



Pacific Northwest Region NN/LM Planning and Assessment Award

**Rural Physicians, Physician Assistants and Nurse Practitioners Practicing in the  
Pacific Northwest: Planning Committee Support**

**Final Report**

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Project Lead: Beth Hill, Library Manager

Award: \$2,000

Period of performance: October 1, 2008 –March 1, 2009

## **Project Overview**

For my dissertation research, I had been looking at the possibility of conducting a replication of the highly-cited Rochester Study, conducted in the early 1990's, that investigated the value of librarian-mediated services for clinical decision making for patient care. Because of numerous changes in healthcare delivery and information technology since that time, it was clear that the original study needed to be modified in order to be relevant in today's world.

I had been in contact with some of the librarians that were involved in the Rochester Study, as well as the researchers and librarians involved in a few new research projects on the same topic, either being planned or having been recently completed. Based on input from members of the Rochester Study team, the NN/LM Mid-Atlantic Region (NNLM/MAR) Advisory Committee, and Christine Urquhart of the University of Wales Aberystwyth, my proposed research questions became:

- To what extent, and in what ways, does clinical information impact decision-making for patient care by physicians and physician assistants (PAs);
- By what method do physicians and PAs prefer to receive information;
- To what extent do physicians and PAs prefer to do their own searching;
- What library services are being utilized by physicians and PAs practicing in rural areas, and what types of consortial arrangements make this access possible;
- To what extent would librarian-led instruction impact physician and PAs' perception of competency in searching the clinical literature?

After review, each of the other planned or completed studies offered some viable ideas for how to design my own research, but I determined that input from a local or regional advisory committee would be instrumental in the design of a successful research project. I began by working to establish communication with the NN/LM PNR Regional Advisory Council (RAC) for Network Services and Health Professional Outreach Programs. Council members living in one of the four states of Washington, Alaska, Montana, and Idaho (WAMI) were contacted and asked to participate as members of a planning committee, and to serve as advocates for presenting my study in the best light to any contacts they might have in the critical access hospitals (CAHs) in which I will be conducting my research.

A face-to-face focus group meeting was organized for the discussion of my research and to garner support. The meeting was held in Spokane, Washington, for one full day at the Riverpoint campus of Washington State University.

## **Planning Activities**

### **Activity One:**

The focus group met on October 31, 2008. Focus group members that were able to attend in person were Bob Pringle, Marcia Francis, Heidi Sue Adams, and Sandy Keno. By phone conference access, we had Mary Anne Hansen, Sandy Hight, Kathy Murray, Kathy Fatkin, and Vicki Croft. We reviewed prior related research studies, and past research study designs. The survey instruments from the University of Wales Aberystwyth study, the Rochester Study, and the NNLM/MAR planning study were compared, as well as the one used in the Chicago Study conducted by Dr. David King. My draft survey instrument was presented, and the committee commented on the

questions I had selected and made suggestions for wording and content changes. A wiki was created after the initial focus group meeting as a communication tool. I uploaded copies of all the different surveys so that the committee could review them again if they wanted to. The wiki can be found here: <http://ruraldocs.wikispaces.com/> and a transcript of the main wiki entries, and the focus group meeting notes, can be found in Appendix A.

There were many valuable suggestions that came out of the focus group meeting. But the two that ended up being most valuable for me was the suggestion that I add nurse practitioners to the survey populations, and that I add questions to the survey that asked about current library services at the CAHs.

### **Activity Two:**

The second planned activity was to be the identification of potential partnerships at the critical access hospitals in the WAMI states. The planning committee was asked to provide the names and contact information for any constituents and healthcare providers that they knew or worked with at the CAHs. A few of the committee members were able to provide spreadsheets or lists of names. I started by identifying the 123 critical access hospitals (CAHs) in the four states from the American Hospital Association website. Then the AHA Guide to Hospitals 2008 was consulted for the phone numbers, and sometimes names of appropriate personnel, at each facility.

### **Activity Three:**

The third planned activity was to be the establishment of a protocol and a timeline for contacting the constituents for the identification of potential study participants. As I began my calls to the CAHs, I ended up talking with either Human Resources, Medical Staff Services, or Medical Records personnel for the most part, to find out the total number of active staff they have practicing in their facilities, in the categories of physicians, PAs, and NPs. Sometimes, I was able to use the contact names and information that the planning committee provided to me. These phone calls took place from November 2008 through January 2009. Often three or four phone calls had to be placed to a facility in order to finally speak with someone who knew the numbers. After numbers of active staff were attained from a facility, I sent a letter explaining my research project, and opened the conversation that I would be contacting them again soon to determine a way to get my survey to them for distribution to their staff. Only six of the 123 CAHs were unwilling to share their active staff numbers with me. Final tallies were 1474 physicians, 261 physician assistants, and 183 nurse practitioners. As you can tell from the final numbers, adding nurse practitioners to my population groups was important. There were some CAHs who only had NPs, and no PAs.

The reason I needed to know the total numbers of my populations was to determine a sample size. After much debate with my major professor and a statistician at the University of Idaho, I have decided to do cluster sampling, as opposed to stratified random sampling. This decision was made because there is such a large variation in the numbers of each practitioner type in each CAH. So, I will be randomly choosing 93 out of the 123 CAHs, and then attempting to survey each practitioner in that facility.

#### **Activity Four: A Pilot Survey Conducted with Kootenai Medical Center Physicians, PAs, and NPs**

The American Medical Association (AMA) gives authority to hospitals and medical centers around the country to bestow continuing medical education credits (CMEs) to practicing physicians. One type of CME- the Internet Point of Care Activity- asks the participant physician to search the clinical literature for evidence that addresses a query they have regarding a current patient case. Physicians review the found materials and then go online to answer some questions about how this information was used for patient care decision making. Their completed online survey is typically forwarded to a facility's Medical Staff Services office, which then awards the participant an AMA PRA Category 1 CME credit of 0.5. For 2009, Washington requires 200 CME every four years, Alaska requires 50 every two years, Montana requires none, and Idaho requires 40 every two years (American Medical Association, 2009). There are no enforcing bodies regulating the completion of these annual requirements, so it is up to the individual physician to comply and to keep track, or to have their hospital's credentialing department track them.

The Internet Point of Care CME activity asks some similar questions to the ones used in the Rochester Study survey, as well as requiring the participant to record one to three citations for the journal articles they found that addressed their patient care question. I believed at that time that the awarding of CME credit, even though it was only 0.5, could be a potentially great motivator for the physicians, PAs and NPs to participate in my research study.

I decided to test that theory, and to test my survey instrument, by conducting a pilot study with the 338 physicians, PAs and NPs that are considered to be active staff at Kootenai Medical Center. I acquired a list of names and mailing addresses, and mailed a print survey out to each one, along with a self-addressed stamped envelope, a cover letter asking for participation and notifying them of the 0.5 AMA Category 1 CME credit that they could earn by participating (I also arranged with our Medical Staff Services office to award the credits). In the cover letter, I also included a URL for an online SurveyMonkey version, should they prefer to respond in that format. Two weeks after sending the surveys out, I only had about a 5% response rate, all of which was by mail- no online responses. So, I sent out a second survey by mail to all non-respondents, with another self-addressed stamped envelope, a cover letter, and a token incentive- a one dollar bill. This strategy was recommended in a book by Dr. Don Dillman (2007) for increasing survey response rates. It was interesting, because I did end up with an overall response rate of 24% about three weeks after this second mailing. Another interesting occurrence was that about a third sent back the dollar bill with no survey, another third sent back the completed survey and the dollar bill, and about a third sent back the completed survey and kept the dollar bill. No respondent chose to complete the survey online.

Findings from the pilot survey included that 91% found their memories refreshed on details of facts due to reading the clinical literature. 83% stated that the information they found helped with advice given to the patient, and 69% stated it contributed to their decisions on choice of other treatments. 47% noted an ability to avoid additional tests or procedures. The Internet (search engines) was the most highly cited resource used, with the hospital library webpage a close second. Almost 60% felt that their search was

completely successful, with 40% concluding that their search took between 10 and 30 minutes. I did have fifteen respondents express a desire for instruction with a librarian on a database of their choice.

In many instances, the respondents to the Internet Point of Care CME activity did not follow directions closely, and did not cite the one to three sources they used for answering their patient care question. For this reason, and because logistically, it would be too difficult to arrange the awarding of the CME credit at a distance, I have decided not to use this strategy for trying to increase the response rate in my research study. I further modified the survey questions based on this decision.

### **How the Award Funds were Spent**

Initially, it was anticipated that the total amount of the award would be spent on travel and accommodation arrangements for the NN/LM PNR RAC for Network Services and Health Professional Outreach Programs members, who had expressed a willingness to participate, for their attendance at the focus group planning session. What happened, though, was that a couple of the committee members that were going to come from the most distant states were unable to attend because of prior commitments. Instead, the funds that would have been used to reimburse them were used to pay for the services of a research assistant, who contacted the constituents in the CAHs, gained their approval for conducting the research in their facilities, and facilitated the plans for distribution of the surveys in the near future. Contacts to the constituents were conducted in February and early March 2009, and continue presently. Award funds were also used for the mailing of the print surveys to the active staff in my pilot study.

### **Next Steps**

This last fall, I submitted a poster abstract on my pilot study to MLA for the 2009 annual conference. The abstract was accepted, and so I will be displaying the poster on Tuesday, May 19 at 10 a.m.

Instructional sessions for the fifteen interested practitioners on the database of their choice are currently being arranged and scheduled. Content to be covered in the instructional sessions will be decided on individually, and could range from how to search the internet in general, to what resources the library has, to how to search specific databases such as PubMed.

And now the real research begins! My final survey has been designed, and I have created both a print and an online Survey Monkey version of it. Surveys will be distributed shortly to all the practitioners at the CAHs.

### **References**

American Medical Association (2009). *Continuing medical education for licensure reregistration*. Retrieved January 14, 2009, from <http://www.ama-assn.org/ama1/pub/upload/mm/40/table16-2009.pdf>

Dillman, D.A. (2007). *Mail and internet surveys: the Tailored Design Method*. (2<sup>nd</sup> ed.). New York: John Wiley & Sons.

# Welcome to the Rural Docs Focus Group Wiki!

## March 10, 2009

The responses to my second survey mailing have pretty much come to a halt. I got two trailers in the mail yesterday, but I don't expect many more. I've received 79 responses out of 338, which is just under a 24% response rate. This is much better than the 5% I reported last time, but I was hoping for a higher rate. I did have fifteen practitioners state that they were interested in some individualized training on searching the databases. It appears that the one dollar incentive that I sent along in the second mailing was somewhat more motivating than the 0.5 CME credit. Outcomes of the survey found that ninety-one percent stated that their memories were refreshed on details or facts; 83% stated that it helped with advice given to the patient; and 69% stated it contributed to their choice of other treatments. Forty-seven percent noted an ability to avoid additional tests or procedures. The Internet (search engines) was the most highly cited resource used, with the hospital library web page a close second. Almost 60% felt that their search was completely successful, with 40% concluding that their search took between 10 and 30 minutes. I have been working with my major professor and the statistician on my sampling technique, and we have decided to do cluster sampling, as opposed to surveying every critical access hospital (CAH), and then randomly selecting a proportional sample of the three populations from each hospital. This seems to be a better tactic, because some hospitals have all three populations- physicians, PAs, and NPs, and others have just one PA! So, from my calculations, I will need to sample 93 of the 123 hospitals, and then within each hospital, I will survey everyone. Out of the 123 CAHs, only five have not responded to my numerous contacts. Two others have said they do not wish to participate. Everyone else has been quite responsive and helpful. It turned out that Arleen was not able to assist me with contacting the potential "facilitators" at each hospital because of other commitments, so my daughter has been helping me make phone calls and e-mail contacts. She has been successful in eliciting much cooperation. I have made a few revisions to the survey instrument, based on your input at the focus group meeting, as well as the survey instruments used in the Rochester Study and the University of Wales study. I am preparing to send the survey out to the chosen CAHs this week, either by snail mail, e-mail attachment, or SurveyMonkey link.

I have decided not to attempt to motivate participation by arranging the awarding of 0.5 AMA PRA Category 1 CME credits as I did in my pilot survey. The Internet Point of Care CME activity that is authorized by the AMA requires about an hour of a physician's time. To complete this activity, they are supposed to research a clinical question, find one to three citations of relevant literature, and then complete the survey based on how they used the information they found. I cannot envision the practitioners in the CAHs taking the time to fully complete this activity. I will be lucky to get 15-20 minutes of their time.

I will be completing a report for the PNR NNLM on the planning grant that I received this fall, and I will send each of you a copy of it. I really appreciate the time and energy you put into helping me to determine a focus for my research, and brainstorm the methodology. A special thanks to the members of the focus group that met at the end of October 2008, for "being there."

## January 23, 2009

The pilot survey has been running for about two and a half weeks now, with an approximate response rate of only about 5%. So, this week, I sent out another letter with a print survey enclosed to all non-responders. This time, I enclosed a token incentive- a one dollar bill- in each envelope. This is a technique that has been shown to increase response rates, according to Dr. Don Dillman of WSU and his book on the Total Design Method for mail and internet surveys. I have been able to turn in 17 names of physicians, PAs or NPs to our Medical Staff Services office

for the award of the 0.5 AMA PRA Category 1 CME credit. Eight of the 17 respondents stated that it would have been helpful to have had some training on how to search the databases in order to complete the survey, and five respondents stated that they would like to set up a time for me to come to their offices to instruct them on how to search the database of their choice. It will be very interesting to see whether or not the token incentive spurs the non-responders on. The KMC practitioners have many other mechanisms for getting their CME points, and therefore may not be motivated by a 0.5 credit, where rural practitioners who have no access to organized CME offerings may be much more interested.

I did have that meeting with a statistician at UI, and she recommends my doing a random sample, as does my major professor. I am in the process of applying numbers to a formula she gave me, and I hope to have my sample size determined at the end of next week. (I leave for ALA Mid-winter tomorrow morning early and won't return home until late the 28th, and I'm not taking this stuff with me!). Maybe five of the 123 CAHs have not given me practitioner numbers yet. At this point, I have 1,463 physicians, 257 PAs, and 179 nurse practitioners.

Arleen Libertini has tentatively agreed to assist me with further contacts to the CAHs, and with setting the stage for the distribution of the survey to the practitioners.

### **December 18, 2008**

One week until Christmas! I can't believe it.

Thanks to everyone that posted information about who they provide services to at the critical access hospitals.

My pilot survey is ready to go, which will be distributed to KMC physicians and physician assistants before the end of the year. I created it through SurveyMonkey. I have made arrangements through our Medical Staff Services office to award a 0.5 AMA PRA credit for participation in the survey. One caveat with this mechanism for boosting participation is that I cannot ask the participant to choose whether they will search themselves or have a librarian search. The CME credit is awarded for an Internet Point of Care educational experience, by searching the clinical literature for EBM resources to address the patient care question at hand, and so must be done by the participant alone. I will gauge how successful the CME credit is for motivating people to participate, and then make a decision on whether or not to use it in my "real" research. When I get all my survey results in, and start to analyze it, I will contact all of you for your feedback on the outcomes!

I have finished calling each and every one of the 123 critical access hospitals. Often, I had to leave a voice mail, and call back numerous times. I will probably send a letter to those hospitals that have been unresponsive so far. There is another issue I am grappling with, and that is the issue of randomizing my sample. I know that randomizing helps for legitimizing and generalizing my findings, but the data that I am gathering through the survey is nominal or categorical anyway. There are limits to the statistical tests I can apply to that kind of data. I have made an appointment with a "statistics help center" at the University of Idaho for mid-January, and they will help me take a close look at what I can and can't do with my data.

I received notice this morning that a poster abstract that I submitted for MLA annual 2009 was accepted. It will be on the results of this pilot survey, of course! I will have to have my results and conclusions in by February 16th.

Happy Holidays!

Beth

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### **November 5, 2008**

The focus group meeting went very well on the 31st. We had a few problems here and there with phone conference issues, but they were resolved fairly easily. Based on the thoughts and ideas of the group, I have been investigating contact information for participants, and making changes to my survey instrument.

The following is a recap of the main ideas and suggestions that were raised during the focus group meeting:

1. A survey question should ask why the physician chose to, or not to, ask the librarian to search. Why did you choose to search yourself? technology issues? Why didn't you choose to call the librarian?

2. Have the participant identify what resources were used in the search.
3. In the University of Wales Study survey #7, only one question at a time should be asked.
4. UW Study survey #9- the question needs to be more explicit. How did you use the information?
5. It was suggested that I should include nurse practitioners (NPs) in my study. Some rural hospitals choose to use NPs instead of physician assistants.
6. Add a question that addresses: What agreements or arrangements do you currently have for library services? How do you get library services? With what hospitals do you have consortial arrangements?
7. One question in the King dissertation survey asked about how much of the librarian-mediated search results the physicians actually reviewed and read. This is interesting because it gets at the issue of what gets used and why.
8. Any database training should be focused on the resources available to an individual physician.
9. Instead of asking if a physician would like to have a database training session, ask if they would like help in identifying possible consortial arrangements for services, "how we can get you more services." Would you like help in being more effective or efficient in finding clinical information? Be sure to make them aware that having a librarian search for them is a way to save time. Use "consultation" lingo- would you like a consultation with a librarian? A librarian consultant just for you. For those physicians who choose to try searching on their own first, make sure they know that they can change their mind and always have the option of asking a librarian.
9. Suggestions for contacts and presentations: Rural health associations/organizations- Northwest U.S., Rural physician conferences, write an article, or place an ad, in each state's journal. For example: Montana Medical Association- MMA Bulletin insert. AHECs, State licensing boards for addresses.
10. If you choose to ask the question- do you or do you not have a library at your hospital, be careful, because library can be defined many ways. Some people call a set of books, and a computer with a few databases accessible from it, a library.
11. Questions # 5 and #13 of the King dissertation survey Part 1 were noticed as possible questions to add to the survey:  
#5- How frequently during the past 12 months have you contacted this hospital library for information directly related to patient care?  
#13- Which of the following sources of information had you already consulted at the time of your request to the library? (Check all that apply)
12. For Beth's draft survey, add "others" after Medscape in Websites in question #5.
13. Incentives for participation, submitted by Heidi Sue:  
Drawings for airline tickets/trip, database licensing for one year, PDA/technology gadget, money (for person/for hospital foundation?), AMA membership (or association of their choice), conference funds, money for equipment or resources, lunch for one week at their facility (desserts instead of lunch), information consultation/services free for one year for facility, AMA Category 1 CME credit
14. Getting at the educational component of the research:
  - a. Ongoing CME- how do rural physicians get their CME?
  - b. Instruction in database searching/retrieving medical literature  
Librarians provide training  
Curriculum should be standardized  
Pre and post-tests should be conducted
  - c. Format for instruction  
Online tutorials- self-study  
Virtual  
Podcasts, CDs, in person  
Pre and post-tests should be conducted
  - d. Questions to add to survey  
Did this work for you?  
What would you want different?  
What is your preferred method of learning?  
What is the preferred time of day/week for learning?

We are having our first f2f meeting on October 31st at the WSU Riverpoint Campus beginning at 10:30 a.m.

The plan is to use this wiki after the meeting to stay in contact on study progress and for having a shared space for uploading any focus group documents.