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putting the pieces together: theory and practice

NLM Informationist Grant– Web Assisted Tobacco Intervention for Community College Students

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Abstract

In 2012 the National Library of Medicine awarded several academic medical libraries informationist grants to become embedded with a research team for the purposes of data management. The University of Rochester Medical Center was among those recipients. This article will give background on the research project and team that won the grant, discuss the process of applying for the grant, identify the data management role that the informationist librarians have agreed to work on, how they embedded into the research team, and relay lessons learned thus far in the project.

Introduction

In the fall of 2012, the Edward G. Miner Library at the University of Rochester Medical Center (URMC) was of one seven awardees of the NLM Informationist grant. Two Miner Librarians were funded to embed into the Web Assisted Tobacco Intervention (WATI) for Community College Students research team. The informationists were embedded into the research team with the intended purpose to apply best practices of data management.

WATI is a smoking cessation project funded through the National Cancer Institute. It is a five-year program that studies community college students from 14 different campuses across upstate New York. The goal of the study is to utilize evidence-based smoking interventions using a novel web-based delivery to reduce the number of community college students who smoke.

Currently in its second year, the WATI project embedded the informationists after much of the preliminary research was completed. The research team had already conducted several rounds of focus group interviews that were used to help determine attitudes and behaviors about smoking and smoking cessation from the community college point of view. The focus groups also helped shape recruitment strategies for potential participants. Moving forward in the project, and as new data is collected, the informationists will begin to support the data management needs of the research team.

Background on the Web Assisted Tobacco Intervention Project

As previously mentioned, the WATI project aims to determine how different levels of website interaction affect community college student smokers' ability to quit. The study will recruit 90-100 students from each of 14 community college campuses across upstate

New York. These campuses, while mostly rural, will also include students from urban and suburban campuses in Rochester, Buffalo, Syracuse, and Albany.

Community college students were targeted as a group to study web assisted smoking cessation for a variety of reasons. Statistics show that the percentage of community college students who smoke is higher than the rest of the population (Berg et al. 2011, James, Chen, and Sheu 2007, Lenk et al. 2012). Community college students are also considered an underserved population, as many of them tend to come from lower socioeconomic statuses (Prokhorov et al. 2003, Rigotti, Lee, and Wechsler 2000). Also, this is a population that is growing and this trend is expected to continue as people retrain for new careers in the changing economy (Prokhorov et al. 2003, Rigotti, Lee, and Wechsler 2000). Lastly, little is known about what smoking interventions work with community college students (Prokhorov et al. 2003).

A recruiting sub-team of the full research team is tasked with identifying "champions" at each campus to help engage and enroll students. Since many of the campuses that will be involved in the study are located several hours away from URMC, it was decided that it was important to have a champion at each campus. The champion will serve as a local contact and help with the recruitment of students. The champion, as a member of the local community, is more knowledgeable about the campus culture and knows what strategies will work with recruitment. Campus champions can also assist with hanging recruitment fliers and staffing tables at health fairs.

Eligibility to enroll in the WATI project is based on a number of factors, but essentially if a student wants to quit smoking or is in the pre-contemplation phase of quitting and is interested in enrolling in the study, he or she will have to complete a baseline survey. Once the baseline survey is complete and eligibility is confirmed the students will be considered fully enrolled.

In addition to the baseline survey, the enrolled students will complete surveys at one month, six months, and 12 months. The surveys are distributed with the survey tool REDCap. If a student indicates that they have quit smoking, there will be two analyses carried out. One is a breath test to measure carbon monoxide; the other is a saliva test to measure cotinine. Each survey and the biochemical validation all represent data points in the project.

Preparing the Grant

When the National Library of Medicine announced the grant, it was immediately decided that the Edward G. Miner Library would attempt to be a part of the preliminary research into librarian or informationist roles in data management. The informationists sought the assistance of the URMC's Clinical and Translational Sciences Award (CTSA) to identify parent projects eligible to be a part of the NLM Informationist grant. The CTSA proved to be a great ally in identifying potentially eligible parent grants and they were eager to have Miner Library aligned with CTSA research.

After reviewing the list of eligible grants it was decided that the informationists would conduct outreach to those projects that focused on public health or community-based research. It was decided to target this type of research since there was a feeling of a better understanding of the subject matter. E-mails were sent to three Principal Investigators to gauge interest in adding the NLM Informationist grant to their existing grant. Two PIs responded initially, but only one responded to a follow up e-mail. Shortly thereafter, a meeting was arranged with the PI interested in moving forward with applying for the grant.

The grant application strategy meeting consisted of the PI, the grant administrator, and

an administrative staff member – all from the URMC's Public Health Sciences department – and the two informationists. After deciding that the grant was worth pursuing, the team strategized the best approach, assigned tasks, and set deadlines.

It should be noted that the PI and grants administration staff did most of the heavy lifting involved with writing and submitting the grant.   As the informationists, we were tasked with submitting language on what specific services would be provided to the research team in terms of data management.

In order to be eligible to embed into the research team, the informationists were required to become certified in the protection of biological specimens and human data. This was a requirement because the types of data that will be collected include human biological data from the biochemical validation. This certification was accomplished at the institutional level at URMC.

When the final grant was submitted, the informationist roles were defined to include the following responsibilities:

- File Management;

  ° Develop a file nomenclature system;
  ° Establish a method for file version control;
  ° Set up a directory of files;

- Assign metadata to incoming data;

- Work with researchers to name study variables and establish labels for each variable (e.g. time of collection, means of collection, directly assessed, or computed variable);

- Work with third party vendor to determine how the cessation websites are being used (e.g. counting clicks and assessing how the websites are navigated)

- Serve on the Data Safety Monitoring Committee;

- Find an appropriate data repository.

Embedding into the Team

While the grant was officially awarded in the fall of 2012, the informationists embedded into the research team during the summer of 2012.   This gave the informationists a chance to gain more in-depth understanding of the research and to begin to develop a working plan of how to manage this project along with their other roles (e.g. liaison, administrative, etc).   Starting on the project early also gave us a chance to meet the team and simply get to know them and colleague and as individuals.

The WATI research team includes one PI and two co-PIs.   The PI, Scott McIntosh, PhD, is an associate professor at URMC in the Department of Public Health Sciences. Deborah Ossip, PhD, one of the co-PIs, is also an associate professor in the Public Health Sciences department.   They each have researched and published extensively on smoking cessation.   The other co-PI, Andrew Wall, PhD, is an associate professor in the University of Rochester's Warner School of Education.   Dr. Wall researches higher education with a particular interest in college student health and safety.   In addition to the PIs, the team also has a project manager, a biostatician, two research assistants, and an undergraduate student worker.

The research team has been welcoming and encouraging of the informationists' ideas and input.   The informationists have been given full access to the project's online folders. One of the informationists has also been given permissions for the REDCap surveys. Being embedded in the research also involves weekly team meetings that the informationists attend.

Working on the Project

As yet, there is no data from the surveys. However, the informationists have already implemented some data management strategies for the team. The informationists have developed a file management and nomenclature system. Because the project team is going through some personnel changes, one of the informationists has been tasked with updating and maintaining the file directory. The informationists have also developed a system to assist the team with version control of the files.

The informationists were surprised to find that more "traditional" librarian roles have come into play throughout the project. They have held a RefWorks workshop and provided RefWorks support for the team. The informationists have also carried out literature searches and provided consultation on publishing issues such as impact factor analysis and other bibliometrics.

The informationists observed that the project produces a great deal of paper. They are currently researching methods to reduce the amount of paper through the use of web forms and mobile device applications. The goal is to produce a linkable form that the research team can use while visiting campuses to input key information on the spot, rather than enter it at a later time. It is important that this link be secure/encrypted as it could potentially contain participant information.

Another goal of the informationists is to develop a system for the storage and retrieval of digital photographs. Team members will be using telephone cameras to capture data while in the field. The informationists are researching mobile applications that might assist with this task.

The informationists also offered to conduct a workshop on mobile applications. They are currently developing a workshop on productivity apps that will assist the team with work done on the campuses out in the field. Other productivity mobile applications will be presented to assist the team with day-to-day tasks.

In the grant, it was stated that the informationists would apply metadata to the survey and biological data. The informationists are researching which metadata schema will work best for this project.

Other aspects of the scope of work, such as developing a data management system for the website use data and finding an appropriate repository are still in the planning or research phase.

Evaluating the Informationist Project

Evaluation is a key element of the grant. The WATI Informationist grant was submitted with an evaluative system based on the implementation of recommendations offered by the informationists. There is a section on the weekly meeting minutes for Informationist Recommendations. Each recommendation will be counted. Whether or not the recommendation was implemented will be counted separately. At six months into the project, a number of the informationist recommendations have been accepted and implemented.

The informationists are also working on a project to interview the team members about their reactions to the idea of having informationists as a part of the research team, and explore their expectations regarding informationists.

Lessons Learned

At the one-quarter point in the project, there have already been some key lessons learned. The first one is time management. Data management tasks can take up a large amount of time. The two informationist librarians were bid to work three and 10 hours per week on this project. While the time commitment ebbs and flows, it seems that

13 hours, between two people, may not be enough. This is particularly true once the survey data and website usage becomes available from a large number of study participants. It will be helpful to develop a system to automate as much of this as possible.

Another lesson learned is to remember the librarian aspects of embedding into the data management. Skills that librarians already excel at, such as bibliographic management and literature searching, have been highly valued by the research team.

It has been incredibly interesting to work so closely with a research team and quite a learning experience. Our short time has taught us more about the grant proposal and submission process, the culture of a research team, and we are acquiring new skills which enable us to become valuable members of research teams.

The last lesson is that it is quite alright to learn as you go. Do not be intimidated to give data management a try. It is fine to jump in with two feet and learn on the job. New skills will be acquired as we gather more experience embedding with research teams.

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