This course was fantastic, but we need a follow up course as well.

### Additional Comments:

\* the instructors were knowledgeable, patient and responsive. I can't say how grateful I am to have been given the opportunity to take this class. It is a much needed set of skills for me, and it was presented in an accessible (both intellectually and physically) format. I will apply every part of what I learn to my research, reference, and classroom

instruction.

\*The instructors were both very accommodating, professional and nice! I look forward to taking other courses with them in the future. I am very grateful for the opportunity to earn CEs which are/were only available if you attend conferences - which not everybody can do. The remote sessions were great ... particularly the use of Moodle ... all instructors managed it all exceptionally well (both Adobe and Moodle). Thank you!

Overall Rating: "A" (91%); "B" (9%)

NTC ADVANCED PUBMED TIPS, TRICKS AND TOOLS: MESH EVALUATION RESULTS  
NTC taught one session of the Advanced PubMed Tips, Tricks, and Tools: MeSH online synchronous class during the third quarter. The class had an attendance rate of 69%. A total of 84 participants confirmed their intent to take the class; 58 participants attended the class; and 43 filled out the evaluation questionnaire.

The evaluation results for the third quarter are as follows:

Instructor knowledge, preparation, presentation skills, and responsiveness to questions:  
High (88%); Good (11%); Fair (1%)

Participants rating of whether they acquired knowledge and skills they can use:  
Agree (100%)

Most Helpful Parts of the Course:

\* Everything was great. I liked the handout, and the little quizzes in the middle. I also liked the links to the articles mentioned in the chat. The first part about "what happens when MeSH is updated," especially the part about paying attention to the dates, was something I had NO idea about, and it's great to get that information.

Least Helpful Parts of the Course:

\* IT WAS 100% HELPFUL, leaving no room for "least helpful." This question can be stricken from the record as far as I am concerned

Additional Comments:

\* More please. I'm the only medical librarian at an academic institution and feel isolated and unable to ask colleagues for assistance. This in-depth training helps keep me on top of my game and was, frankly, really interesting! Any other training you could do at this level would be much appreciated.

Overall Rating: "A" (95%); "B" (5%)

NTC DISCOVERING TOXNET EVALUATION RESULTS

In the third quarter the NTC taught one session of "Discovering TOXNET." Seventy-six students confirmed their registration for the class. Of those, 60 completed at least one module, and 14 completed all the modules.

The evaluation results for the third quarter are as follows:

Instructor knowledge, preparation, and responsiveness to questions:  
High (86%); Good (14%)

Participants rating of whether they acquired Knowledge and skills they can use:  
Agree (98%); Somewhat Agree (2%)

Most Helpful Parts of the Course:

\*I am an Environmental Consultant Scientist who often needs to research both human health effects and environmental concerns from chemicals in the environment from

releases and spills. I often do searches online using IRIS but had no idea how useful TOXNET was and how many resources were available through TOXNET. ChemIDPlus was completely brand new to me and will prove useful for some of the chemical environmental fate and transport and toxicity work I do.

\* Having it organized into modules that you could do at your own pace was tremendously helpful. I would've been sunk if this were the regular, everyone stay at approximately the same pace kind of course.

Least Helpful Parts of the Course:

\* I disliked the video tutorials - the guide on the side was significantly more helpful for learning about the databases. It also would have been nice to have more of an introduction to each database before the pretest. I had not worked with a single one of these databases before, so my pretest scores were always just educated guesses.

\* I know it's hard to come up with relevant and proportionate test questions, but I think the modular quizzes (which I know are only used in aggregate) have as many strikes as hits. I actually think the pop-up questions that populate the Hands-On Tours are generally quite good. They have the right amount of clarity and encourage the user that (s)he is on track. The end quizzes tend to either focus on arcane minutiae or are hard to deduce.

Additional Comments

\* It was nice that the instructors contacted us via email to remind us of the course start and end dates and information throughout the course duration. The instructors did a great job of offering comments and feedback to the assignments. The instructors added a personal feel to a remote online class that could have been very impersonal. I appreciated the friendly interaction with the instructors which was unexpected. I appreciated not feeling like a number =).

\* I think that the Discovery exercises are really where the learning takes place. The videos and hand-on tours are generally good, they provide the right amount of gentle introduction to each database; most importantly, both the videos and hands-on tours provide set-ups or warm-ups for the discovery exercises. I thought the Word format (save file and upload) was cumbersome at first, but I quickly got used to it. I know these discovery exercises are hard to create. One or two were perhaps too easy (e.g., HSDB, REMM), but several were pretty much on-target (ChemID Plus, ToxMAP, Household Products), with the exercises and questions proportional and relevant. Sometimes, the exercise questions lacked clarity (e.g., IRIS). Even though I am a toxicologist by training and have used IRIS regularly for 21 years, I nevertheless struggled with the exercise and the intent of the questions. The LactMed and LiverTOX exercises were relatively clear and straight-forward, but were very time consuming given the 0.5 hour module length. . So I would say that the Discovery Exercises are the key to this class, and honing the scope and clarity of the exercise questions is key to the success of the class. Although I gave the class a "B" grade overall, I think an "A" is not far away, with some tweaks to the logistics, the length and clarity of some of the discovery exercises, and module quizzes.

Overall Rating: "A" (78%); "B" (22%)

FUNDAMENTALS OF BIOINFORMATICS AND SEARCHING EVALUATION RESULTS  
Consultant Diane Rein taught one session of Fundamentals of Bioinformatics and Searching, facilitated by NTC staff. The course was taught online via Moodle over seven weeks, with 20 students participating in the class. All of the students received full CE credit for completing the course.

The evaluation results for the third quarter are as follows:

Instructor knowledge, preparation, and responsiveness to questions:  
High (93%); Good (7%)

Participants rating of whether they acquired Knowledge and skills they can use:  
Agree (89%); Somewhat Agree (11%)

Most Helpful Parts of the Course:

\*I found everything we did to be very helpful for updating my understanding of molecular biology terms and further exploring the contents and functions of NCBI.databases. The readings and resource kits (teaching bioinformatics, entrez) are great resources.

\*Getting in and doing things in the databases and tools was very helpful, as was watching the lectures. The readings were also helpful as they tended to reinforce lecture content.

Least Helpful Parts of the Course:

\*The vocabulary exercises. I found it very difficult to put the answers in my own words. I do believe that I learned a lot of basics, but the time it took seemed very long.

\* I would have liked the CN3d and BLAST exercises to have us do a bit more with those tools.

Additional Comments:

\*I'm very happy to be given the opportunity to add this knowledge to my set of skills.

\* It was a struggle to fit the assignments in with full-time work. Access to a mentor who has already completed the course would be useful. I struggled with some basic biology (my knowledge is outdated) - perhaps an optional precourse module or specified reading/videos would have helped.

Overall rating:  
"A" (63%); "B" (37%)

## **NTC Web site**

Matt Steadman explored using NLM's new learning resources API to embed learning objects into the website, but has not implemented it.

## **MLA Educational Clearinghouse Activities**

We updated NTC records in the MLA Clearinghouse to ensure that they have current contact information.

## **Collaboration with NN/LM staff**

Matt Steadman worked with OERC staff to reintroduce them to the NTRP system and made corrections to the Bethesda site information page. He also made several enhancements to the NTRP, including: adding Subtitle, and Additional Class information fields to NTRP; adding the ability to advertise RML NTRP classes outside of each regions calendar; and adding the ability for staff to trigger the creation of a Moodle account for user's who have registered for a class but do not have a Moodle account. The first two changes were in response to requests from NN/LM staff.

Matt resolved several other issues occurring between Moodle and the NTRP and worked with Web-STOC where appropriate. He also created an instructional video on migrating videos from Adobe Connect to YouTube to aid NN/LM staff in this transition.

## **Marketing and Promotional Activities**

During the third quarter, NTC published 10 blog posts. Blog posts covered scheduled upcoming classes, end of year processing and changes for MeSH in 2016, tips and tools for effective training, NLM resource updates, and information related to the Zika virus outbreak. During the quarter, there were 7,529 views of the blog, an average of 82 views per day. This is slightly lower than the second quarter of Option Year 3.

At the end of the quarter, NTC had 840 likes on Facebook (up by nearly 100 since the end of the last quarter), and 414 followers on Twitter. During this quarter, @nlnmnc has been retweeted 24 times and had tweets liked 15 times. Our most popular tweets from this quarter were related to updates and changes in PubMed, end of year processing and MeSH 2016, training opportunities, and teaching or training tips. We have seen consistent increases in our followers on social media in relation to our ongoing training and promotion of social media as a way to stay current.

## Other

November 3-4, 2015: Cheryl Rowan attended the Library Marketing and Communications Conference in Dallas, Texas.

November 5-6, 2015: Cheryl Rowan attended the Bob Pike Group Train the Trainer Bootcamp in Dallas, Texas.

November 12, 2015: Jessi Van Der Volgen and Sarah Dickey attended a University of Utah Grants Management class in Salt Lake City, Utah.

December 2, 2015: Jessi Van Der Volgen, Rebecca Brown, and Cheryl Rowan attended the MLA Webinar on Instructional Design (online).

December 22, 2015: Jessi Van Der Volgen attended the Bob Pike Group webinar, "Dealing with Difficult Participants."

January 11-12, 2016: Jessi Van Der Volgen attended an ATD Workshop on Articulate Storyline.

January 13-15, 2016: Jessi Van Der Volgen attended the University of Utah Health Sciences Leadership Seminar.

January 25, 2016: Rebecca Brown, Cheryl Rowan, and Jessi Van Der Volgen attended a systematic review workshop at the University of Utah Eccles Health Sciences Library.