

National Network of Libraries of Medicine® (NN/LM®)

RFP NLM-10-055-AN

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**Technical Proposal**

**Final Proposal Revision**

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**Version 1: Technical Approach in response to award for  
Base RML Services and NTC**

**Offeror’s Name:** University of Utah  
**Region Number Proposed:** 4  
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**Part I: Mission, Goals and Regional Services Plan**

## Regional Services Plan

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### Mission

The mission of the National Network of Libraries of Medicine (NN/LM) is to advance the progress of medicine and improve the public health by:

- 1) providing all U.S. health professionals with equal access to biomedical information and,
- 2) improving the public's access to information to enable them to make informed decisions about their health.

The program is coordinated by the National Library of Medicine<sup>®</sup> and carried out through a nationwide Network of health science libraries and information centers.<sup>1</sup>

For the National Network of Libraries of Medicine, MidContinental Region (NN/LM MCR), the mission and organization of the NN/LM constitutes the best strategy to assure that there is no information disparity for health professionals and the public. The quality of health care delivered and of health care decisions made is absolutely dependent on access to quality health information resources and services. It is through the National Network that this access is assured.

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### NN/LM Goals

The three goals established by the National Library of Medicine will provide the action plan for the region. In addition, the NN/LM MidContinental Region (MCR) has added a fourth goal to support the assessment and evaluation activities that identify the effectiveness of the NN/LM MCR. The goals for our regional services plan are:

- Develop collaborations among Network members and other organizations to improve access to and sharing of biomedical information resources throughout the nation;
- Promote awareness of, access to, and use of biomedical information resources for health professionals and the public, with a particular emphasis on contributing to Healthy People 2020 (<http://www.healthypeople.gov/HP2020/>);
- Develop, promote, and improve electronic access to health information by Network members, health professionals, and organizations providing health information to the public; and
- Understand how the products and services of the NN/LM and NLM<sup>®</sup> contribute to improved access to health information by health professionals, and the public.

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<sup>1</sup> Department of Health and Human Services, National Library of Medicine. RFP NN/LM 2011-2016 Attachment 1: Statement of Work. [Internet] 2010 Mar 5. Available from: [https://www.fbo.gov/index?s=opportunity&mode=form&id=101d833702f40eb703f7d7432066f171&tab=core&\\_cvi=1](https://www.fbo.gov/index?s=opportunity&mode=form&id=101d833702f40eb703f7d7432066f171&tab=core&_cvi=1)

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## Who We Are

The Spencer S. Eccles Health Sciences Library at the University of Utah will serve as the Regional Medical Library for the MidContinental Region. Spencer S. Eccles Health Sciences Library has been the Regional Medical Library serving the states of Colorado, Kansas, Missouri, Nebraska, Utah and Wyoming since 2001.

### ***Geography***

The geographic scale of the region offers both challenges and opportunities. From its western border to the Mississippi River in the east, the region extends over 1,000 miles and across two time zones. Geographically, the region is extremely diverse, including the western desert, Rocky Mountains, Great Plains and Mississippi Valley. Population distribution is among the most extreme in the continental United States with areas that at best are described as remote. A few metropolitan areas -- St. Louis, Kansas City, Omaha, Denver and Salt Lake City -- break up the open landscape. The large metropolitan areas, like St. Louis, exemplify the traditional inner-city environment, while rapidly growing metropolitan areas, like Salt Lake City and Denver, exemplify inner-cities where these challenges are only recently appearing. All of the metropolitan areas of the region have academic health sciences centers and Resource Libraries. The numbers of Resource Libraries are not so overwhelming that the focus is simply on coordination, nor so few that a range of possible programs is constrained. The RML has established strong relationships with these institutions that have demonstrable records of innovation, and partners with them to address the challenges of the region.

### ***Demographics***

The population in the NN/LM MCR is primarily White. It may appear that this is a homogenous population but there are small, but significant, minority populations in the MidContinental Region that face health disparities. Although the minority populations that we work with may be smaller than in other regions, the NN/LM MCR faces the same issues and challenges that are faced in all regions to improve health information literacy among groups of different cultures who may speak languages other than English. Through our efforts to improve health information literacy we hope to improve the identification of and access to health information resources; the ability to evaluate, analyze and understand the content; and the ability to use the health information to make informed decisions. We continue to work with health care providers, who care for patients of other backgrounds, to increase their awareness of appropriate materials designed to convey diagnoses, treatment methods and other health information in a way that their patients can understand. Although we still lag behind other regions, the racial and ethnic percentages of our population are increasing. Health care providers are more frequently encountering refugees from different cultures, people who resettled in our states due to hurricane Katrina, and a minority workforce of Spanish language speakers.

	Total Population	White	Black	Hispanic	Other
Colorado	4,875,100	3,578,200 73.40%	184,800 3.79%	901,700 18.50%	210,400 4.32%
Kansas	2,708,000	2,175,600 80.34%	155,200 5.73%	230,200 8.50%	147,000 5.43%
Missouri	5,823,300	4,762,30 81.78%	654,900 11.25%	181,700 3.12%	224,400 3.85%
Nebraska	1,758,800	1,477,000 83.98%	76,800 4.37%	143,400 8.15%	61,500 3.50%
Utah	2,703,200	2,250,600 83.26%	28,600 1.06%	313,000 11.58%	110,900 4.10%
Wyoming	520,500	457,100 87.82%	No Significant Data	41,300 7.93%	16,900 3.24%
United States	300,544,200	196,505,600 65.00%	36,466,900 12.13%	47,395,400 15.77%	20,176,200 6.71%

Table 1. Population Distribution by Race/Ethnicity<sup>2</sup>

There are numerous federal and state recognized native tribes in the MCR,<sup>3</sup> as well as Native North American languages spoken:<sup>4</sup>

**1. Colorado: Southern Ute Indian Tribe, Ute Mountain Ute Tribe.**

Languages spoken include Navajo, Blackfoot, Cheyenne, Fox, French Cree, Athapaskan, Apache, Dakota, Choctaw, Muskogee, Kere, Iroquois, Cherokee, Ute, Shoshoni, Hopi, Tiwa, and Zuni.

**2. Kansas: Iowa Tribe of Kansas and Nebraska, Kickapoo Tribe of the Indians in Kansas, Prairie Band of Potawatomi Nation, Sac and Fox Nation of Missouri in Kansas and Nebraska.**

Languages spoken include Navajo, Cheyenne, Kickapoo, Ojibwa, Potawatomi, Apache, Kiowa, Dakota, Kansa, Omaha, Choctaw, Muskogee, Cherokee, and Hopi.

<sup>2</sup> Kaiser State Health Facts "Population Distribution by Race/Ethnicity, states (2007-2008)", U.S. (2008) <http://www.statehealthfacts.org/comparetable.jsp?typ=2&ind=6&cat=1&sub=1> Accessed March 30, 2010.

<sup>3</sup> National Conference of State Legislators. (July 2010). Federally and State Recognized Tribes. Retrieved October 6, 2010, from <http://www.ncsl.org/default.aspx?tabid=13278>.

<sup>4</sup> U.S. Census Bureau. (April 2010). Language Use in the United States: 2007. In American Community Surveys. Retrieved October 6, 2010, from [http://www.census.gov/population/www/socdemo/lang\\_use.html](http://www.census.gov/population/www/socdemo/lang_use.html).

**3. Missouri: Northern Cherokee Nation, Chickamauga Cherokee.**

Languages spoken include Navajo, Inupik, Ojibwa, Potawatomi, Apache, Kiowa, Tlingit, Diegueno, Dakota, Chiwere, Winnebago, Osage, Choctaw, Muskogee, Cherokee, Comanche, and Zuni.

**4. Nebraska: Iowa Tribe of Kansas and Nebraska, Omaha Tribe of Nebraska, Ponca Tribe of Nebraska, Santee Sioux Nation, Winnebago Tribe of Nebraska.**

Languages spoken include Navajo, Ojibwa, Dakota, Winnebago, Omaha, Ponca, Mikasuki, Muskogee, Cherokee, Shoshoni, and Chinook Jargon.

**5. Utah: Confederated Tribes of Goshute Reservation, Navaho Nation, Northwestern Band of Shoshoni Nation of Utah, Paiute Indian Tribe of Utah, Skull Valley Band of Goshute Indians, Ute Indian Tribe of the Uintah and Ouray Reservations, Ute Mountain Ute Tribe.**

Languages spoken include Navajo, Blackfoot, Kickapoo, Dakota, Omaha, Choctaw, Keres, Mohawk, Cherokee, Paiute, Ute, Shoshoni, Hopi, Tewa, Zuni, and Chinook Jargon.

**6. Wyoming: Arapaho Tribe of the Wind River Reservation, Eastern Shoshone Tribe of the Wind River Reservation, Fort Peck Assiniboine and Sioux Tribes.**

Languages spoken include Navajo, Arapho, Cheyenne, Ojibwa, Apache, Crow, Dakota, and Shoshoni.

Missouri is the only state in the MCR with two Historically Black College and Universities (HBCUs):<sup>5</sup> Harris Stow State University in St. Louis and Lincoln University in Jefferson City. Colorado and Kansas are the only states in the MCR with Hispanic-Serving Institutions (HSIs).<sup>6</sup> Colorado has six: Adams State College, Colorado State University (Pueblo), Community College of Denver, Otero Junior College, Pueblo Community College, and Trinidad State Junior College. Kansas has one: Donnelly College in Kansas City.

Although the MCR is primarily English and Spanish speaking, it is growing in diversity with an increasing number of refugees resettled in the region. Other top languages spoken in the MCR include Arabic, Cambodian, Chinese, Cushite, French, Hindi, Italian, Korean, Laotian, Persian, Polish, Portuguese, Russian, Serbo-Croatian, Swahili, Tagalog, Thai, Urdu, and Vietnamese.<sup>7</sup>

<sup>5</sup> Hispanic Association of Colleges and Universities. (2010). HACU Member Hispanic-Serving Institutions. Retrieved October 6, 2010, from [http://www.hacu.net/assnfe/CompanyDirectory.asp?STYLE=2&COMPANY\\_TYPE=1,5](http://www.hacu.net/assnfe/CompanyDirectory.asp?STYLE=2&COMPANY_TYPE=1,5).

<sup>6</sup> U.S. Department of Education. (January 4, 2010). List of Historically Black Colleges and Universities. In *White House Initiative on Historically Black Colleges and Universities*. Retrieved October 6, 2010, from <http://www2.ed.gov/about/inits/list/whhbcu/edlite-list.html>.

<sup>7</sup> U.S. Census Bureau. The 2010 Statistical Abstract. Population: Language Spoken at Home by State: 2008 [cited 2010 October 11]. Available from [http://www.census.gov/compendia/statab/cats/population/ancestry\\_language\\_spoken\\_at\\_home.html](http://www.census.gov/compendia/statab/cats/population/ancestry_language_spoken_at_home.html)

### ***Common Health Conditions and Risk Factors in the MCR***

Every racial, ethnic, age, gender or geographic group has specific health concerns. Differences in the health conditions and risk factors of various groups can result from genetics, environmental factors, access to care, and cultural factors. The leading causes of death in the states comprising the MidContinental Region (MCR) include diseases of the heart, malignant cancers, chronic lower respiratory diseases, Alzheimer’s disease, diabetes, influenza and pneumonia, chronic liver disease and cirrhosis, sepsis, and acute or chronic inflammation of the kidney.<sup>8</sup> The Centers for Disease Control and Prevention (CDC) has coined the term “Winnable Battles” to describe domestic public health priorities with large-scale impact on health and with known, effective strategies to intervene. CDC Director Dr. Thomas R. Frieden and CDC leaders have identified the following winnable battles based on the magnitude of the health problems and CDC’s ability to make significant progress in improving outcomes: healthcare associated infections, HIV infection reduction, motor vehicle injuries, obesity, nutrition, physical activity, food safety, teen pregnancies, and tobacco use and exposure to secondhand smoke.<sup>9</sup>

### ***Internet and Telephone Connectivity***

The Federal Communications Commission (FCC) map (Figure 1) shows the percentage of housing units with 4 Mbps broadband availability within the six states of the MidContinental Region. This map is based on data from a variety of public and commercial sources and represents the FCC’s current best estimate on the availability of broadband service.<sup>10</sup> As the map shows, most areas in our six-state region have more than 50% connectivity. The darker and black areas of the map show pockets of underconnected areas in the region. For information on connectivity of MCR members, see our response to SOW section B5.

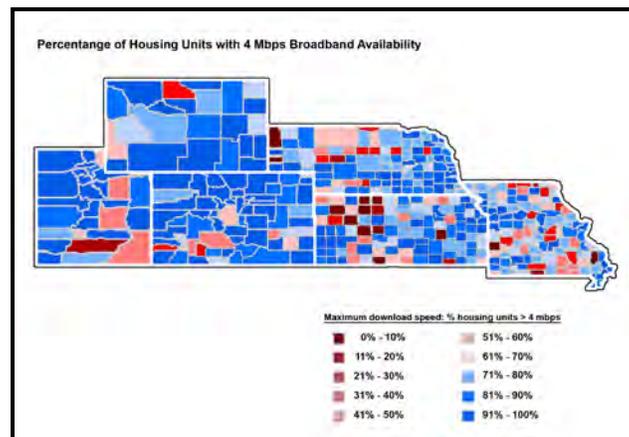


Figure 1

<sup>8</sup> Centers for Disease Control and Prevention. (May 20, 2009). *Deaths, percent of total deaths, and death rates for the 15 leading causes of death: United States and each State, 2006*. In National Vital Statistics System: Mortality Data. Retrieved October 6, 2010, from [http://www.cdc.gov/nchs/data/dvs/LCWK9\\_2006.pdf](http://www.cdc.gov/nchs/data/dvs/LCWK9_2006.pdf).

<sup>9</sup> Centers for Disease Control and Prevention. (September 29, 2010). *CDC’s Winnable Battles*. In *About the CDC*. Retrieved October 6, 2010, from <http://www.cdc.gov/about/winnablebattles.htm#six>.

<sup>10</sup> Federal Communications Commission National Broadband Plan. <http://www.broadband.gov/maps/availability.htm>. Accessed October 7, 2010.

**Figure 2 presents comprehensive data on telephone penetration statistics collected by the Bureau of the Census under contract with the FCC for 2009.<sup>11</sup> “Available” indicates the percentage of households which have telephone service available for incoming and outgoing calls, either in the housing unit or elsewhere.**

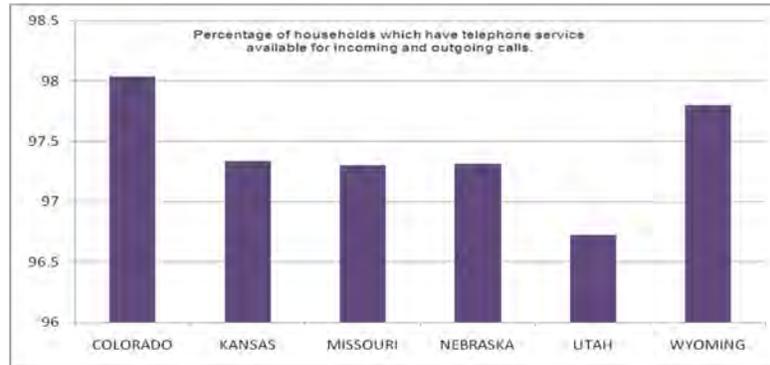


Figure 2

### **Health Care Providers**

Our vast geography and population distribution impacts health care availability in the region. Health care providers tend to congregate in our more populated areas. Since much of the region is frontier (less than 7 people/square mile) or rural (any non-urban or non-metropolitan area), patients often need to travel long distances to receive health care, especially from medical specialists. Much of the region has been designated medically underserved either by the state’s governor or by the U.S. Health Resources and Services Administration.

Medically underserved areas are designated based on four variables:

- The ratio of primary medical care physicians per 1,000 population
- Infant mortality rate
- Percentage of the population with incomes below the poverty level
- Percentage of the population age 65 or over.

The value of each of these variables is converted to a weighted value and then added together to produce a score. Medically underserved areas (MUAs) have received a score of 62 or less.

Medically underserved populations are based on the same variables used for MUAs except they are calculated for populations instead of for a geographic area. All governor designated medically underserved populations reflect local conditions and barriers that affect personal health services.

<sup>11</sup> Federal Communications Commission. Telephone Subscribership in the United States. <http://www.data.gov/raw/2120>. Accessed October 7, 2010.

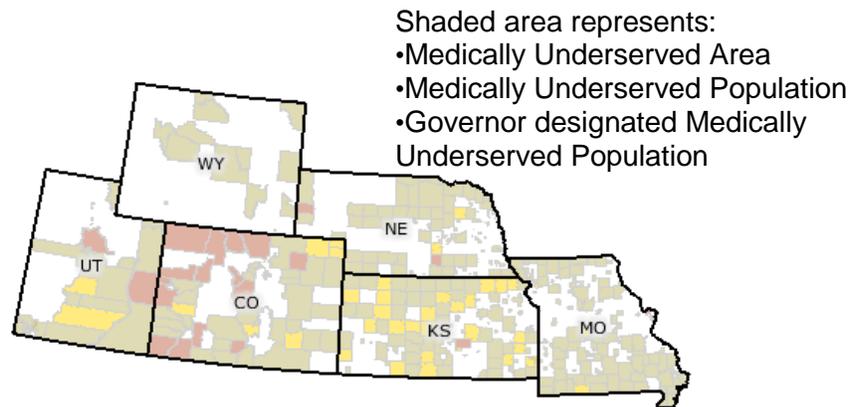


Figure 3<sup>12</sup>

The challenges providers face now due to racial and ethnic diversity will continue as the population in the region becomes more diverse. These challenges fall in two areas. First, providers will increasingly find themselves required by laws and standards, such as Title VI, The Joint Commission, and CLAS standards to develop cultural and ethnically appropriate materials for patients. In addition, they will continue to interact with new population groups. For example, Omaha now has a growing Mayan population, and finding interpreters, assessing the population's health needs and finding information resources to meet those needs is a new challenge for health care providers in Omaha.

#### ***Community Based Organizations***

There are numerous community and faith based organizations in the MCR that work in diverse service capacities. Those groups include public health organizations, community groups such as Boys and Girls Clubs of America; health related groups, such as the Red Cross; faith based groups such as parish nurses. A survey of the local United Way organizations in the region provides an overview of the richness and diversity of community and faith based organizations in the MidContinental Region. There are a total of 107 local United Way organizations spread across the MCR that work with more than 2300 partner agencies. Each local organization funds the work of partner agencies in their geographic boundaries to carry out the mission and goals of the International United Way.

- **Colorado: 14 local organizations work with more than 451 partner agencies**
- **Kansas: 29 local organizations work with more than 508 partner agencies**
- **Missouri: 29 local organizations work with over 725 partner agencies**
- **Nebraska: 19 local organizations work with over 310 partner agencies**

<sup>12</sup> RAC: Information for Rural America [Internet]. Rural Assistance Center c2002-2009. Maps; Health Resources and Services Administration, Bureau of Health Professionals. 2010 Apr16 [cited 2010 May 18]; Available from <http://www.raconline.org/maps/#hpsa>

- **Utah: 9 local organizations work with over 230 partner agencies**
- **Wyoming: 7 local organizations work with over 99 partner agencies**

### **Network Members**

From the Institutional records in DOCLINE<sup>®</sup>, we know that the NN/LM MCR has 325 Network members. Half (165) are Full Network members; they meet all the criteria (staffing, collection, and services including DOCLINE) for membership. Half (160) are Affiliate members; they are a library or an information resource center but do not meet all the criteria for Full membership.

Hospital libraries still make up the majority (64%) of our Full members with most of them staffed by solo degreed librarians. Academic libraries compose the next largest group (28%) of our Full members. Among our Affiliate members, public libraries make up the largest (44%) category of libraries, with hospital libraries coming in second (17%).

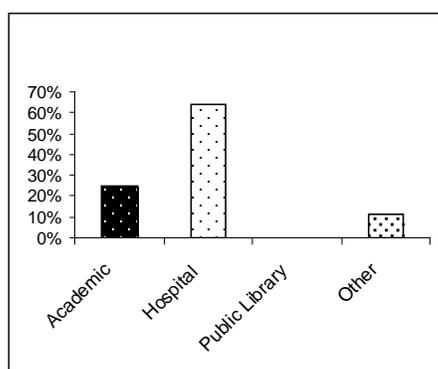


Figure 4: Full Members by Category

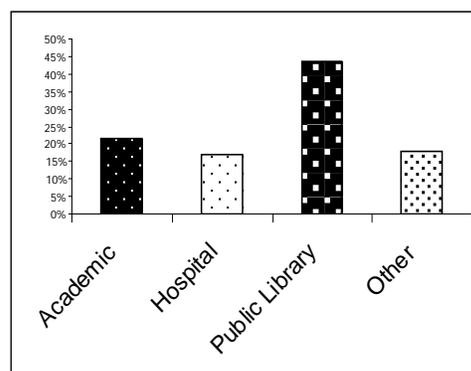


Figure 5: Affiliate Members by Category

Our membership demographics are changing. At the beginning of the current contract Full members outnumbered Affiliate members. The percentage has changed due to active recruitment of public libraries into the Network. Seventy one public libraries are now members of the Network. Unfortunately, the shift has also occurred because of cutbacks in hospitals that affected libraries. Some hospital libraries were no longer able to meet the requirements of Full membership and moved from Full to Affiliate status. This has importance for the Network when a health care provider may no longer have full services available from their hospital, causing the health care provider to seek other Network members willing to provide information services or decide to practice without the information. This may be offset by the increase in public library members. More public libraries belonging to the Network allows unaffiliated health care providers to use them as portal to the health information resources, especially if there are no local health sciences libraries in their community providing health information services. **Public libraries that are NN/LM MCR Network members will be knowledgeable about ordering articles from medical and scholarly biomedical related journals from health sciences libraries through Loansome Doc. In the current contract, the NN/LM MCR has conducted training sessions for public library staff and will provide Loansome Doc training in the next contract. Public libraries with this expertise can become Loansome Doc “portals” for health**

**professionals or could provide Loansome Doc information so health professionals could set up their own Loansome Doc accounts. There are no public libraries in the NN/LM MCR that participate in DOCLINE as a borrower or lender.**

### ***Organization of the NN/LM MCR***

Central to the regional services plan are the RML coordinators located in each state in the MidContinental Region. This distributed model brings the services of the RML closer to the communities the RML serves and enhances the development, assessment and coordination services to members and of outreach to the state. This distributed model also helps to address the geographic challenges posed by the region. The coordinators are located at each of the seven Resource Libraries and lead regional projects. In each state, a coordinator serves as a state outreach coordinator and implements the special projects in their state. The table below outlines the responsibilities each Resource Library contributes to the regional services plan. The RML coordinators also contribute to activities such as the communications program, reports, evaluation and exhibits/presentations.

<b>Library</b>	<b>State Outreach</b>	<b>Special Project Area</b>
Health Sciences Library University of Colorado Denver	Colorado	Health Information Literacy
A.R. Dykes Library of the Health Sciences, University of Kansas Medical Center	Kansas	Technology
Bernard Becker Medical Library, Washington University	None	Assessment and Evaluation
J. Otto Lottes Health Sciences Library, University of Missouri, Columbia	Missouri	Library Advocacy
Creighton University Health Sciences Library/Learning Resources Center	None	Health Information Literacy
McGoogan Library of Medicine, University of Nebraska Medical Center	Nebraska	Education
University of Wyoming Libraries	Wyoming	Funding Resources
Eccles Health Sciences Library, University of Utah (RML)	Utah	Technology Member Services

*Table 2. Resource Library Responsibilities*

The members of our region strongly endorse this distributed model. We learned from the focus groups we held in 2010 that

“...participants identified the specialty roles of the liaisons in different states, and they felt confident referring colleagues to the RML staff member who could best

help with the question at hand. For one-person libraries, networking opportunities were viewed as 'extremely important because I have no colleagues here who know what I do...nice to know there are other(s)...I can talk to about problems I'm encountering....' The role of the RML in motivating member library service advances and improvements was recognized—'I...feel fortunate...they seem to push us...professionally.... I faithfully read those bulletins...somebody is seeing things that I haven't seen....'"<sup>13</sup>

### ***Our Pillars***

Three pillars build the foundation to our regional services plan: application of technology, collaboration, and assessment and evaluation.

#### **Collaboration**

The first pillar of our plan is collaboration. The distributed model of this RML is founded on collaboration. We collaborate with each of the Resource Libraries in the region to successfully fulfill the Statement of Work of the NN/LM contract. The RML seeks additional ways to strengthen our programming through collaboration.

In 2007, our Technology Coordinator began service as the shared Technology Coordinator for both the MidContinental Region and the Pacific Southwest Region (PSR). To further the nature of inter-regional collaboration, the MCR/PSR Technology Coordinator assumed responsibility for developing and carrying out a technology program for both regions. Both regions benefited from sharing a position.

In 2007, we collaborated with the National Training Center and Clearinghouse (NTCC) to create a web-based class registration and scheduling system for the RMLs. The Associate Directors of all the RMLs and the NTCC staff identified requirements for an NN/LM system. The system identifies both regional classes and the NTCC classes held in each region, manages online registration for both, and compiles a class participant spreadsheet. Three RMLs are using the National Training and Registration Page with a fourth to come up by the end of this contract.

Our collaboration ranges from national to local. On the national level we have held leadership positions in organizations such as REFORMA to move forward our initiatives in health information access to minority populations. On the very local level, staff has been integrated in community organizations to learn their information needs and influence the organization to incorporate health information access into their operations.

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<sup>13</sup> Graham, Elaine; Kelly, Betsy. 2010 Network Member Focus Groups Report. 2010. National Network of Libraries of Medicine, MidContinental Region; MS.

### Technology

The second pillar of our plan is technology. The advancement of computing and networking technologies has had an extraordinary impact on library resources and services. Resources and services once confined to academic health sciences centers and large, tertiary hospitals are, through the Internet, now accessible in hospitals, clinics and homes throughout the nation. The National Library of Medicine, through its leadership in the development of powerful resources like PubMed<sup>®</sup>, MedlinePlus<sup>®</sup> and PubMed Central<sup>®</sup>, is transforming healthcare and the public's access to health information. NLM resources are truly available anywhere, anytime since products such as PubMed, MedlinePlus and Wiser<sup>®</sup> have been formatted for mobile devices as well as on the web. We believe that keeping up with technology is one way that members can become leaders within their institution.

The MCR staff monitors and experiments with technology and uses it to facilitate our collaborative operations. We track advances in technology and identify those that can best be used to improve access to health information and the services of our Network members. To help members become technology leaders in their institutions, the technology coordinators offer consultations, classes and technology updates, throughout the current contract period.

The NN/LM MCR has gained years of experience with distance education technologies. Our synchronous classes are taught using Adobe Connect. Class members can see and hear the instructor through the use of audio and video; and the class can be recorded so that it can be viewed at a later date. In this and other ways we have introduced our members to Twitter, podcasting, screencasting, blogs, wikis, RSS, social bookmarking, and other web 2.0 technologies in the hopes that they will adopt these technologies and employ them within their own institutions. In Year 3 of the current contract, the NN/LM MCR released a questionnaire to members asking if they adopted new technologies in their work due to our programming. Fifty two percent of the respondents said they had adopted a new technology. We continue to support the integration of technology into the operations of our Network members and our partners to facilitate operations throughout the region.

### Assessment and Evaluation

The third pillar of our plan is assessment and evaluation. NN/LM MCR strongly encourages members to use evaluation methods to produce evidence to show the value of the library to their administration. We practice what we preach. Assessment and evaluation is integrated into the MidContinental RML from the first brainstorming session until we write our annual report. Behind all of our plans is our logic model. The logic model offers direction through the goals, objectives and outcomes we have identified. The Activity Reporting System (ARS) is based on the logic model and captures all the work of staff. Coordinators add their activities into the ARS and select the goals and outcomes that the activities address. The status reports that are produced from this data provide the staff with an update of where we are in approaching our outcomes. The logic model is also a topic in many of our activities. It is taught in our proposal writing class, in our library advocacy workshop, and is incorporated when we work with groups in project planning. We use evaluation and assessment tools such as the Network Member Questionnaire and focus groups to assess needs, to provide us with baseline data on our

members, and to help us determine the impact of our program. Just as we encourage our Network members to show their value to their institutions, our assessment and evaluation program produces data that shows to the National Library of Medicine and to our region our effectiveness, our impact and our value. (See our response to the SOW Section C for our logic model)

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## Challenges and Strategies

### ***Outreach Success is Dependent***

The RML's outreach efforts focus on public librarians, health care providers, and staff of community organizations. The success of our health information literacy efforts are dependent on the receptivity of the group we focus on. Being open to hear our message is dependent on many variables including:

- Do they have time to hear our message?
- Do they recognize how health information can assist them and the patients or clients they serve?
- Do they have the resources to easily access the resources we promote?

In the current contract we have become members of community organizations, minority health organizations, and public health organizations. Through this experience we are learning to understand the variables in their terms. We are learning what the group's health information needs are and how we can better frame our message and our activities to address their needs.

In the new contract, we will enlist the assistance of our Network members. The increased number of personnel and the additional sites where outreach can be localized should increase the number of outreach activities. Network members will be invited to exhibit and present at health professional meetings and to offer training sessions on NLM resources to our outreach populations. Increasing the number of our outreach field force will increase the health information literacy of the populations on which we focus.

### ***Technology Changes***

Significant changes in technology facilitate communication and interactions that diminish geographic distances (videoconferencing), make news instantly available (Twitter), allow individuals with common interests to find each other (Facebook), and offer professional development without leaving the office (webinars). Mobile devices provide continuous and everywhere connectivity. The NN/LM MCR has a well established history of investigating new communication technologies for practical applications and implementing them for the benefit of the region. Current and emerging technologies open up new ways for us to interact with and convey information to our constituencies in the region.

Regrettably, not all Network member environments permit the use of these new technologies. Hospital librarians find it especially difficult, due to restrictive security policies and concerns

about using too much bandwidth, to employ these technologies. Some participants of our “13 Things” workshop series have had to do their homework activities at home because their institutions block social networking tools. One of our members remarked on the irony that access to Facebook was blocked within the hospital, even though the marketing department established a Facebook page to promote the hospital. Eventually, as more organizations find the value in social networking tools, policies will change. Network librarians are promoting the usefulness of the tools and advocating for a change in policy. The RML is teaching members how to use the new technologies so that they will be prepared to take advantage of the accessibility to these tools the moment they become available in their institutions. As one of our members told us, “[There are] so many young residents at the hospital...we’re going to need to know how to put together wikis, and blogs, and podcasts....”

New technologies allow collaboration among organizations who, because of distance, would have found it difficult to work together in the past. Collaboration spaces such as wikis and Google Docs make it “... just as easy for an organization to learn from and collaborate with an individual located across the globe as with the nonprofit across town.”<sup>14</sup> This expands the potential partners that the RML can collaborate with and should strengthen our efforts to reach the goals of our regional services plan. Because of our distributed model, staff has years of experience working in a team that depends on these collaborative technologies. Our expertise assists those who collaborate with us so that they can use their knowledge of these technologies to partner with others.

### ***Broadening Role of the Librarian***

New opportunities abound for librarians in hospital and academic settings to support the mission and goals of their institution. Patient safety, the electronic health record, CTSA community engagement, e-science, emergency preparedness, knowledge management, and personal health records are the ones that have been identified in the NN/LM RFP. For many of our Network members taking on any of these activities would be new responsibilities. Members may require resources to apply existing skills in new ways and more knowledge in medical disciplines and the research process. Fortunately there are those in the region and the country who have already adopted these roles, the early adopters. It is important for the RML to pinpoint the early adopters and have them identify the skills and knowledge that they used to carry out these new responsibilities. The RML can then provide the training and support to enable others to adopt these new roles in their institutions.

### ***Resources***

The recession affecting the nation has not bypassed the MidContinental Region. Tight budgets mean that administrators are looking for services that can be reduced, services that can be combined, or services that be cut. Hospital libraries experience this cost cutting hunt whenever the healthcare economy is in a down slump. The recession has been severe enough that

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<sup>14</sup> Gowdy, H, Hildebrand A, La Piana D, Mendes Campos M. Convergence How Five Trends Will Reshape the Social Sector. Focus 2009 Nov; 12.

academic health sciences libraries find themselves justifying maintaining status quo to university administration. Some academic libraries are reporting up to double digit budget cuts in the last two years.

Since 2002, we have collected data on the staffing in member facilities. In hospitals, the average librarian staffing went from 1.34 FTE in 2002 to 1.24 FTE in 2008. The trend for professional staffing in hospitals is going downward. Staffing at academic health sciences libraries remained flat over this period. Many health sciences librarians are on the verge of retirement. The recession may have delayed this decision for a couple of years but soon the baby boomers will no longer be part of this workforce. Will institutions replace their librarian? Preliminary data from our 2010 focus groups indicate that Network members are also concerned about succession planning.

The tightening of resources (budgets, staff and time) in our member institutions affects how the RML delivers its services and our expectations of members. We can no longer expect members to travel out of state, across the state, or sometimes even across town to participate in training or meetings. Their involvement in RML infrastructure/outreach activities may be constrained due to policy restrictions. The use of technology to provide services to their workplace and to incorporate them into our infrastructure becomes essential. We need to engage our members where they are, in their offices.

### ***The Future is Unknown***

We don't know what the big outside influences will be over the next 5 years. In 2001, at the start of the current contract, who could have predicted the passage of the health care reform bill? We do not know the affect health care reform will have on the health care system. With health insurance available to more people, the individuals navigating the health system will include many who are unfamiliar with how the health system functions. What assistance will they need to navigate the system? What role does health information literacy play for the provider, patients and family members in making the system work more effectively? In the future, what will influence access to health information and the resources that support health information access? Will our member libraries, such as our hospital libraries, benefit from these changes?

The RML has never had a crystal ball. The NN/LM site visit team in their review, complimented the RML coordinators as being "very innovative." The creativity and knowledge of the region that is incorporated in the RML staff will enable us to address the challenges facing health information access in the future.

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## **Member Involvement**

Implementing the regional services plan involves Network members. It begins with the partnerships established between the Resource Libraries and the Regional Medical Library. Resource Libraries that are at state institutions have a dual responsibility of coordinating a

project area for the entire region in addition to state outreach responsibilities. Involving Network members extends to the workgroups created by each of the project coordinators to involve Network members and key individuals in the region to assist in the implementation of the projects. These work groups help the coordinator produce a product or carry out an activity identified in our logic model for the year, thereby influencing the output. The involvement continues in with the participation of our Regional Advisory Board members who are selected because they have exhibited leadership among their constituency and an interest in health information. The Regional Advisory Board advises the RML in all areas of its program and is especially helpful in our annual planning process. Members also contribute to the strength of the RML in smaller ways:

- Write articles for our newsletter, *Plains to Peaks Post*
- Co-sponsor training of Network members, public librarians, health professionals or the public
- Promote NN/LM goals to their own constituencies
- Participate in an ongoing dialogue on how we accomplish our goals
- Apply for funding and carry out funded projects that extend our outreach efforts
- Share their expertise with the region in RML sponsored events

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## **New Programming**

### ***Funding Opportunities***

The NN/LM MCR is increasing its funding opportunities for our Network members. We will offer four awards that range from a maximum of \$1,000 - \$60,000:

- Teaching Health Professionals Award - \$1000
- Health Information Literacy Connectivity Award - \$2,025
- Continuity of Health Information Award - \$15,000
- New Collaborations for Health Sciences Librarians Award - \$60,000

### **New Roles for Health Sciences Librarians**

The NN/LM MCR will promote new roles for health sciences librarians through awareness raising presentations, training sessions, conferences, and funding opportunities for research and pilot projects.

### **Outreach to Health Care Providers**

The NN/LM MCR will increase the level of outreach activities in the region. We will do this by training and funding Network members to train health care providers and exhibit and present at their meetings.

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## Innovative Approaches to Providing Services

### ***Sharing Technology Coordinator Position***

In July 2007, the MidContinental and Pacific Southwest Regions began an experiment where a single technology coordinator led and managed technology programs for the two regions. This position sharing was the outcome of a 2006 meeting of the Regional Medical Library Directors where they brainstormed ideas to optimize the use and talents of NN/LM personnel. The two regions decided to pilot the idea in hopes that it would optimize the use and talents of staff and result in salary savings that could be directed to other needs. The Technology Coordinator, primarily works from the University of Utah where she serves the members of the MidContinental Region but spends an equal amount of time developing programming and offering training for the Pacific Southwest Region as well as. We are starting the third successful year of this shared technology position. We are continuing the arrangement because of the following benefits to each of the RMLs:

- Leveraged experienced staff, existing relationships, and technology activities
- Promoted interregional cooperation and synergy
- Integrated distance solutions
- Tapped a broader pool of ideas and solutions
- Used FTE funds for other program needs

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## **Regional Services Plan**

### **Section A: Network Infrastructure**

## A1 – Basic Services

### Statement of Work

Develop and implement a program designed to provide health professionals in all parts of the Region with a basic level of information services which includes:

- a. Access to books, journal articles, and audiovisuals;
- b. Access to online databases in the health sciences; and
- c. Access to reference and web services.

The RML shall establish agreements with Network member libraries to provide these services to unaffiliated health professionals. For any areas where the RML is unable to establish such agreements, the RML will provide the service on a cost recovery basis;

### Applicable NN/LM Goal

Develop collaborations among Network members and other organizations to improve access to and sharing of biomedical information resources throughout the nation

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### Objective & Rationale:

Objective:

- Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information

This objective is directly tied to the mission of the NN/LM which is to provide “all U.S. health professionals equal access to biomedical information.” Through its Network members the Regional Medical Library will provide basic services to all health professionals including those who are unaffiliated with a library.

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### Approach & Methodology:

Outcome: -Network members and other organizations are better able to support access to health information resources

Develop and implement a program designed to provide health professionals in all parts of the Region with a basic level of information services

Primary Access Libraries and Resource Libraries in the region are actively providing basic information services to health professionals. The NN/LM MCR has 165 full Network members and 160 Affiliate members providing information services to their affiliated users. A majority (75%) of Resource Libraries and Primary Access Libraries in the MCR offer Internet training,

mediated searching, onsite collection access, online search training, and reference services. One third of these members (108) offer services to unaffiliated health care professionals in the region. Primary access to the collection is gained through Loansome Doc<sup>®</sup>, the National Library of Medicine's document delivery service for individuals. Loansome Doc is currently used by 377 unaffiliated health professionals in the MCR. The Resource Libraries serve the 64% of unaffiliated health professionals (240), while Primary Access Libraries serve 137.

The NN/LM maintains a searchable web directory that describes services provided by Network members. The Members Directory web site (<http://nmlm.gov/members/>) lists libraries in the region, the services they provide (e.g., reference, access to resources, document delivery service) and whether they provide these services to unaffiliated health professionals. RML coordinators will promote the Members Directory web site to health professionals in exhibit halls and at meetings, as well as through our presentations and training. Messages will be sent via association discussion lists and newsletters. Regional Advisory Board members will be encouraged to inform health professionals they work with about the library and information services that are available to them.

Figure 6.

### **Subsidized Document Delivery**

A common concern of unaffiliated health care providers is how to get articles affordably or free. As stated above, they can use Loansome Doc by making an arrangement with a Network member. In Colorado, Kansas, Nebraska, and Utah, subsidized programs allow for health care providers to order articles through a state agency Network member at little or no cost. State libraries or the state Area Health Education Centers (AHEC) in these four states subsidize document delivery of articles to health care providers in their state. Requests that the state agency is unable to fill from its own collection are forwarded to a Resource Library. The NN/LM MCR will promote the subsidized services to unaffiliated health care providers. This promotional effort will include establishing a web page on the NN/LM MCR web site where contact information and information on the subsidized ordering process will be maintained. These subsidized programs provide unaffiliated health care professionals with access to affordable health information needed for quality patient care.

**The NN/LM MCR will contact the state libraries and other organizations in Missouri and Wyoming libraries and share with them the subsidized document delivery models occurring in four states in the region. We will encourage the organizations in Missouri and Wyoming to adopt or adapt the models of the other NN/LM MCR region states to offer subsidized document delivery in their states.**

***PubMed Central and the Emergency Access Initiative***

Two additional resources will be promoted to unaffiliated health care providers in the region. PubMed Central is the U.S. National Institutes of Health's free digital archive of biomedical and life sciences journal literature and offers immediate access to thousands of full-text articles. The Emergency Access Initiative provides free access to full-text articles from major biomedicine titles to healthcare professionals, librarians, and anyone in the United States affected by disasters.

***Evaluation***

Although Network members provide all the basic services listed in the statement of work, health care providers primarily rely on the journal literature to keep up with latest developments. Loansome Doc is the key information service that the RML will monitor to assure equal access to health information. In the MidContinental Region there are twenty-seven libraries (16% of Full members) providing Loansome Doc services. This percentage correlates with the average percentage of Loansome Doc providers throughout the different regions in the NN/LM.

The MCR will annually request a report on unaffiliated Loansome Doc participants from NLM. The majority of Loansome Doc users (240) are served by the Resource Libraries (including the Regional Medical Library). This is to be expected because these libraries hold the largest number of journal titles. Primary Access libraries serve 137 Loansome Doc users. We expect to see an increase in the number of Loansome Doc users due to our promotion of this service.

**The NN/LM MCR will continue its history of encouraging Primary Access Libraries to provide Loansome Doc services to unaffiliated health professionals by stressing the benefits to be gained by the library and its parent institution. The MCR will do this through its Plains to Peaks Post newsletter, MCR Blog, during the monthly series of four online DOCLINE training classes, and at local health sciences library consortia meetings. We will also add Loansome Doc services to unaffiliated health professionals on a list of "encouraged" services for full Network membership.**

As a result of our promotion of subsidized document delivery in Colorado, Kansas, Nebraska, and Utah, we expect that unaffiliated health care providers will also take advantage of these services. The NN/LM MCR will request a report from the Network members providing subsidized document delivery. These usage reports, along with monitoring our Network members who provide access to unaffiliated health care providers, will enable the RML to assess whether equal access to health information is available to health care professionals across the region.

Establish agreements with Network member libraries to provide basic services to unaffiliated health professionals

The core entities that will provide services to unaffiliated health professionals are the region's Resource Libraries. Incorporated into the agreement signed by each Resource Library is the responsibility of serving unaffiliated health professionals by providing the basic level of services mentioned in the statement of work. This service to unaffiliated health professionals will continue to be included in the Resource Library subcontracts with the NN/LM MidContinental Region.

The Resource Libraries for the MidContinental Region are:

Colorado

Health Sciences Library, University of Colorado Denver

Kansas

A.R. Dykes Library of the Health Sciences, University of Kansas Medical Center

Missouri

Bernard Becker Medical Library, Washington University

J. Otto Lottes Health Sciences Library, University of Missouri, Columbia

Nebraska

Creighton University Health Sciences Library/Learning Resources Center

McGoogan Library of Medicine, University of Nebraska Medical Center

Utah

Spencer S. Eccles Health Sciences Library, University of Utah

Wyoming

University of Wyoming Libraries

Where no agreements exist, the RML will provide basic levels of service on a cost recovery basis

The Resource Libraries have agreed to provide a basic level of service for health professionals and the citizens of their states. (For details on Resource Library responsibilities see SOW section A5) Should there be an area not covered by agreements with the Resource Libraries, the Regional Medical Library, Spencer S. Eccles Health Sciences Library, will provide basic services on a cost recovery basis.

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Subcontract with Resource Libraries to provide basic services to unaffiliated health care providers in their states	X				
Create a page on the MCR web site to direct unaffiliated health care providers to subsidized document delivery options	X				
Network members and agreements with Resource Libraries cover all parts of the region with basic services	X	X	X	X	X
The RML will provide basic services at cost recovery should there be an area not covered by Network members or Resource Libraries	X	X	X	X	X
Promote the Member Directory web site and access to health information services to unaffiliated health professionals	X	X	X	X	X
Promote document delivery services and free full text resources	X	X	X	X	X

**A2 – Needs of Health Sciences Libraries****Statement of Work:**

Assess and respond to the needs of health sciences libraries to support programs that improve the transfer of health care and biomedical information within their institutions and through their participation in the network. This includes promoting the use of relevant NLM services, testing new features of these services; and identifying the need for new or enhanced NLM services.

**Applicable NN/LM Goal:**

Develop, promote, and improve electronic access to health information by network members, health professionals, and organizations providing health information to the public

**Objective & Rationale:****Objective:**

- Libraries and librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information

A strong Network of health sciences libraries and librarians provides an effective way to fulfill the mission of the NN/LM to ensure the transfer of health care and biomedical information within member institutions. With an understanding of Network member needs, the MCR can assist health sciences librarians to develop programs and services that support that mission.

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### **Approach & Methodology:**

Outcome: - Network members and other organizations are better able to support access to health information resources

Responsibilities for activities of this statement of work are shared by three program areas: Assessment and Evaluation, Members Services, and Library Advocacy. The assessment portion falls under Assessment and Evaluation. The programming portion falls under Member Services and Library Advocacy.

Assess and respond to the needs of health sciences libraries to support programs that improve the transfer of health care and biomedical information within their institutions and through their participation in the network

### ***Assessment***

In order to understand how well we are serving the needs of our Network members, NN/LM MCR will conduct one Network Member Questionnaire in Year 2 and of focus group series in Year 3. The Network Member Questionnaire and two series of focus groups were conducted during the current contract to ascertain Network members' perception of the resources and services of the NLM and the RML. Public librarians were invited to participate in focus groups held in 2007 and health sciences Network members in groups held in 2010. Each time a questionnaire or focus group is planned, the question sets are reviewed for ongoing relevancy and new questions are added that address changes in the health information landscape. The focus groups that will be held in Year 3 will ascertain Network members' perception of the impact of health care reform, e-science and new developments in health information access on their work and services.

We evaluate data obtained from each assessment tool for new insights into our Network members' needs. We also compare data to that collected previously to better understand the progress being made in supporting librarians' work to make health information available and accessible throughout the region. We have found our assessment tools to be effective in describing the status of Network members in the region and in identifying areas where the NN/LM MCR can support them. For example, in earlier questionnaires, our Network members indicated that only a handful of health sciences libraries do not have broadband Internet connectivity. However, many of our hospital libraries are restricted in their use of web 2.0 communication and social networking tools due to policy or institutional firewalls. The NN/LM

MCR developed a pilot project to determine whether the availability of a computer connected to the Internet via a modem card increases accessibility to needed information.

A consultant will assist us in analyzing the project data and will write the assessment reports. Reports from our previous Network Member Questionnaires and three series of focus groups are posted on the MCR web site in the Member Input section of Evaluation.

*(<http://nnlm.gov/mcr/memberinput/>)*

Less formal methods are also used to assess the needs of Network members. At local and regional meetings, NN/LM MCR coordinators raise questions, such as those addressing scholarly communication and electronic resources, in order to get feedback from members on the issues they face in their institutions. Coordinators will continue to gather first-hand information at local and regional meetings.

In the current contract, the MCR developed a checklist (Figure 7) that is used as a reminder of issues to cover when visiting member libraries. We will continue to use the checklist to provide and collect information during visits to full and affiliate Network members.

Checklist of Items to Cover in Library Visits	
<b>Awareness:</b>	
•	DOCLINE
○	FreeShare
○	Link Out Use
○	Link to MedlinePlus
○	EFTS
•	MCR and NN/LM web sites
•	MLA Educational Clearinghouse
•	NTCC trainings
•	NLM Distance Education/Online Resources
•	Blogs
•	MedlinePlus magazine
•	Technology Applications - Skype
•	NetLibrary
•	Breezing Along with the RML
•	Spotlight! On National Library of Medicine Resources
•	Plains to Peaks Post
•	BHIC blog ( <a href="http://nnlm.gov/mcr/bhic/">http://nnlm.gov/mcr/bhic/</a> )
•	NLM Product availability
•	Information Rx program
•	Library Success wiki ( <a href="http://www.libsuccess.org/index">http://www.libsuccess.org/index</a> )
<b>Services/Marketing</b>	
•	Institutional outreach/clinical librarian program
○	(Attend department meetings/rounds)
•	Institutional involvement (i.e. committee participation)
•	Library marketing activities (if publishing a newsletter, please send copy to Network Coordinator)
•	Online catalog
•	Community collaborations
•	National Network of Library of Medicine ( <a href="http://nnlm.gov/">http://nnlm.gov/</a> )
•	National Library of Medicine ( <a href="http://www.nlm.nih.gov/">www.nlm.nih.gov/</a> )
<b>Professional Development:</b>	
•	MCMLA member/ attend conference? <a href="http://www.mcmla.org">www.mcmla.org</a>
•	MLA member/ attend conference? <a href="http://www.mlanet.org/">http://www.mlanet.org/</a>
•	State library association member/ attend conference?
•	Interested in active involvement with MCR (service on work group, RAB, write articles, etc.)

Figure 7.

This checklist will be reviewed and updated by all state coordinators at least twice during the contract. The needs that are identified and status of the libraries that should be made known to NLM will be entered in the Activity Reporting System so that the information can be included in our quarterly reports.

### **Response to Needs**

The NN/LM MCR will respond to the needs of health sciences library Network members to improve the transfer of health care and biomedical information within their institutions and to

provide benefits to them through their participation in the Network. We will design programs based on needs expressed in the responses from the 2012 Network Member Questionnaire, the 2013 focus group discussions, and data gathered from the visit checklist. After conducting the proposed Network Member Questionnaire in 2012 and the focus groups in 2013, we will adjust planned programs to reflect the changing needs of our members. We will promote programs and identify them as responding to the needs articulated in questionnaires and focus groups. The Library Advocacy Program will continue to develop programming to document the value of health sciences librarians, support members in their institutional advocacy efforts and explore the emerging roles of information professionals.

This includes promoting the use of relevant NLM services, testing new features of these services; and identifying the need for new or enhanced NLM services

### ***Promotion of NLM Services***

The NN/LM MCR will promote and offer classes to health sciences librarians on NLM resources and services. In response to the data from the Network Member Questionnaire, coordinators will add themselves as instructors for classes or develop new training curriculum for NLM services. The Education Coordinator will ensure that there is at least one instructor in the NN/LM MCR for each of the workshops developed by other RMLs and shared across regions.

NN/LM MCR will promote the availability of classes on PubMed, MedlinePlus, PHPartners, DOCLINE and other NLM products that Network members can take for MLA CE credit. Resource Libraries have agreed to host at least one visit by the National Training Center (NTC) in the next contract. We will coordinate the NTC training visits and promote the classes so that the minimum number of participants is registered.

In the current contract, NN/LM MCR has solicited and gathered recommendations from Network members on changes or enhancements they would like to see in DOCLINE. The Member Services Coordinator routinely asks members for any suggestions they may have for the DOCLINE system, and also solicits comments from Network members whenever NLM and the DOCLINE team request feedback. Feedback is also solicited from members in evaluation materials for classes on NLM products.

We will continue to promote and facilitate services such as DOCLINE, Loansome Doc, and other relevant NLM services to Network member libraries. We will include information about these services as part of the content of the NN/LM MCR web page and coordinators can add it to their presentations. We will periodically publish information about the services using our communication tools and remind Network members and others that coordinators are available to assist them with NLM services. NLM services are included on our library visit checklist to ensure that we inform Network members about changes in services and ask about their use of them. We will include these services in conversations during visits and at appropriate library meetings and exhibits.

**Test New Features of NLM Services**

In the current contract NN/LM MCR staff has tested new features of NLM resources. For example, the NLM DOCLINE Team occasionally requests that each of the RMLs test the beta version of new releases. The RMLs primarily look for typographical errors, script errors, etc., and report back findings. Another example is the NN/LM MCR's participation in a load test (a scheduled event where several sites use a web site's features in order to test its capabilities for processing a large number of users at one time) of the NLM Journal Donation Program prior to it being released to the public. We will continue testing new features at the request of NLM and will provide feedback.

**Identify the Need for New or Enhanced NLM Services**

We will report data gathered from the Network Member Questionnaire, focus groups, and informal visits that identify the need for new or enhanced services. We will share with NLM and other RMLs suggestions and observations resulting from coordinators' experiences.

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
The MCR will conduct one Network Member Questionnaire		X			
The MCR will conduct a series of focus groups with Network members			X		
Promote classes on NLM products including PubMed, MedlinePlus, PHPartners, DOCLINE, and others	X	X	X	X	X
Promote NLM services including DOCLINE and LoansomeDoc	X	X	X	X	X
Solicit and gather recommendations from Network members on NLM products and services	X	X	X	X	X
Visit Network member libraries and gather recommendations on NLM products and services	X	X	X	X	X
Test new features of NLM products and services as requested by NLM	X	X	X	X	X
Update member visit checklist	X		X		

## A3 – Manage the NN/LM MCR Network Membership

### Statement of Work

Manage the NN/LM Network membership program for the Region. Membership in the NN/LM Network is an integral part of the NN/LM program and defines the NN/LM Network member constituency (see Appendix 1).

The Network members are crucial to the operation of the NN/LM Network, providing health professionals and consumers with access to needed information resources. Network membership is a way of recognizing the contributions of members. The contractor shall:

- a. Recruit new Network members from eligible libraries and information centers in the Region. Network membership certificates for the 2011-2016 time period will be provided by NLM and be personalized and distributed by the RML;
- b. Support Network members that participate in DOCLINE;
- c. Work with the NLM DOCLINE Team on DOCLINE system enhancement testing and implementation; and
- d. Actively involve Network members in NN/LM infrastructure and outreach programs, including obtaining feedback on regional and NLM programs on periodic basis.

### Applicable NN/LM Goal

Develop collaborations among Network members and other organizations to improve access to and sharing of biomedical information resources throughout the nation

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### Objective & Rationale:

Objective:

- Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information

Managing, developing, and building the NN/LM membership program are foundations of the NN/LM MCR program. Members are essential to successfully reaching the objective of equal access to health information for health professionals, including unaffiliated health professionals, and health consumers. The NN/LM MCR recruits and supports two types of members:

**Full Network member** – any health sciences library or health-related information center, institution, or organization that:

- is regularly staffed
- has an Internet connection
- has its own collection of current and lendable health sciences materials (books, journals, audiovisuals, and electronic databases)

- provides information services to health professionals and/or the general public and fully participates as a reciprocating DOCLINE user

**Borrow-Only members** – As described in Appendix II of the Statement of Work, Borrow-Only members are a special category under the Full member level. Members that qualify for this category are members that, due to insufficient holdings or staff, have opted out of lending to other Full members.

**Affiliate Network member** – A library, information/resource center or organization that promotes health information, education, and/or access, but does not meet all of the criteria for Full member participation.

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## Approach & Methodology:

Outcome: - Network members and other organizations are better able to support access to health information resources

A3a: Recruit new Network members from eligible libraries and information centers in the Region. Network membership certificates for the 2011-2016 time period will be provided by NLM and be personalized and distributed by the RML

In Year 1, all existing members will be informed that renewal of membership is required. Links to an online agreement form will be sent to all members. The membership renewal process will provide us with the opportunity to update contact information. Certificates will be distributed as part of the renewal process.

Each MCR staff member pursues opportunities to increase Network membership. They look for potential members where librarians congregate, such as at state and regional health sciences consortia meetings, during annual and mid-year state library association conferences, and while exhibiting and participating in the annual conference of the Midcontinental Chapter of the Medical Library Association. The training environment will also continue to be used as an opportunity to promote membership.

We designed a brochure during the current contract that describes the mission of the NN/LM and explains the benefits of membership. This and other member recruitment documents will be regularly reviewed and updated. These materials will be maintained on our web site so that the NN/LM MCR web site is also a promotional resource for membership. Procedures and systems, such as the online membership application and online Network member agreement form, have been established to ensure efficient and timely responses to membership applications.

The NN/LM MCR will encourage health professionals and health consumers encountered at conferences, training sessions, and health fairs to assist us in the recruitment process. For example, during the course of the conversation, we will inform health professionals or health consumers that they can access health information and services from Network members located near them. Using the NN/LM Member Directory (<http://nmlm.gov/members/adv.html>), we can locate the nearest Network member (Primary Access Library or Resource Library) to their practice, place of business, or residence. If there are no participating members in their area, staff now has an opportunity to focus recruitment efforts in that area. This also gives us an opportunity to partner with the health professional or health consumer to encourage a health care facility or public library to become a Network member. We anticipate that this recruitment strategy will boost membership.

Primary focus for Network member recruitment falls into five categories:

1. Non-members listed in DOCLINE
2. Academic libraries supporting higher education health programs
3. Academic health sciences libraries that solely support health programs
4. Hospital libraries/information resource centers
5. Public libraries

A substantial list of non-member institutions already exists in DOCLINE and NN/LM MCR coordinators will approach these institutions first. There are 207 institutions listed as non-members.

Location	Total
MidContinental Region	207
Colorado	53
Kansas	33
Missouri	61
Nebraska	24
Utah	23
Wyoming	14

*Table 3. Non-Member Institutions in DOCLINE*

There are eleven academic libraries in the MCR that solely support health related fields and all are current Network members. NN/LM MCR will monitor this category and recruit if and when new institutions are formed.

There are approximately 266 academic libraries in the MCR. Of these, 118 (44%) support programs offering degrees in a health-related field. Sixty-six of these are current members leaving fifty-two institutions to target for Network membership.

There are approximately 170 hospital libraries/information resource centers in the MCR. Of these, 134 (79%) are current Network members. Thirty-six are potential Network members and will be targeted for recruitment.

There are approximately 984 public library systems across the MCR, of which seventy-three (7%) are current Network members. There are 911 potential public library Network members.

#### A3b: Support Network members that participate in DOCLINE

An important aspect of the MCR program is supporting health professionals, including unaffiliated health professionals, and health consumers, to gain or improve their access to health information resources. In order for this access to occur, Network members need to efficiently and rapidly provide their clients with access to health sciences information through document delivery services. The NLM DOCLINE system is a significant resource for improving access to health sciences information. A detailed explanation of these activities can be found in our response to SOW section A4. The NN/LM MCR will continue to provide resources and services to improve the knowledge and skills of Network members using DOCLINE as a way of providing health professionals and consumers with access to health information.

The NN/LM MCR will continue to use all forms of communication (listserv messages, newsletters, weekly news, announcements at consortia meetings, etc.) at its disposal to inform DOCLINE users of updates and/or changes in DOCLINE.

One-on-one consultations with Network members, in person, over the telephone, or using teleconferencing technologies will continue to be employed to assist members to use DOCLINE efficiently. The distributed model enables MCR staff to more easily meet one-on-one with DOCLINE users that need assistance in their states. The NN/LM toll-free telephone number also allows DOCLINE users to contact the MCR with questions. Over the course of the current contract, the MCR has handled over 190 telephone consultations and conducted six in-person training sessions for individual members.

Training to improve efficiency in using DOCLINE will also continue. The online environment has proven to be the most popular method for training members to use DOCLINE. NN/LM MCR has developed several classes that cover the principle features of DOCLINE. Each class earns participants one continuing education credit from the Medical Library Association (MLA). NN/LM MCR will continue to provide quarterly online classes in five major DOCLINE:

- Beginning DOCLINE
- Serial Holdings
- Routing Tables
- Borrowing and Lending
- How to Use and Get DOCLINE Help

Because these classes are online and open to any DOCLINE user, regardless of their region, an impressive 511 DOCLINE users nationwide have attended the classes between January 2010 and March 2010. Four hundred fifty-one participants filled out an MLA class evaluation with 96% reporting the classes met the learning objectives and 94% giving the classes a grade of A or B. Demographic information was not gathered during the evaluation portion of the process in order to protect the privacy of class participants filling out the evaluations. However, demographic information was gathered from the 361 members requesting MLA continuing education credits, which identified thirty-nine individuals from the NN/LM MCR who participated in these online DOCLINE classes.

These high attendance numbers, along with participants giving such high marks to the training, are evidence of a real need for DOCLINE training using the online training environment. The NN/LM MCR will continue to explore other classes of interest to Network members. Future topics will include EFTS (setting up, using, and promoting the benefits of EFTS), and LinkOut<sup>®</sup> (gaining institution support, setting up, and promoting service to PubMed users).

A3c: Work with the NLM DOCLINE Team on DOCLINE system enhancement testing and implementation

The NN/LM MCR will continue to work with the NLM DOCLINE Team on testing and implementing DOCLINE system enhancements. For instance, when the NLM DOCLINE Team asks the regions to test a beta version of a new DOCLINE release, the MCR runs tests on the new features of DOCLINE and reports any anomalies to the DOCLINE Team. The NN/LM MCR will continue to participate in the monthly DOCLINE coordinators' teleconferences, where progress reports of DOCLINE enhancements are given by the DOCLINE Team and where the RMLs provide feedback from DOCLINE users' regarding reported issues with DOCLINE.

A3d: Actively involve Network members in NN/LM infrastructure and outreach programs, including obtaining feedback on regional and NLM programs on periodic basis

NN/LM MCR will continue to actively involve Network members in the NN/LM infrastructure and outreach programs. In this respect, we are distinguishing between Network members as institutions and as individuals employed at Network member institutions. Understanding who individuals are at Network member institutions and what strengths and interests they (and their institution) have will allow us to ensure we are reaching and involving a majority of those individuals and their institutions.

Beginning in Year 5 of the current contract, we will encourage Network members to list all individuals who would benefit from being involved in NN/LM MCR infrastructure and outreach programs in their DOCLINE Institutional Record. **The NN/LM MCR will use the additional contacts in the DOCLINE Institutional Record to push information to or invite participation in**

**NN/LM MCR infrastructure and outreach opportunities.** DOCLINE lists eight contact type categories that organize individuals by their library function. These contact types are:

- Consumer Health
- Director
- Interlibrary Loan
- LinkOut®
- Loansome Doc
- Reference
- Serial Holdings
- Other

**The NN/LM MCR will use the job category types as a filter to promote opportunities to a specific category. For example, if the NLM DOCLINE team asks for enhancement ideas from DOCLINE users, we could send targeted emails to individuals who work with interlibrary loan, LinkOut, Loansome Doc, and serial holdings and ask them about changes they would like to see in DOCLINE.** Using DOCLINE to identify these individuals will simplify the process and reduce the number of databases where member information is tracked. Because they have read/write access to their records, Full members can easily update their own information as necessary. Because our Affiliate members do not have access to modify their institutional records, the NN/LM MCR will work directly with them to ensure their contact information is current.

#### ***Member Involvement in Infrastructure***

We have identified four activities where our members can be actively involved in NN/LM infrastructure:

1. Advisory board and groups
2. Special project working groups
3. Focus groups
4. Questionnaires

Network members, representing the diversity of our membership, are invited to be on the Regional Advisory Board and participate in one of the special project work groups led by RML coordinators. Participating in focus groups and responding to questionnaires are other ways members can be involved in NN/LM infrastructure. (For more information about member feedback, see our response to SOW section A9) In addition to being part of the MCR's infrastructure, this participation provides members with the opportunity to comment and advise the RML on its programs and services.

***Member Involvement in Outreach***

We have also identified three areas where our members can be actively involved in NN/LM outreach programs:

1. Outreach to unaffiliated health professionals and health consumers. Members can indicate their involvement by noting outreach services in their DOCLINE Institutional Records. These services include:
  - a. Loansome Doc
  - b. Internet Training
  - c. Mediated Searching
  - d. Onsite Collection Access
  - e. Online Searching Training
  - f. Reference Services
  - g. Authorize their institutions' listing in MedlinePlus Consumer Health Libraries Directory
2. Exhibiting on behalf of or co-exhibiting with NN/LM MCR coordinators
3. Teaching on behalf of or co-teaching with NN/LM MCR coordinators

Any individual at a Network member institution wishing to be involved in NN/LM MCR outreach programs will be provided with training needed to participate in these activities. Members interested in exhibiting on behalf of or with the NN/LM MCR will continue to be required to have a certain level of knowledge and skill. The NN/LM MCR has an exhibitor training program that provides instruction on NLM and NN/LM resources and services, along with how to use laptop computers, and setting up and taking down exhibits. In the next contract, the NN/LM MCR will offer teaching certificates to Network members wishing to teach for or co-teach with the NN/LM MCR. The process will include a train-the-trainer model of education. Certificates are evidence that member skills and knowledge are valued by a regional professional organization. Many Network members keep certificates of achievement or participation in their portfolios and include them in their annual reports and for MLA academy credit.

To continue to encourage Network members' participation in NN/LM programs, we will publish opportunities in our quarterly newsletter, our weekly e-news compilation, on the MCR web site, on the MCMLA-L listserv, and through direct mail and email. Opportunities to participate will also be described at health sciences library meetings, both regional and local.

In addition to promoting and supporting Network member involvement, the MCR uses a variety of methods to obtain feedback from our Network members on NLM and NN/LM resources and services. We have had success with several formal assessment instruments, our Network Member Questionnaire and focus groups, and regularly record anecdotal feedback. (For more information, see our response to SOW section A9)

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Renew full and affiliate Network members and distribute Network member certificates	X				
Recruitment strategy plan created and organizations indentified to be targeted	X				
Training for NN/LM MCR staff on recruitment resources and procedures	X				
Develop and offer online LINKOUT and EFTS class	X	X	X	X	X
Quarterly monitoring of Network membership numbers	X	X	X	X	X
Quarterly (or as needed) promotion of how to get DOCLINE assistance	X	X	X	X	X
Quarterly announcements inviting Network member involvement in NN/LM MCR infrastructure and outreach programs	X	X	X	X	X
Announcements of changes to DOCLINE as needed	X	X	X	X	X
Monthly DOCLINE class offerings	X	X	X	X	X
Attend monthly DOCLINE Coordinators' meeting	X	X	X	X	X
Provide DOCLINE Team with feedback when requested	X	X	X	X	X
Bi-quarterly offerings of NN/LM MCR Exhibit and Teaching Certificate training	X	X	X	X	X

## A4 – NN/LM MCR Regional Service Plan

### Statement of Work

Implement the portion of the Regional Services Plan concerned with document delivery to provide health professionals, including unaffiliated health professionals throughout the Region, with efficient, rapid access to health sciences information resources, and promote network participation in the Electronic Fund Transfer System (EFTS). The plan for the Region shall conform to the NN/LM Resource Sharing Plan (Appendix 2);

### Applicable NN/LM Goal

Develop, promote, and improve electronic access to health information by Network members, health professionals, and organizations providing health information to the public

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### Objective & Rationale:

#### Objective:

- Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information

Supporting efficient and rapid access to health sciences information has been a critical component of the NN/LM from the time of its inception and continues through the present. Document delivery services through the NLM DOCLINE system remain the primary means of health sciences information delivery to health professionals, including unaffiliated health professionals. NLM reports that DOCLINE interlibrary loan requests have steadily decreased on an average of 7.2% between FY2003 and FY2007. In FY2008 there was a 6% decrease from the previous year.<sup>15</sup> This downward trend does not mean that the value of DOCLINE has diminished for the end user. Health care providers still want access to journal articles. We speculate that user habits are changing. More full text articles are immediately available from their library or from sources such as PubMed Central at no extra charge. Health professionals are using these sources and not seeking additional articles to answer their questions.

The NN/LM MCR, as a region, has a fill rate of 91% (U.S. NN/LM Fill Rate is 93%). To keep this number climbing, current member information is extremely important so that DOCLINE requests can be appropriately routed to the library that has the resource to lend and can fill the request in compliance with the borrower's criteria. The NN/LM MCR will continue to track and work with individual members who need to update their institutional record or serial holdings information by utilizing the DOCLINE reports provided by NLM. The primary reports to be used are the "Routing Tables Not Updated Within 1 Year," "Institutional Records Not Updated Within 1 Year," and "Holdings Not Updated Within 1 Year."

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<sup>15</sup> US Department of Health and Human Services Public Health Services. National Institutes of Health National Library of Medicine: Programs and Services. Bethesda, Maryland; Fiscal Year 2008 13 p. Available from: [www.nlm.nih.gov/ocpl/anreports/fy2008.pdf](http://www.nlm.nih.gov/ocpl/anreports/fy2008.pdf)

Promoting the use of EFTS (Electronic Fund Transfer System) as a proven cost saving enhancement to the DOCLINE system to Network members remains an important component to improving the performance of the NN/LM document delivery services. The NN/LM MCR recently conducted a study<sup>16</sup> on non-EFTS MCR Network members in order to identify barriers to using EFTS. The findings showed that primary barriers are at the Network members' institutions. The majority of respondents (51%), do not charge or are not charged for document delivery and would not benefit in participating in EFTS. Another 26% reported that changing their institution's policy regarding EFTS was beyond their ability or would require too much effort with little perceived gain for the library. As a result of this study, the NN/LM MCR has a better understanding of these barriers and how to address them. NN/LM MCR will continue to work directly with EFTS to find effective ways to promote the benefits of online billing to Network members, specifically the policymakers, and to provide better training for Network members on how they can implement an EFTS program at their institutions.

Coordinating and encouraging the use of the MCR Resource Sharing Plan is overseen and implemented by the Member Services Coordinator. Assisting the Member Services Coordinator is the DOCLINE Coordinator. The NN/LM MCR state coordinators also assist in implementing the MCR Resource Sharing Plan for members located in their respective states. The Member Services Coordinator, DOCLINE Coordinator, and state coordinators all support new and current members' participation in the Resource Sharing Plan. RML staff assists members in:

- Entering and maintaining serial holdings
- Creating and maintaining efficient DOCLINE routing tables
- Borrowing and lending procedures
- Establishing and using EFTS accounts

The Member Services Coordinator and the DOCLINE Coordinator provide monthly<sup>17</sup> online training sessions (<http://nmlm.gov/mcr/education/docline.html>) that are promoted to and open to all DOCLINE users. Between January 2010 and March 2010, the classes have reached over 500 DOCLINE users from the United States and Canada. Each class qualifies participants for one Medical Library Association Continuing Education Credit. The classes cover:

- Introduction to DOCLINE
- Serial Holdings
- Routing Tables

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<sup>16</sup> Bramble JB, Kelly B. Report on Network Member Institutions that do not use Electronic Funds Transfer Service Utah; 2009. Contract No. NO1-LM-6-3504. Supported by the National Library of Medicine and the University of Utah Spencer S. Eccles Health Sciences Library. Available from: <http://nmlm.gov/mcr/rsdd/efts/eftsreport.pdf>

<sup>17</sup> National Network of Libraries of Medicine MidContinental Region. Document Delivery Resources and DOCLINE Classes. [Internet]. Utah: Contract No. NO1-LM-6-3504. Supported by the National Library of Medicine and the University of Utah Spencer S. Eccles Health Sciences Library.; [updated 2010 Mar 10; cited 2010 May 5]. Available from: <http://nmlm.gov/mcr/education/docline.html>

- Borrowing and Lending
- Using and Getting Help with DOCLINE

In addition to responding to questions from Network members, the Member Services Coordinator monitors messages and discussions on the DOCLINE-L and responds to MCR members who post questions and comments there. The Member Services Coordinator and DOCLINE Coordinator regularly participate in the monthly DOCLINE Coordinator teleconferences where DOCLINE changes are discussed. News of DOCLINE changes impacting MCR Network members are posted to MCR publications (*RML News* and *Plains to Peaks Post*). Messages are posted in order to inform members of new DOCLINE developments and how-to-tips.

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## Approach & Methodology:

Outcome: -Network members and other organizations are better able to support access to health information resources

Appendix II - NN/LM Resource Sharing Plan: Coordinate the contribution, review, and maintenance of serial holdings data to DOCLINE in a manner that is timely, efficient, and accurate

The MCR will continue to coordinate working with members to encourage regular review and maintenance of their libraries' serial holdings data. One of the requirements of full Network membership is the expectation to accurately report and maintain holdings on at least an annual basis. Level two holdings will be corrected and modified to become level three holdings within a 30-day period. Members that are reciprocal borrowing DOCLINE participants will be required to have at least twenty-five current (five years to the present) and lendable (license restriction free/embargo free) holdings listed in their records. The Member Services Coordinator is responsible for alerting members that have not reviewed or maintained their serial holdings for more than one year.

Appendix II - NN/LM Resource Sharing Plan: Provide standardized policies and procedures to assure appropriate regional consistency within the national Network

The MCR will provide and promote standardized policies and procedures to assure appropriate regional consistency with the NN/LM. The MCR will monitor performance data from DOCLINE to identify Network members not meeting the minimum requirements of policies that govern Network membership. The NN/LM MCR coordinators will work with individual Network member institutions to meet the requirements of their desired level of membership. DOCLINE reports from NLM will be used to identify Network members potentially needing assistance.

- Fill Rate – All reciprocal borrowing participants will understand they are required to maintain a fill rate of 75% or higher
- Routing Tables – All reciprocal borrowing participants will understand they are required to maintain a current routing table and will verify or update it on at least an annual basis. The NN/LM MCR will continue to encourage members to update their Routing Tables
- Institutional Records – All membership levels will understand they are required to maintain current institutional records and will verify or update them on at least an annual basis. The NN/LM MCR will encourage Full members to update their Institutional Records. Affiliate members will not have access to update their institutional records; MCR state coordinators will update affiliate member records

Appendix II - NN/LM Resource Sharing Plan: Investigate and test new methods of resource sharing which use existing or new technologies for access and/or delivery

The NN/LM MCR will investigate and test new methods of resource sharing that use existing and new technologies in the area of information access and delivery. Some of this exploration will come from the expertise of our Network members. An example of this was the investigation into workflow tools for online resources. Network member Rosalind Dudden, Library Services Director at National Jewish Health, Denver, Colorado, shared her knowledge of this topic with the rest of the Region by writing an article for the spring 2010 *Plains to Peaks Post* newsletter ([http://nnlm.gov/mcr/services/comm/newsletter/PTPP\\_April\\_2010.pdf](http://nnlm.gov/mcr/services/comm/newsletter/PTPP_April_2010.pdf)). She shared a comprehensive report of her experiences and recommended time-saving workflow tools used by scientists and physicians. Her contribution is an example of how involving Network members can widen the MCR knowledge base and investigational reach.

Appendix II - NN/LM Resource Sharing Plan: Provide guidance on managing and negotiating e-journal subscriptions related to ILL and document delivery privileges

The NN/LM MCR will continue to provide ILL and document delivery service management and guidance regarding e-journal subscriptions to Network members. Network members will have access to several sources of support in this area.

The NN/LM MCR maintains a web page of resources that contains current and vetted information on the licensing of electronic resources. The NN/LM MCR web page supporting e-journal licensing guidance will be kept up to date and informative. This page provides links to effective methods of managing collections and licensing strategies members may use to increase their knowledge and skills in this aspect of librarianship. Network members also have free access to NetLibrary, through a license purchased by the NN/LM MCR. The current collection consists of e-books in the areas of technology and library management.

Another resource is a regularly taught class called “Librarians are from Venus, Vendors are from Mars: Strategies for Developing Respectful Vendor Relationships and Strong Contracts.” Class participants learn:

- How to work and communicate in a language that vendors understand
- How to make sure they are being understood by sales and vendor representatives
- Fundamentals of getting the best contract for their institutions that also meets the needs of the vendors
- How to manage collections, contract information, and correspondence

This is a live web class that qualifies participants to earn four continuing education credits from the Medical Library Association. Participants also have an opportunity to work with a classmate on their homework portion. This opportunity not only increases skills and knowledge but also is chance for networking between members.

The third resource is the NN/LM MCR coordinators, who will continue to provide consultation services to members needing assistance in this area. The NN/LM MCR will continue to encourage members to contact their state coordinator or the Member Services Coordinator to work with them on questions or concerns they may have.

Appendix II - NN/LM Resource Sharing Plan: Develop a Network strategy to provide document delivery and access to collections in the event of a regional or national disaster

The MCR has developed a comprehensive emergency plan that provides continuity of service, which essentially diverts and redirects services away from the impacted area to resources that can provide services. The plan includes document delivery services and collection access. A more detailed description can be found in our response to SOW section A6.

For a large scale emergency, the MCR and the New England Region have an agreement to be “buddy” regions. This essentially means that if there were a large scale emergency impacting an entire region, for example the MCR, someone from the MCR RML would initiate the emergency plan and all services for the MCR, including document delivery support and collection access, would be redirected to the New England Region.

Appendix II - NN/LM Resource Sharing Plan: Facilitate and promote electronic document delivery with a goal of increasing electronic delivery in the Network

There are six electronic delivery options available in DOCLINE that members may select as the method of delivering requested journals:

1. Ariel
2. Email PDF
3. Email TIFF
4. Web PDF
5. Web TIFF
6. FAX (the NN/LM MCR does not consider FAX a form of electronic delivery)

Early in the current contract, the MCR learned that all DOCLINE users provided some form of electronic document delivery. Currently, all MCR Full Network members continue to provide some form of electronic delivery. Because members already meet this standard of document delivery service, the NN/LM MCR will not devote resources to facilitating or promoting the use of electronic delivery other than annual monitoring.

Appendix II - NN/LM Resource Sharing Plan: Encourage and promote the use of Electronic Fund Transfer System (EFTS) throughout the NN/LM

Promoting the use of EFTS (Electronic Fund Transfer System) as a proven cost saving enhancement to the DOCLINE system to Network members remains an important component to improve the performance of NN/LM document delivery services. The MCR recently performed a study on non-EFTS MCR Network members in order to identify barriers blocking Network members from using EFTS. The findings showed that primary barriers are at the Network members' institutional levels. As a result of this study, the MCR has a better understanding of these barriers and recognizes that promotional efforts will need to be implemented in a way that is understandable to members' institutional policy makers as well as the members themselves. **EFTS promotional materials have been created that are more in tune with what institutional policy makers consider to be important. For instance, EFTS has created promotional material that shows the return on investment for EFTS users versus those using paper invoices and checks.**

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Annual monitoring and reporting of Network member performance data (Serial Holdings, Routing Table, Fill Rates, Institutional Record, and not using electronic method for document delivery)	X	X	X	X	X
Quarterly promotion encouraging: <ul style="list-style-type: none"> <li>• Updating Serial Holdings information</li> <li>• Updating Institutional Records</li> <li>• Review of DOCLINE Fill Rate</li> <li>• Participation in EFTS</li> </ul>	X	X	X	X	X
Annual review of available resource sharing technologies and publishing findings in NN/LM MCR communication venues	X	X	X	X	X
Quarterly offering of the class “Librarians are from Venus, Vendors are from Mars: Strategies for Developing Respectful Vendor Relationships and Strong Contracts”	X	X	X	X	X
Annual review of ILL and document delivery service management and negotiating e-journal subscriptions resources posted on the NN/LM MCR web page	X	X	X	X	X
Quarterly promotion of consultation services on ILL and document delivery service management and negotiating e-journal subscriptions	X	X	X	X	X
Annual review of the NN/LM MCR document delivery and access to collections emergency plan	X	X	X	X	X

## A5 – Resource Libraries

### Statement of Work

Enter into formal agreements with a limited number of institutions in the Region to serve as Resource Libraries:

- a. Criteria for selection of Resource Libraries will be proposed by the offeror and may include, but are not limited to:
  - (1) Quality, uniqueness and/or size of the collection which add significantly to the resources of the Region;
  - (2) Special expertise which contributes to improving regional or national programs, in areas such as distance learning, advanced applications of technology to solving information access and delivery problems, digitization of information, commitment to the retention and preservation of print materials, library and information research, etc.;
- b. The RML will negotiate with Resource Libraries that are willing to develop projects that will build on their expertise to address the needs of the Region and to enhance the Resource Libraries' ability to contribute to their institutional goals and priorities.
- c. All Resource Libraries and the RML must agree to:
  - (1) Support DOCLINE libraries in the Region, participate fully in the DOCLINE system, and keep detailed library profile information up-to-date in the system;
  - (2) Contribute their institution's serial holdings data to DOCLINE and keep holdings current by updating them online;
  - (3) Provide health professionals and other Network libraries with access to journal articles, books and audiovisuals in all formats via interlibrary lending or other legal resource sharing mechanisms;
  - (4) Adhere to Network performance standards for fill rate and throughput for interlibrary loan service;
  - (5) Participate in the Electronic Fund Transfer System (EFTS); and
  - (6) Participate selectively in a regional program for the retention and preservation of print serials and monographs in multiple U.S. locations.

### Applicable NN/LM Goal

Develop collaborations among Network members and other organizations to improve access to and sharing of biomedical information resources throughout the nation.

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### Objective & Rationale:

Objective:

- Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information

Resource Libraries play a major role in the region. They subcontract with the University of Utah to help carry out the mission of the NN/LM through regional coordination of special projects and/or state outreach. They have assisted the University of Utah's Spencer S. Eccles Health Sciences Library in providing NN/LM services to the Region since 2001.

## Approach and Methodology:

Outcome: -Resource Libraries are partners in carrying out the NN/LM 2011-2016 contract

In the MidContinental Region decentralized model, Resource Libraries subcontract to assist the Regional Medical Library with the implementation of the NN/LM contract. Each Resource Library hires staff who are dedicated at varying levels of FTE to NN/LM work. Each Resource Library has statewide outreach and/or regional special project responsibilities. The strong relationship between the RML and its Resource Libraries is based on this decentralized model.

In the current contract, responsibilities are apportioned as follows:

Library	State Outreach	Special Project Area
Health Sciences Library University of Colorado Denver	Colorado	Health Information Literacy
A.R. Dykes Library of the Health Sciences, University of Kansas Medical Center	Kansas	Technology
Bernard Becker Medical Library, Washington University	None	Assessment and Evaluation
J. Otto Lottes Health Sciences Library, University of Missouri, Columbia	Missouri	Library Advocacy
Creighton University Health Sciences Library/Learning Resources Center	None	Health Information Literacy
McGoogan Library of Medicine, University of Nebraska Medical Center	Nebraska	Education
University of Wyoming Libraries	Wyoming	Funding Resources
Spencer S. Eccles Health Sciences Library (RML), University of Utah	Utah	Member Services Technology

*Table 4. Resource Libraries and their Responsibilities*

In the proposed contract, the Assessment and Evaluation Coordinator ~~is~~ **will continue to be** funded at .5 FTE. The Utah based Technology Coordinator is shared with the NN/LM Pacific Southwest Region.

The Director, Associate Director, and Resource Library Directors have excellent rapport. Bi-monthly meetings between the RML and Resource Library Directors foster this relationship. Issues that any of the parties have identified concerning the administration of the RML program or those concerning academic health sciences libraries are included as agenda items and

discussed during these meetings. In preparing for the next contract, an in-person meeting was held by the RML for the Resource Library Directors. This meeting fostered an increased awareness of each library's priorities and environment. The sharing that took place during the meeting was invaluable, and included experiences in providing outreach to communities and integrating the library in to medical school and university initiatives. The RML gained insight into challenges facing Resource Libraries that will translate into programming for academic health sciences Network members. In the new contract, bi-monthly videoconferences will be supplemented by three in-person meetings.

During the current contract, the RML came under new leadership when Wayne J. Peay, Director, retired and Jean P. Shipman became the new Director. To introduce Ms. Shipman to the region and the region to Ms. Shipman, she and the Associate Director visited each state and each Resource Library, and whenever possible met with Network members and Regional Advisory Board members. The Director and Associate Director plan to repeat these visits to the Resource Libraries and include meetings with local health sciences library consortia in these visits. This will give the RML leadership additional opportunity to network directly with Network members.

Resource Libraries have agreed to all the required and optional responsibilities listed in the Statement of Work. In their Memoranda of Understanding (see Appendix B), they have also agreed to the following:

1. Whenever possible sign license agreements that permit document delivery from electronic resources
2. Coordinate and manage special project for the region and/or state responsibilities of the RML
3. Provide technology staff and infrastructure to support hardware and software necessary for liaison activities, including, but not limited to, connectivity through Skype, Adobe Connect, and SharePoint
4. Participate in regularly scheduled meetings of the Resource Library Directors
5. Directors serve, on a rotating term, as a Regional Advisory Board member and participate in appointed workgroup
6. Institution's coordinator assesses his/her experience carrying out the work of the RML within the Resource Library setting
7. Provide information about library staff outreach activities for inclusion in the Outreach Activity Report Form (OARF) system
8. Submit reports and invoices in a timely manner
9. Develop a service continuity plan
10. Include NLM resources as part of Resource Library outreach
11. Provide the facility and host at least one training visit by the National Training Center and Clearinghouse instructors

12. Share with the region, information and experiences that address the changing roles of biomedical librarians

**Evaluation**

The RML will use several monitoring procedures to verify that Resource Libraries are meeting their responsibilities.

- The Network Services Coordinator monitors the DOCLINE reports produced by the National Library of Medicine. If a Resource Library starts having problems, he will identify the problem and contact the library to resolve the problem.
- RML coordinators working at each of the Resource Libraries file daily activity reports in the Activity Reporting System. These reports are reviewed monthly by the Associate Director. She will recognize if there are problems at the Resource Library in carrying out project or state responsibilities and will follow up with the coordinator or the Director, as appropriate.

Utilizing the logic model and the Activity Reporting System, Resource Library activities are monitored by the Associate Director to assess that they are carrying out the responsibilities listed in the Memoranda of Understanding and are fully contributing to the implementation of the NN/LM program in the MidContinental Region.

Additional evaluation will be administered: one to assess the coordinator’s environment at the Resource Library and another to assess the Resource Library’s collaboration in carrying out the mission of the NN/LM.

- Once during the contract, the RML administers a survey to the coordinators to assess their experiences working within a Resource Library of the RML program. Coordinators give feedback on space, budgets, working conditions, benefits, workload and challenges, support, cooperation, tools, RML staff, etc. Issues identified by their responses are jointly addressed as appropriate by the RML and the Resource Library.
- Once during the contract, the RML administers a questionnaire to the Resource Libraries to gather the opinions and concerns of directors and staff on fulfilling the Resource Library subcontracts. This tool will be distributed to improve how the RML administration manages the coordinators and the Resource Library subcontracts.

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**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Sign subcontracts with Resource Libraries	X				
Monitor that the responsibilities of the Resource Libraries are being carried out as agreed through the logic model reports and the Activity Reporting System	X	X	X	X	X

	Year 1	Year 2	Year 3	Year 4	Year 5
Administer coordinator experience questionnaire					X
Administer Resource Library questionnaire					X

## A6 – Emergency Preparedness & Buddy System

### Statement of Work

Implement the NN/LM National Emergency Preparedness & Response Plan (<http://nnlm.gov/ep>).

- a. Each RML is responsible to one other RML as a backup in an emergency, referred to as the Buddy System. Buddy responsibilities are located at: [https://staff.nnlm.gov/wiki/Emergency\\_Preparedness#RML\\_pairs](https://staff.nnlm.gov/wiki/Emergency_Preparedness#RML_pairs)  
Buddy relationships are as listed:  
MAR and SCR  
SEA and PNR  
GMR and PSR  
MCR and NER
- b. RMLs also serve as backup for NLM customer service inquiries

### Applicable NN/LM Goal

Develop collaborations among Network members and other organizations to improve access to and sharing of biomedical information resources throughout the nation

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### Objective & Rationale:

#### Objective:

- Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information

Current events are raising awareness of the disruption to library services due to natural phenomena. Severe snowstorms in the winter of 2009 closed the National Library of Medicine's customer services for a week. Network members in the MidContinental Region (MCR) are subject to some of the more severe forces of nature. Three states, Missouri, Kansas, and Nebraska, are located in "Tornado Alley," where annual tornado activity places many Network members at risk. Additionally, Colorado and Wyoming experienced tornado damage to populated areas during the current contract. Many populated areas in the region are situated along major river systems that are prone to flooding. Geologic fault lines run through several of the states. A dormant super volcano is located in the northwestern corner of Wyoming,

potentially threatening populated areas in all the states in the region with falling ash and debris. There are innumerable possibilities for human caused service disruptions as well (e.g., chemical spills, fires, terrorism, and pandemics).

The NN/LM Outreach Evaluation Resource Center conducted a national assessment of emergency preparedness through a questionnaire administered to a random sample of Network members during the current contract. A summary report for the NN/LM MCR found that 69% of responding Network members did not have an emergency preparedness and response plan and 63% indicated they did not have a continuity of services/operations plan. In response to the question “What types of support could NN/LM offer to make your library better prepared to respond to an emergency?” 56% indicated “Training in emergency preparedness and response” and 69% indicated “Assistance in developing continuity of services/operations plans.” These results indicate that more training and education of Network members is needed for emergency preparedness.<sup>18</sup>

The NN/LM MCR addressed these results by conducting hands-on training sessions at the annual chapter meeting to raise awareness of the importance of emergency planning and offer training on the components of a continuity of service plan. Member feedback at these meetings indicated that they understood they should have an emergency preparedness plan even though many of them did not. More opportunities are needed to encourage members to create a continuity of service plan.

The NN/LM MCR also conducted a successful table-top exercise with its “buddy region,” the New England Region (NER) in Year 4 of the current contract. Both regions will benefit by annually conducting that exercise to support readiness for transfer of services during a region-wide emergency.

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<sup>18</sup> NN/LM National Emergency Preparedness Project: Baseline Preparedness Assessment Mid-Continental Region Summary Report. Bethesda (MD): National Network of Libraries of Medicine, Outreach Evaluation Resource Center. [2008]

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## Approach & Methodology:

Outcome: -MCR customers are satisfactorily served in time of disasters

A6: Implement the NN/LM National Emergency Preparedness & Response Plan  
(<http://nnlm.gov/ep>)

NN/LM MCR coordinators will continue to promote the value of creating emergency preparedness plans to every member institution. Ongoing training for NN/LM MCR members in the 10-Step Approach to Service Continuity Planning, as presented in the NN/LM Emergency Preparedness & Response Toolkit, will be a priority. Coordinators will conduct live web-based instruction on the concepts presented in the 10-Step Approach. We will encourage members to submit their disaster plans to the Toolkit to be shared with other members in the NN/LM. Participants are offered MLA CE credit as an incentive to complete the instruction. **A reasonable target to reach by the end of the contract would be that 66% of full members have continuity of service /emergency preparedness and response plans in place.**

A6a: Each RML is responsible to one other RML as a backup in an emergency, referred to as the Buddy System

Just as members need continuity of service plans, the NN/LM and NLM need to have plans in place to assure continuity of services should they be impacted by a disaster. Because of the decentralized model in the MCR, Resource Libraries play an essential role in providing coverage of any gaps in service during a local disaster. In the NN/LM MCR plan, RML services and communication can be coordinated from any of the Resource Libraries.

Although unlikely, a major disaster scenario could affect the entire region and require the NN/LM MCR to request our “buddy,” the New England Region (NER), to assume services for the MCR. The NN/LM MCR has developed a comprehensive emergency plan and has placed it on the NN/LM staff intranet for reference by staff in both regions. The NN/LM NER is able to access those instructions in the event of a major disaster in the MCR. The NN/LM NER has login access to the NN/LM MCR blog and DOCLINE members’ accounts. The 800 number will be transferred to the NER. The NER will have access to the regional email list of members and will set up a listserv for NN/LM MCR members. They will request that NLM make the Emergency Access Initiative (EAI) available for the first responders and health care providers in the affected area. The EAI, a partnership between the National Library of Medicine and publishers, allows affected librarians, healthcare professionals, and the public free access to major biomedical journal titles during a disaster. NN/LM MCR staff will make every effort to keep communication lines open to the NN/LM NER and with one another during a disaster affecting the entire region. The NN/LM MCR will reciprocate with these services for the NER if that region experiences a major disaster. The NN/LM MCR will regularly conduct internal emergency drills with coordinators located at the Resource Libraries to test its continuity of service plans. The

NN/LM MCR and the NN/LM NER will conduct regularly scheduled table-top exercises to test the communication and back-up service plans that each has developed for the other. The internal plans and buddy plans will be updated as inconsistencies and needed changes are identified.

A6b: RMLs also serve as backup for NLM customer service inquiries

Outcome: -NN/LM MCR customers are satisfactorily served when NLM customer service is unavailable

When NLM customer service is unavailable a message and link is triggered to appear on the NLM web site indicating the NLM is closed but that questions will be accepted. Questions arising from the six states in the MidContinental Region will be forwarded to the MCR. A message and link will also appear on the NN/LM MCR web site. One of the Technology Coordinators will activate the special NN/LM Request Form if it has not been already activated by Web-STOC staff or another RML web coordinator.

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**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Verify internal emergency preparedness system for the NN/LM MCR is working	X	X	X	X	X
Offer online continuity service training to Network members		X	X	X	
Verify NN/LM NER's preparedness to initiate services for the NN/LM MCR	X	X	X	X	X
Serve as back up for NLM customer services inquiries as needed	X	X	X	X	X

## A7 – Effective Communication

### Statement of Work

Identify and maintain effective methods of communication with current and potential NN/LM participants. All print and electronic communication should include an acknowledgment of NLM funding and the NN/LM Logo using the National Network of Libraries of Medicine Graphic Standards dated July, 1992. The contractor shall:

- a. Distribute important information about regional and national programs, policies, services, and procedures to the Region;
- b. Coordinate the development of materials with other RMLs and NLM to avoid duplication of effort;
- c. Develop and maintain a regional Web site as an integral component of the NN/LM Web site, that incorporates the guidelines of 508 compliance (<http://www.section508.gov>);
- d. Participate in monthly teleconferences with NLM and the other RMLs to discuss topics of importance in the overall management of the NN/LM program;
- e. Develop working relationships with other networks and relevant organizations by identifying common program interests and goals, work to develop regular lines of communication and develop appropriate cooperative programs;
- f. Inform NLM about regional, state and local activities of health professionals and health sciences libraries, networks, and other organizations as they relate to the programs of the NN/LM, NLM and the national information infrastructure;
- g. Obtain ongoing feedback from users about their information preferences, needs and uses, and recommend ways of improving health professional and consumer access to information;
- h. Assist in the identification of training resources to be added to the MLA Educational Clearinghouse;
- i. Participate in testing and using alternative methods of communication; and
- j. Participate in RML Directors' meetings.

### Applicable NN/LM Goal

Develop collaborations among Network members and other organizations to improve access to and sharing of biomedical information resources throughout the nation

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### Objective & Rationale:

#### Objectives:

- Librarians, health care providers and consumers receive information from the NN/LM MCR and provide feedback about health information resources, services and programs
- NN/LM MCR will collaborate with NLM and other RMLs

All publications of the NN/LM MCR will acknowledge NLM funding and include the logo following the NN/LM graphic standards.

***Identify & Maintain Effective Methods of Communication***

Effectively communicating with current and potential NN/LM participants is critical to the success of the NN/LM MCR program. Advanced computing and networking technologies continue to transform communication capabilities as seen in the variety of ways users access the Internet (e.g., mobile devices, smart phones, tablet devices and netbooks) and increasingly offer affordable and speedier access to the Internet. Better online applications are helping users get organized and get noticed without losing the human element. Web 2.0 technologies, live peer2peer and peer2many applications (e.g., video conferencing, VoiceOver IP, chat, text messaging, etc.), web collaboration applications (e.g., GoogleGroups, wikis) are a few examples.

The MCR continues to be a leader in educating Network members in the use and demonstration of the relevance of these communication technologies. We are committed to understanding the preferences of our constituency on where and how information is provided.

***Distribute (A7a)***

The use of Adobe Connect has been very popular with our members. We consistently receive overwhelmingly positive comments about the time saving benefits of reducing travel (even across town) to learn about topics that assist them in their work. “Breezing Along With the RML” is a monthly presentation that uses Adobe Connect. “Breezing” covers topics that range from updates on NLM or NN/LM resources to invited presenters highlighting projects on which they are working. Members have the option to attend the live session or view the recording at a time better suited to their schedule. “Spotlight! on National Library of Medicine Resources” sessions are another series of monthly classes delivered via Adobe Connect. The sessions focus on one or more NLM databases and are complete with exercises and interaction. “Spotlight!” sessions are eligible for Medical Library Association Continuing Education credit.

Our Network members also like receiving information from the MCR’s weekly “RML News” (distributed via the MCMLA-L listserv) and receiving RSS feeds from the MCR News Blog. Messages are short and concise news items related to health information access with links to the more complete stories. Our quarterly published *Plains to Peaks Post* newsletter remains popular with readers. Between May 2006 and May 2010, the online issues of the *Plains to Peaks Post* received 3679 views (or an average 229 views per issue) with an average of ten minutes spent per view. Also most of the views were repeat visitor/readers; there were 423 unique visitors. Network members as well as MCR staff contributed articles published in the newsletter.

***Coordinate Development of Materials with RMLs (A7b & h)***

In the current contract, the Educational Clearinghouse Database will be phased out and educational materials will be added to the Medical Library Association (MLA) Continuing Education Clearinghouse. This transition could make instruction created by NN/LM Coordinators and Network members more broadly available. It is not necessary to “recreate the wheel,” especially when user friendly technologies exist for sharing and collaborating online. Tutorials and videos are now available in addition to print materials (e.g., PowerPoint presentations, speaker handouts, class handouts, etc.). NN/LM regions will share in the

development and maintenance, minus the duplication, of MLA Education Clearinghouse materials, spreading the workload and taking advantage of RML expertise.

### ***NN/LM MCR Web Site (A7c)***

The NN/LM MCR web site is our “face” to the world and as such must be attractive, easy to navigate, and clearly branded part of the NN/LM. The web site also acts as a portal to NN/LM MCR social networking opportunities (such as Twitter and Facebook) as well as informing members about upcoming events and classes. The web site is designed to comply with the Section 508 accessibility guidelines.

### ***NLM & RML Monthly Teleconferences & RML Directors’ Meetings (A7d & A7j)***

An important way to stay connected with the NN/LM regions and the NLM is by attending regularly held teleconferences where important topics are addressed. This is also an opportunity to provide input and to ask questions. NN/LM MCR staff members attend all NN/LM teleconferences and convey news and events to Network members when appropriate. RML Director’s meetings are also a way to stay connected and contribute to the NN/LM.

### ***Relationships with Other Networks & Relevant Organizations (A7e)***

Communicating with organizations and networks outside the NN/LM is key to providing access to health information, especially for underserved populations and the health care providers who serve them. The NN/LM MCR created the “Bringing Health Information to the Community” (BHIC) blog (<http://nmlm.gov/mcr/bhic>) as a communication device for interested consumers and providers to remain current in minority and public health issues. There are currently over 500 subscribers to the BHIC blog, along with an unknown number of readers who access the blog through RSS feeds.

The NN/LM MCR staff has become directly involved in community, library, and public health consortia and organizations in the region. Working with these organizations as gatekeepers, trusted resources and communication avenues increase access to health information by underserved populations.

### ***Inform NLM of Regional, State & Local Activities (A7f)***

Keeping NLM informed of activities in the Region that are related to health and health information is very important to the NN/LM MCR. If NLM understands the environment and issues in the NN/LM MCR, NLM will better understand how its resources and services are impacting intended users. The NN/LM MCR submits a variety of reports to inform NLM of activities in the NN/LM MCR. Assessment is a key element to measure the impact of resources and services from the NN/LM and NLM.

### ***Obtain Feedback (A7g)***

Understanding and adjusting to user preferences is an area where the NN/LM MCR has years of experience. The NN/LM MCR has devoted a .5 FTE coordinator to collect, analyze, and report on feedback from users. Every RML activity has some form of assessment that measures users’

feedback, which is used to make improvements. Improvements are shared with other RML coordinators and leadership.

### ***Communications Technologies (A7i)***

Motivated by the distributed structure of the NN/LM MCR, where team members are working in six different states, the RML is constantly scouting new technologies or improved technologies that facilitate internal communications. This organizational need has supported a program to introduce new communications technologies to our membership. During the current contract, the NN/LM MCR has tested many communication applications. We have found that the mix and match approach serves us best - using selected features of multiple applications to achieve the results needed.

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## **Approach & Methodology:**

A7a: Distribute important information about regional and national programs, policies, services, and procedures to the Region

Outcome: - NN/LM MCR communications mechanisms are effective

The NN/LM MCR will continue to distribute important information about regional and national programs, policies, services, and procedures to current and potential NN/LM participants in the Region. The NN/LM MCR feels it is important that information is distributed where our current and potential NN/LM participants congregate, whether it is online or in person.

The NN/LM MCR will continue to provide important information in person at conferences and meetings where librarians and health care providers meet. The NN/LM MCR presents and exhibits at library and healthcare provider meetings in each of our states plus health sciences library organization meetings where news and updates are regular parts of the meeting agendas.

The NN/LM MCR will continue to have a strong presence in online communication conduits that reach both Network members and our partnering organizations. The NN/LM MCR distributes information to Network members and NN/LM MCR partner organizations via:

<b>National</b>
<ul style="list-style-type: none"> <li>• “Bringing Health Information to the Community” blog is used as a tool to communicate with public health and community based organizations</li> <li>• LIBNET (listserv for public and school libraries)</li> <li>• American Indian Library Association listserv</li> <li>• REFORMA listservs</li> <li>• HELP Adult Services Wiki</li> </ul>

<b>Regional</b>	
	<ul style="list-style-type: none"> <li>• RML News postings (available through an RSS feed and direct access on our web site as a blog, as well as sent to the MCMLA listserv weekly as an e-mail)</li> <li>• NN/LM MCR Twitter page postings</li> <li>• NN/LM MCR Facebook page postings</li> <li>• <i>Plains to Peaks Post</i> newsletter</li> <li>• “Breezing Along with the RML” (Adobe Connect)</li> <li>• “Spotlight! on National Library of Medicine Resources” (Adobe Connect)</li> <li>• HHS Region VIII eNews</li> <li>• Tribal Connections Four Corners Listserv</li> </ul>

<b>State</b>	
CO	<ul style="list-style-type: none"> <li>• Colorado State Library Blog</li> <li>• Colorado Council of Medical Libraries <i>CCML Council Quotes</i> newsletter</li> <li>• Rocky Mountain Chapter of SLA listserv</li> <li>• Colorado School of Public Health @theForefront</li> <li>• Colorado Public Health Association News</li> </ul>
KS	<ul style="list-style-type: none"> <li>• BlogJunction Kansas</li> <li>• KANLIB Listserv (Kansas Libraries)</li> <li>• Health Science Library Network of Kansas City postings</li> </ul>
NE	<ul style="list-style-type: none"> <li>• Nebraska Library Association Listserv</li> <li>• Nebraska Educational Media Association Listserv</li> <li>• Nebraska Distribution list (key public health, CBOs, hospitals, academic staff)</li> <li>• Lincoln Metropolitan Medical Response System Wiki</li> <li>• Office of Inter-professional Scholarship Service and Education at Creighton Wiki</li> <li>• Public Health Association of Nebraska Listserv</li> </ul>
MO	<ul style="list-style-type: none"> <li>• St. Louis Medical Library Group postings</li> <li>• Missouri Distribution List (Missouri Network members, key public health contacts and CBO contacts)</li> </ul>
UT	<ul style="list-style-type: none"> <li>• Utah State Library Division’s <i>Utah Libraries</i> Blog</li> <li>• Utah Library Association newsletter</li> <li>• Center for Utah Multicultural Health newsletter</li> <li>• Rural Health Association of Utah newsletter</li> <li>• Metro Library Directors’ listerv</li> <li>• Utah Academic Library Directors’ listserv</li> <li>• Utah Health Sciences Library Council listserv/blog</li> </ul>

State	
WY	<ul style="list-style-type: none"> <li>• Wyoming Library Association Listserv</li> <li>• Wyoming State Library email Listserv</li> <li>• WYLD Databases &amp; Online Resources blog (Wyoming State Library)</li> <li>• Wyoming Comprehensive Cancer Control Consortium</li> </ul>

Table 5.

The NN/LM MCR will continue to distribute important information in person and via online communication conduits to Network members, potential members, and partnering organizations. We will continue to evaluate what communication methods are best suited for these groups. For instance, the results of the Network Member Questionnaire informed us that the majority of Network members prefer traditional methods of communicating (e.g., email, mailings, web site); however, web 2.0 technologies will continue to be used in order to reach members who are using these tools. Exhibiting and presenting in person at conferences and meetings where potential members (librarians and health care providers) meet will remain an effective method for distributing important information. The NN/LM MCR will continue to distribute important information to the many partnering organizations using their preferred communication tools (e.g., newsletter and listserv messages, blogs).

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### Schedule:

	Year 1	Year 2	Year 3	Year 4	Year 5
Transition of Bringing Health Information to the Community blog to national status	X				
Daily health information access related news postings to the RML News Blog	X	X	X	X	X
Daily postings to the NN/LM MCR Twitter and Facebook pages	X	X	X	X	X
Weekly distribution of the RML News via the regional listserv	X	X	X	X	X
Monthly presentations via Breezing Along with the RML sessions	X	X	X	X	X
Quarterly publication of the <i>Plains to Peaks Post</i> newsletter	X	X	X	X	X
Contributions to the NN/LM MCR Delicious social bookmarks list	X	X	X	X	X

A7b: Coordinate the development of materials with other RMLs and NLM to avoid duplication of effort

Outcome: - NN/LM MCR collaborations are valuable

### ***Sharing information with other RMLs through NN/LM Coordinator meetings***

As a standing topic of NN/LM Outreach and Education Coordinators' monthly webinar meetings, a session will be suggested where each RML's Outreach/Education coordinator reviews resources on his/her respective web site that should be shared with other RMLs. This will also include DOCLINE, technology, and consumer health topics.

Currently, the NN/LM MCR collects materials to share and post on its web site. (<http://nnlm.gov/mcr/education/online.html>). This includes webinar recorded sessions that are archived as well as PowerPoint presentations and other materials that correspond to project areas and initiatives intended for MCR audiences. All RMLs have similar collections on their web sites. Sharing these web resources in a meeting will allow each region the opportunity to select links that would benefit its membership. The NN/LM MCR would appreciate knowing what the other RMLs have produced that could be linked from our web site. By sharing this information among the regions and NLM, web site awareness and usage of materials will increase.

### ***Classes Under Development Page***

Classes that are currently under development are shared in the NN/LM staff intranet. Utilizing this site offers opportunities for collaboration with NN/LM staff working on similar topics. The NN/LM MCR currently does not have classes under development. When an NN/LM MCR coordinator begins to develop a class, it will be noted on the NN/LM staff intranet and will be announced to appropriate NN/LM coordinators. For instance, if a new DOCLINE class is being developed, it will be announced to the DOCLINE Coordinators.

### ***Establish a "Trainer's Bureau" for online classes***

The NN/LM MCR will ~~propose at an Outreach/Education Coordinators' monthly meeting to establish a~~ **contribute to the NN/LM** "Trainer's Bureau" for online classes. ~~If an NN/LM~~ **When a** coordinator develops a class which is suitable for sharing as a webinar in another region, that person's name and topic ~~could be maintained on a~~ **will be added to the** "Trainer's Bureau" list. Having this list of presenters would not preclude coordinators in the region from developing a baseline of expertise, but would open up the talent base to include other NN/LM presenters. For example, the NN/LM MCR staff has presented webinars on the MLA/NLM sponsored Health Information Literacy Research Project and on using the value of library services' calculators. Other RMLs have staff whose expertise would be valuable to share with the NN/LM MCR's members. A directory would facilitate cross training among the regions.

**Bringing Health Information to the Community Blog**

In 2002, the NN/LM MCR established a regional communication mechanism for community organizations through the “Bringing Health Information to the Community” (BHIC) blog. The Community Outreach Coordinator regularly posts information to the blog that falls into the following categories: articles, conferences, environmental health, HIV/AIDS, inner city issues, minority health concerns, public library, public health, regional information, rural, and scholarships/grants. The blog has garnered a national readership over the years, and periodic questionnaire results of readers indicate that the blog makes an impact in their daily workflow. Beginning May 1, 2011, the BHIC blog will become a national communication tool, with collaborative authors from four additional NN/LM regions, the Greater Midwest Region, the Southeastern/Atlantic Region, the Pacific Northwest Region and the South Central Region. Procedural changes will be made to incorporate additional authors and branding will reflect its national status.

~~The MCR will coordinate the development of materials with one or more RMLs and the NLM to avoid duplication of effort, which will reduce the duplication of materials between these partners.~~ **When the blog moves to national status, the MCR will have administrative responsibility. In the initial transition, the MCR Health Information Literacy Coordinator will make all posts to the BHIC blog. Staff at other regions will email the Health Information Literacy Coordinator items they wish to be posted. This first step will provide a way to ensure that items are not duplicated in the blog. As the other regions become more comfortable with finding and sending items to be posted, staff at other regions will post items to the blog directly without using the MCR Health Information Literacy Coordinator as a filter.**

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Promote information shared on NN/LM MCR web site to other RMLs	X	X	X	X	X
Sharing of RML web sites at coordinators' meetings	X	X	X	X	X
Remind other appropriate NN/LM Coordinators of classes under development annually	X	X	X	X	X
<del>Establish and maintain</del> <b>Contribute to the NN/LM coordinators' "Trainers Bureau" for online class topics</b>	X	X	X	X	X

A7c: Develop and maintain a regional Web site as an integral component of the NN/LM Web site, that incorporates the guidelines of 508 compliance (<http://www.section508.gov>)

Outcome: - NN/LM MCR communications mechanisms are effective

### Regional Web Site

The NN/LM MCR web site (<http://nnlm.gov/mcr/>) is designed to use the approved nlm.gov template created by Web-STOC. The home page features an "In the Spotlight" box that is dynamically updated with new information about upcoming events. The box includes links to the three most recently posted news stories from the news blog. Tabs at the top delineate major sections of the web site.

The web site content is maintained on a regular basis. MCR technology staff receive notifications from an automated weekly link checking program run by Web-STOC. Broken links are fixed immediately. NN/LM MCR staff also schedule a review of the web site once a year to check for outdated information.

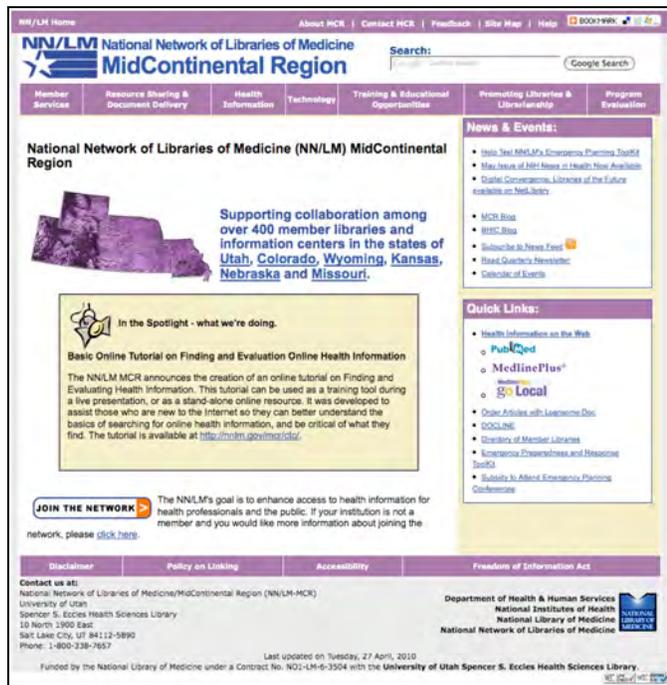


Figure 8.

Web-STOC plans to coordinate usability tests of the nlm.gov web site. We will participate in the usability tests and make improvements to the site based on the results. In addition, Web-STOC plans to eventually make a content management system (CMS) available so that it is easier for web site authors to edit the web pages; NN/LM MCR will adopt the CMS as soon as it is available. This will improve the efficiency of web page editing.

Traditionally, the web site has "pushed out" information to our members rather than offering two-way communication. With the advent of new social networking tools, we have more opportunities for direct communication with our members. We will include prominent links to new communication mechanisms (such as Twitter and Facebook) on our home page. The web page also dynamically updates the latest NN/LM MCR Twitter and Facebook posts.

In the Spring of 2009, we sent a questionnaire to our members with the question "Has the NN/LM MCR web site increased your awareness of health information resources and regional

activities?" One hundred three respondents answered the question. Seventy-eight (75.7%) said yes and twenty-five (24.3%) said no. We will continue to send an annual questionnaire using SurveyMonkey to our members to determine if the web site and social networking pages are useful to them in their work.

We have also used data from the Google Analytics tool provided by Web-STOC to analyze the use of our web site and specific sections of the web site. This tool allows us to determine the most frequently used pages, the number of visitors, and how visitors found our site. In May 2010, we compared the web site statistics for Year 3 (May 2008 – April 2009) and Year 4 (May 2009 – April 2010). Analysis of the data showed the following results:

- There was no significant change in the number of visits to all MCR pages between Year 3 and Year 4; an average of 50,000 total visits per year
- 31% of the visits to the MCR pages come from the MCR states; of these most of the visits are from Utah (31%) and then Colorado (26%)
- The most visited sections of the web site are the Bringing Health Information to the Community (BHIC) blog (30% of visits) and the RML News Blog (10% of visits)
- The most visited project sections of the web site are the "Health Information" (10%) and "Program Evaluation" sections (8%)
- Most users find the MCR web site via search engines, except for the "Promoting Libraries and Librarianship" and "Training and Educational Opportunities" which were more often found via direct links from offline materials (such as bookmarks and promotional materials)
- Most users coming to the "Health Information" project pages and the State Resource pages were directed from search engines

We will continue to analyze web site statistics using Google Analytics. We will improve the content and usability of our web site based on the information provided by the member evaluation and the Google Analytics data.

### ***Mobile Users***

Web-STOC and the NN/LM Technology Coordinators have discussed creating a mobile device style sheet for the nnlm.gov web sites. NN/LM MCR will participate in testing the style sheet and adding it to the web site after it is developed. We will publicize this option to our members in a "Breezing Along with the RML" session. We will ask our members whether the mobile style sheet was useful to them in their work in the annual technology questionnaire.

**Section 508 Compliance**

The MCR web pages and documents stored on the web site must meet Section 508 guidelines in order to be accessible to users with disabilities. In the current contract, we are using a variety of resources to learn about techniques for compliance:

- The accessibility checklist available on the nnlm.gov staff wiki ([https://staff.nlm.gov/wiki/GMR-508\\_Compliance\\_Checklists](https://staff.nlm.gov/wiki/GMR-508_Compliance_Checklists), available only to nnlm.gov staff)
- W3C WAI: Strategies, guidelines, resources to make the Web accessible to people with disabilities (<http://www.w3.org/WAI/guid-tech.html>)
- W3C Web Accessibility Quick Reference(<http://www.w3.org/WAI/WCAG20/quickref/>)
- WebAIM PowerPoint Accessibility Techniques (<http://www.webaim.org/techniques/powerpoint/>)

Web page, PowerPoint, and document 508 compliance are validated using these tools:

- Dreamweaver CS 4 Built-in Accessibility Checker
- Adobe Acrobat Pro Built-in Accessibility Checker
- AccessColor: For checking color contrast of web sites for color-blind or vision impaired users (<http://www.accesskeys.org/tools/color-contrast.html>)

We will continue to use these resources and tools in the next contract.

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Maintain and regularly review the NN/LM MCR web site	X	X	X	X	X
Maintain the NN/LM MCR social networking pages	X	X	X	X	X
Adopt the CMS	X	X	X	X	X
Adopt the mobile device style sheet	X	X	X	X	X
Continue to monitor for Section 508 compliance	X	X	X	X	X

A7d: Participate in monthly teleconferences with NLM and the other RMLs to discuss topics of importance in the overall management of the NN/LM program

Outcome: - NN/LMMCR collaborations are valuable

The NN/LM MCR is regularly represented at all the NN/LM teleconferences (Consumer Health Coordinators, Outreach and Education Coordinators, DOCLINE Coordinators, Web-STOC, and All RML Staff) with a primary and back up staff member designated. NN/LM MCR staff will continue to attend these meetings, suggest topics to be discussed and facilitate teleconferences.

The NN/LM MCR will actively contribute and participate in NN/LM and NLM teleconferences.

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**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Participate in monthly teleconferences with NLM and the other RMLs	X	X	X	X	X

A7e: Develop working relationships with other networks and relevant organizations by identifying common program interests and goals, work to develop regular lines of communication and develop appropriate cooperative programs

Outcome: - NN/LM MCR communications mechanisms are effective

The NN/LM MCR staff will continue their direct involvement in community, library ,and public health consortia and organizations in the region. The NN/LM MCR has been successful in reaching populations that these groups represent in the current contract. The groups have acted as gatekeepers to health information resources for the NN/LM MCR. They already have trusted lines of communication with their population, and are often open to acting as a bridge between the NN/LM MCR and the groups they represent. The NN/LM MCR works with libraries and with community organizations, especially those who serve minority and other underserved groups in our region. For example, the Health Information Literacy Coordinator is on the board of HELP Adult Services, an organization that loans health equipment such as wheel chairs, hospital beds, etc, at little or no cost to people on Medicare, Medicaid, or those who are uninsured or underinsured. The staff often receive questions beyond how to use and maintain the equipment a client is borrowing. The Health Information Literacy Coordinator was able to provide hands on computer training to the staff at HELP Adult Services on NLM resources such

as MedlinePlus, so that the staff can include a recommendation to MedlinePlus in addition to referring the client back to their health care professional. She also provided the organization with MedlinePlus bookmarks and the group will include a bookmark with each piece of equipment that they loan out.

**Health Literacy Missouri**

Health Literacy Missouri advocates for health literacy issues at the state and national level, working to effect policy change, inform stakeholders, and support and initiate grassroots and community activities. The Missouri/Library Advocacy Coordinator has worked closely with Health Literacy Missouri throughout this contract, including helping to develop a librarian tract at the June 15, 2010 Health Literacy Summit being held in Columbia, Missouri. The MCR will continue to work with Health Literacy Missouri in ways that complement both. Health Literacy Missouri will host a Health Literacy Summit in Year 2 of the contract in collaboration with the NN/LM MCR. (See our response to SOW section B2b for summit details)

**Library Organizations**

NN/LM MCR Coordinators are members of local, state, regional, and national library and health sciences library organizations. Membership in these groups provides coordinators opportunities to present updates at monthly, quarterly and yearly meetings, to participate in listservs, and to be members of committees and governing boards of these groups. In addition, each coordinator is a member of his/her state library association and is able to send out information on the listserv for his/her respective state. The NN/LM MCR also maintains the listserv for the Midcontinental Chapter. Memberships in organizations include:

<b>National</b>
<ul style="list-style-type: none"> <li>• Outreach Connections: Native Health Information</li> </ul>

<b>Regional</b>
<ul style="list-style-type: none"> <li>• Midcontinental Chapter of the Medical Library Association</li> <li>• Four Corners Tribal Connections</li> <li>• Four Corners Library Directors</li> </ul>

<b>State</b>	
CO	<ul style="list-style-type: none"> <li>• Colorado Association of Libraries</li> <li>• Colorado Council of Medical Librarians</li> <li>• Rocky Mountain Chapter of the Special Library Association</li> <li>• Alliance: The Colorado Alliance of Research Libraries</li> </ul>
KS	<ul style="list-style-type: none"> <li>• Health Sciences Library Network of Kansas City (HSLNKC)</li> <li>• Kansas Biomedical Librarians (KBML)</li> </ul>
MO	<ul style="list-style-type: none"> <li>• Health Science Library Network of Kansas City</li> <li>• St. Louis Medical Library Group</li> <li>• Missouri Library Association</li> </ul>

State	
NE	<ul style="list-style-type: none"> <li>• <b>ICON (the Nebraska Health Sciences Library Consortium)</b></li> <li>• Nebraska State Library Advisory Council Board</li> <li>• Nebraska Library Association</li> </ul>
UT	<ul style="list-style-type: none"> <li>• Utah Health Sciences Library Consortium</li> <li>• Utah Academic Library Consortium</li> <li>• Salt Lake City Metro Library Directors Group</li> </ul>
WY	<ul style="list-style-type: none"> <li>• Wyoming Federal Depository Library Consortium</li> </ul>

Table 6.

### ***Coordinators Embedded in CBOs***

In the current contract, coordinators have been embedded in community based organizations. **Being embedded in a CBO means that the RML Coordinator is an active member of the organization, on the board, or on a committee where he/she participates in carrying out of the work of the CBO. This process is able to be carried out in the MCR due to the distributed nature of the staff; it is possible to join and work for a CBO in each state since coordinators live in each state.**

Through this effort, potential public health and community organization have been identified for NN/LM membership and training has been provided. In Year 1, the NN/LM MCR will review its relationships with these organizations to determine whether continued partnership is still beneficial to both parties.

State	
CO	<ul style="list-style-type: none"> <li>• Colorado Public Health Association, Professional Education</li> </ul>
KS	<ul style="list-style-type: none"> <li>• Mother &amp; Child Health Coalition, Adolescent Health Committee</li> </ul>
MO	<ul style="list-style-type: none"> <li>• Health Literacy Missouri, Resource Inventory Committee</li> <li>• Health Literacy Missouri, Librarian Expert Group</li> <li>• Public Health Practice Research Network of the Missouri Institute for Community Health</li> <li>• Missouri Institute for Community Health</li> </ul>
NE	<ul style="list-style-type: none"> <li>• HELP Adult Services</li> <li>• Rural Health Education Network</li> <li>• Wyoming Comprehensive Cancer Control Consortium, Cancer &amp; Environment Working Group</li> </ul>
UT	<ul style="list-style-type: none"> <li>• Utah Multicultural Health Network Data Committee</li> <li>• Utah Multicultural Health Network Conference Committee</li> <li>• Utah Library Association Multicultural Services Roundtable</li> </ul>
WY	<ul style="list-style-type: none"> <li>• Wyoming Comprehensive Cancer Control Consortium, Cancer &amp; Environment Working Group</li> </ul>

Table 7.

***Aberdeen Area Tribal Chairmen's Health Board  
Northern Plains Tribal Epidemiology Center***

The Health Information Literacy Coordinator and the NN/LM Greater Midwest Region's (GMR) Public Health Librarian have contacted Dr. Corey Smith, Epidemiologist and Health Informatics Specialist at the Northern Plains Tribal Epidemiology Center. This center is part of the Aberdeen Area Indian Health Service Office. "The Aberdeen Area Office in Aberdeen, South Dakota, works in conjunction with its 13 Service Units to provide health care to approximately 94,000 Indians on reservations located in North Dakota, South Dakota, Nebraska, and Iowa."<sup>19</sup> Dr. Smith is planning to assess health information for the Tribal Colleges in the Indian Health Service's Aberdeen Area, which include the Winnebago Tribal College and the Nebraska Indian Community College, both in Nebraska. He will be pursuing funding through the GMR, since the Aberdeen Area Office is located in the GMR, but will also work with the NN/LM MCR Health Information Literacy Coordinator to approach tribal college librarians in Nebraska. Following the assessment, the NN/LM MCR will work with the Dr. Smith to develop tools and training to fill gaps identified in the assessment.

Once this pilot project has taken place with the Aberdeen Area Office, the NN/LM MCR will investigate other Indian Health Service Area Offices to determine if similar projects can be carried out in those areas. Indian Health Service Area Offices in the NN/LM MCR include:

- Aberdeen (North Dakota, South Dakota, Iowa, and Nebraska)
- Navajo Area (Arizona, New Mexico, and Utah)
- Albuquerque (New Mexico, Colorado, and Texas)
- Oklahoma Area (Oklahoma, Kansas, and Texas)
- Billings Area (Montana and Wyoming)
- Phoenix Area (Arizona, California, Nevada, and Utah)

Tribal Connections 4 Corners is a collaboration of health sciences librarians and RMLs working in the Four Corners area of Arizona, Colorado, New Mexico and Utah. As part of the collaboration, NN/LM MCR will propose that the group encourage its IHS Area Offices to use the assessment tool. It will also propose that Tribal Connections 4 Corners follow up with the tribal college librarians to address the needs identified by the assessment tool.

The NN/LM MCR will evaluate the working relationships with other networks and relevant organizations via feedback from NN/LM MCR coordinators. For instance, the NN/LM MCR will know it is having a positive impact when it assumes a leadership role in an organization, can schedule health information resources training sessions, has presentations accepted at conferences or meetings, or when articles are published in an organization's publications or moderated listservs.

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<sup>19</sup> <http://www.ihs.gov/FacilitiesServices/areaOffices/aberdeen/>

The NN/LM MCR's working relationships with other networks and relevant organizations, as well as contributions to common program interests and goals, will continue to develop.

### Schedule:

	Year 1	Year 2	Year 3	Year 4	Year 5
Continue to work with Aberdeen Area to expand relationship		X	X	X	X
Apply lessons learned in Aberdeen Area to forge relationships with Tribal Health Boards in other states		X	X	X	X
Develop tools and training based on Aberdeen Area Tribal Chairmen's Health Board Assessment of Nebraska Tribal Colleges	X				
Coordinators are active members of health sciences library consortia	X	X	X	X	X
Health Literacy Missouri will host a Health Information Literacy Symposium in collaboration with the NN/LM MCR		X			

A7f: Inform NLM about regional, state and local activities of health professionals and health sciences libraries, networks, and other organizations as they relate to the programs of the NN/LM, NLM and the national information infrastructure

Outcome: - NN/LM MCR collaborations are valuable

The NN/LM MCR will continue to inform NLM on regional, state, and local activities of health professionals and health sciences libraries, networks, and other organizations as they relate to NN/LM programs, NLM, and the national information infrastructure through quarterly and annual reports.

Reports will be added to the NLM integrated outreach system that collects information on outreach activities, exhibits, and projects funded by the NN/LM MCR. NN/LM MCR staff will informally send news from the region that it deems to be of interest and will respond to NLM's requests for data from the region. More information about how the NN/LM MCR gathers information about regional, state and local activities of health professionals and health sciences libraries, networks and other organizations can be found in our response to SOW section A9.

The NN/LM MCR will produce informative reports that are submitted in a timely manner.

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Contributions to NLM integrated outreach system	X	X	X	X	X
Submit quarterly and annual reports to NLM	X	X	X	X	X

A7g: Obtain ongoing feedback from users about their information preferences, needs and uses, and recommend ways of improving health professional and consumer access to information

Outcome: - NN/LM MCR communications mechanisms are effective

The NN/LM MCR will continue to obtain ongoing feedback from users about their information preferences, needs and uses, and recommend ways of improving health professional and consumer access to information. This feedback will accompany quarterly and annual reports. When requested, the NN/LM MCR will respond to NLM’s request for data from the regions. (See SOW sections A9 and A10 for more information about obtaining feedback)

The NN/LM MCR will produce data that are representative of users in the Region and are submitted in a timely manner.

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Obtain feedback and evaluate NN/LM MCR activities	X	X	X	X	X
Questionnaire sent to BHIC blog readers to assess usefulness/ satisfaction of the BHIC blog		X		X	
NN/LM MCR staff feedback gotten on MCR operations’ questionnaire		X			

A7h: Assist in the identification of training resources to be added to the MLA Educational Clearinghouse

Outcome: - NN/LM MCR collaborations are valuable

NN/LM MCR coordinators will submit training resources to the MLA Continuing Education Clearinghouse. These coordinators work in the different Resource Libraries of the Region. They are in a good position to identify resources produced by the Resource Libraries and assist in adding them to the clearinghouse. The MLA Continuing Education Clearinghouse will be promoted monthly to Network members and materials appropriate for this repository will be solicited (e.g., presentations, brochures, distance learning classes, tutorials and webinars).

The NN/LM MCR will identify training resources developed in the NN/LM MCR and coordinate their submission to the MLA Continuing Education Clearinghouse in a timely manner.

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Include a link to the MLA Educational Clearinghouse on the NN/LM MCR web site under "Training and Educational Opportunities"	X				
Assist in submitting entries to the MLA Educational Clearinghouse	X	X	X	X	X

A7i: Participate in testing and using alternative methods of communication

Outcome: - NN/LM MCR communications mechanisms are effective

Currently, the NN/LM MCR team incorporates the following communications technologies into its day-to-day work:

- Skype, a voice over IP program, for audio communications (point-to-point and conference calls), chat, screen sharing, and point-to-point video calls. Skype is also a tool to determine team "presence" (i.e., who is in the office, who is available for communication, etc.)
- Adobe Connect, offered through an NIH license. Internally, NN/LM MCR uses Adobe Connect for weekly staff meetings, where team members can see and hear each other and share computer applications. Externally, Adobe Connect is used for classes, the

monthly “Breezing Along with the RML” updates, “Spotlight!” sessions, work group meetings, and Resource Library Director meetings.

- Polycom videoconferencing is used for the Technology Coordinator, who shares her position with the Pacific Southwest Region (PSR), to participate in PSR staff meetings. One unit is located at University of Utah and one unit is located at UCLA.
- Until March of 2010, QuickPlace was used internally as NN/LM MCR’s collaboration and document sharing tool. In March of 2010, NN/LM MCR adopted SharePoint through a University of Kansas Medical Center license.
- Social networking tools used by NN/LM MCR to push information out to members include Facebook, the RML News Blog, Bringing Health Information to the Community (BHIC) blog, Delicious social bookmarking, and Twitter updates published to the BHIC blog.

Mobile devices, including smartphones and new tablet devices such as Apple’s iPad, are an alternative method of accessing information and communicating via social networking sites. The NN/LM MCR will test mobile device applications related to health information as well as applications that allow for new methods of communication. We will disseminate information about what we learn through RML News blog postings, newsletter articles, and presentations at the “Breezing Along with the RML” sessions.

The NN/LM MCR has also experimented with high-end videoconferencing, streaming video broadcasts and podcasting. The mobile video broadcasting unit used by the Spencer S. Eccles Health Sciences Library often had technical difficulties at remote sites, making it difficult to offer a quality experience for members. NN/LM MCR staff created two podcasts related to community health outreach (<http://nnlm.gov/mcr/services/podcasts/podcasts.html>) but a questionnaire sent to members in August 2007 indicated that most members had not listened to the podcast and still needed to be educated about how to access podcasts.<sup>20</sup> The NN/LM MCR has subsequently offered classes about podcasting, but has not produced any additional podcasts. The high-end videoconference system available at the Spencer S. Eccles Health Sciences Library, the Access Grid, also proved to consistently have technical difficulties, most likely due to inadequate bandwidth at the library and other sites.

New opportunities for videoconferencing, video broadcasts, and audio and video podcasts will become available. We will explore these opportunities as they emerge.

NN/LM MCR now has access to a high-end videoconferencing system through the Utah Education Network (UEN). UEN has professional videoconference facilities available for use free of charge. The UEN system is compatible with the H.323 and SIP videoconference systems, so it

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<sup>20</sup> Dennis S. The MCR Podcasting Service: Results from the Feedback Survey. Utah: MidContinental Region Plains to Peaks Post Utah; 2008. 3 p. Contract No. NO1-LM-6-3504. Supported by the National Library of Medicine and the University of Utah Spencer S. Eccles Health Sciences Library. Available from: [http://nnlm.gov/mcr/services/comm/newsletter/PTPP\\_February\\_2008.pdf](http://nnlm.gov/mcr/services/comm/newsletter/PTPP_February_2008.pdf)

can work with other high-end videoconference facilities in the region, such as the University of Missouri at Columbia's "Cisco Telepresence" system. Desktop users can also join the system through a free conferencing program. Working with the MCR Resource Libraries, we will scan the region for other facilities that can be scheduled for little or no charge. We will offer classes that require small group interaction and hold other interactive events, such as a health literacy conference or an e-science forum (see SOW section B4a) using the videoconferencing system.

The Eccles Health Sciences Library continues to successfully offer streaming video broadcasts of educational events at University of Utah (<http://library.med.utah.edu/ed/videoresources.php>). We will revive the idea of broadcasting events to the region from the University of Utah.

NN/LM MCR will investigate whether audio and video podcasts can be published using iTunesU, and continue to promote and educate our users about podcasting.

The NN/LM MCR will continue to investigate and implement new forms of communication, including audio, video, social networking, and collaboration tools. Technologies that work will be communicated to the region so that they can be incorporated into the services and operations of Network members.

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### Schedule:

	Year 1	Year 2	Year 3	Year 4	Year 5
Investigate and implement new technologies for communication and collaboration	X	X	X	X	X

A7j: Participate in RML Directors' meetings

Outcome: - NN/LM MCR collaborations are valuable

NLM schedules and coordinates two RML Directors meetings a year. The first is held in conjunction with the annual Medical Library Association (MLA) meeting; the mid-year meeting is held in December or January. The RML staff and Resource Library Directors are consulted on agenda items they would like to have discussed. The Director and Associate Director inform RML staff and Resource Library Directors of the outcomes of discussions. All RML staff attends the RML Directors' meetings preceding MLA and participates in the appropriate break out sessions.

The Director and Associate Director actively participate by suggesting topics, facilitating discussions, and collecting regional information in preparation for the meetings. Suggested topics that have been incorporated in past meetings include: changing demographics of

Network members, scholarly communication, and sharing of a technology coordinator with PSR.

The NN/LM MCR volunteered to host a mid-year meeting in Salt Lake City, Utah. The RML has successfully used group processes with the Regional Advisory Board, with members at chapter meetings, and with mixed groups at state meetings. Appreciate Inquiry, Open Space, Café to Go and Work-Thru are all tools that we use when working with a group. The RML will use this experience for agenda items that require idea generation, group involvement, and consensus building. If there is no mid-year meeting scheduled for Salt Lake City, the NN/LM MCR will volunteer to coordinate one of the Directors’ meetings held in conjunction with MLA.

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**Schedule:**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Participate in RML Directors’ meetings	X	X	X	X	X

## A8 – Regional Advisory Board

### Statement of Work

Implement a Regional Advisory Committee (RAC). The RAC must include health professionals and health sciences librarians from hospital libraries and other large and small medical libraries within the Region. The RAC should also include representatives of state library agencies, public and school libraries, health information consumer groups, special populations, as well as representatives of community organizations with which the RML has partnerships. The RAC need not be structured as a single body, nor is it necessary for it to meet in a physical location, as long as a system is in place that enables the RAC to:

- a. Advise the RML within the framework of the NN/LM contract on ways to develop and implement outreach programs to improve health professionals' and the public's access to biomedical information;
- b. Advise the RML in establishing regional priorities, policies and procedures, including the development and implementation of a regional emergency preparedness plan, and reviewing regional programs;
- c. Develop plans to encourage health professionals and health sciences librarians to participate actively in regional and national programs affecting the delivery of health information; and
- d. Assist the RML in identifying health professionals without access to health information.

### Applicable NN/LM Goal

Develop collaborations among Network members and other organizations to improve access to and sharing of biomedical information resources throughout the nation

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### Objective & Rationale:

Objective:

- The Regional Advisory Board contributes to improving access to health information in the MCR

The advisory group for the MidContinental Region is called the Regional Advisory Board.

An advisory group is a useful mechanism to enable organizations such as the NN/LM to be responsive to the constituency it serves. This group can act as the sounding board before programs are piloted, provide outside perspectives, and bring additional expertise and useful contacts to the program. Through its diverse composition and participatory activities, membership in the Regional Advisory Board can also establish collaborative relationships that enable organizations such as the NN/LM to be effective.

The Regional Advisory Board is made up of health professionals, health sciences librarians from hospital libraries and other large and small health sciences libraries within the region, representatives of state library agencies, public and school libraries, public health, health

information consumer groups, special populations, as well as representatives of community organizations.

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## Approach & Methodology:

Outcome: - The Regional Advisory Board effectively advises the RML on outreach and programming for Network involvement and access to health information for health professionals and public

### ***Make Up of the Board***

The Board is made up of eighteen members who serve staggered two year terms, with the RML holding the option of re-appointing members for a third year.

The RML uses the following criteria for selecting Regional Advisory Board members:

- Network member, health professional or member of a community organizations or representation from stake holders (commercial, governmental)
- Exhibited interest and/or support for access to health information (e.g., with electronic health records)
- Evidence of status with a priority population (public librarians, public health workforce, **those who work with minority populations, health educators who promote health information literacy, researchers who are involved in E-science, representatives from Regional Extension Centers, representatives from health insurance companies, and Network members, etc.**)
- Lives or works in the MidContinental Region
- Recommended by staff of the RML, Resource Library, or previous Regional Advisory Board member
- Experience working with the NN/LM at a local level

In order to have a representative board, the RML selects representatives for: each state in the region, each special project area, Resource Library Directors, and MCMLA (Midcontinental Chapter of the Medical Library Association). In the current contract, the members have been health professionals, health sciences librarians from hospital and academic libraries, public librarians, public health professionals, and staff of community organizations. We will invite representation from the commercial sector such as Walmart and health insurance companies who are involved in personal health records, and governmental agencies who are involved in health reform. We will continue to have a representative board in the next contract to help the RML move forward on its initiatives.

Members of the Board are listed on the RML web site and are introduced to the region in an article in the RML newsletter. This is done to acknowledge member participation and to notify those in the region about who they can talk to about programming in addition to RML staff.

**Board Responsibilities**

Each year as new members are added to the Board, the Director and Associate Director provide an orientation to introduce and review the organizational structure of the NN/LM, the organizational structure of the NN/LM MCR, the personnel who carry out programming and their responsibilities including special project areas, and expectations for the board. Board members have indicated that this is a good introduction to the organization.

RML expectations from board members are described when recruiting new members. The RAB will continue to have the following responsibilities:

- a. Advise the RML within the framework of the NN/LM contract on ways to develop and implement outreach programs to improve health professionals' and the public's access to biomedical information
- b. Advise the RML in establishing regional priorities and policies including the development and implementation of a regional emergency preparedness plan and reviewing regional programs
- c. Develop plans to encourage health professionals and health sciences librarians to participate actively in regional and national programs affecting the delivery of health information
- d. Assist the RML in identifying health professionals without access to health information
- e. Assist the RML in reviewing subcontract proposals
- f. Provide advisory responsibility for one of the RML's project areas
- g. Present information on their organization or area of expertise/work in one of the NN/LM MCR's publications or presentation mechanisms
- h. Assist the RML in reaching the constituency that the member represents (e.g., Network members, public libraries, public health workforce, etc.)

This includes:

- Promoting NLM resources
  - Forwarding RML messages to constituency group/population
  - Recommending ways to best communicate with this group/population
  - Providing insights into the organizational structure, culture of this group/population
- i. Provide input on RML concerns from the perspective of the population they represent

Each Board member is assigned a special project reflecting the strengths of the member. For example, members who work in health education have been assigned to the education special project area. Public librarians have been assigned to the consumer health project area. As part of his/her focus on a specific project area, the board member participates in a working group established to assist in carrying out an activity. This has worked especially well in the current contract with the members assigned to community outreach; they helped produce an

introductory series on collaboration for the region. Members assigned to Network membership developed policies and procedures for the Region's reference continuity effort. We will continue this approach as a way to actively involve our board in RML programming.

### ***Board Meetings***

The NN/LM MCR will continue to bring the board together for an annual meeting. During these meetings, we will include an update from the National Network Office (NNO) staff to introduce and keep our board members abreast of the accomplishments of the National Library of Medicine (NLM) and the scope of its work. We include information on NLM resources so that RAB members can promote these resources with the populations they represent.

The annual Board meeting initiates the annual planning process for the upcoming year. Issues will be brought forward for Board input on strategies that the RML can employ. In the past, the Regional Advisory Board has provided advice on encouraging member involvement in emergency preparedness, adopting new technologies, participating in professional development, supporting members' advocacy efforts, and promoting health information literacy. These topics all represent challenges facing the RML and were brought to the Board to gain perspectives not just from librarians representing multi-type libraries but from health care providers as well. The RML has found that using the Regional Advisory Board meeting to initiate the planning process focuses the Board on real issues which results in ideas that can be incorporated into the following year's activities. Since the majority of the time spent at a Board meeting is dedicated to discussion and group processes, we have found that in-person meetings are the most effective.

To provide Board members with another opportunity to interact with and advise the RML, we will establish regular virtual special project meetings. We will hold web-based conferencing sessions where two or three RML project areas will be featured. Coordinators will describe current activities, challenges related to those project areas as well as inviting comment and suggestions.

### ***RML Events***

In another effort to encourage greater involvement with and understanding of the RML, staff will extend invitations to Regional Advisory Board members to all events planned for the state where the Advisory Board member works. This would include invitations to the exhibit hall where staff is promoting NLM and NN/LM resources and services as well as training sessions offered by the RML. Board members will also be invited to regional events such as those planned for e-science and health information literacy. Participation in these additional activities will provide Board members with awareness of the broad scope of the RML and areas where they can provide input to assist us to be more effective.

**The RML will pay travel costs to attend events when appropriate, for example if the RAB member helps to staff an exhibit booth or is a co-presenter. If there is not direct involvement in the event, the advisory board member will be invited but will be responsible for picking up the cost of attending the event.**

***Evaluation of the Regional Advisory Board Experience***

The RML is interested in capturing feedback from Regional Advisory Board members on their experience as well as identifying ways in which the Regional Advisory Board has assisted the RML in its programming. The NN/LM MCR will develop a feedback mechanism for Regional Advisory Board members to tell us what they thought of their experiences: Was it time well spent? What were the benefits to them or their organizations? What would they like to see done differently? The RML will use these comments to revise its management of the Regional Advisory Board.

Midway through the contract and at the end of the contract, the RML will review the activities of Board members through meeting minutes and through special project group activities to identify where and how the Regional Advisory Board has assisted the NN/LM MCR in its programming, and specifically in the areas of responsibility identified in the statement of work.

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**Schedule:**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
New member selection and orientation	X	X	X	X	X
Advisory Board members are assigned to specific project areas	X	X	X	X	X
Coordinators review logic model with members	X	X	X	X	X
Virtual Board meetings focused on special projects in July, January, and April	X	X	X	X	X
Annual Board meeting held in September or October	X	X	X	X	X
Assess Regional Advisory Board experience in April	X	X	X	X	X
Review the impact of the Board on RML programming and responsibilities identified in the statement of work			X		X

## A9 – Monitor and evaluate the Region's programs to assess their effectiveness

### Statement of Work

Monitor and evaluate the Region's programs to assess their effectiveness in meeting NN/LM goals and to identify and resolve problems which impede the effective delivery of health information services. The contractor shall:

- a. Evaluate and/or assess selected regional programs in consultation with the NN/LM Outreach Evaluation Resource Center and the Regional Advisory Committee;
- b. Provide NLM with regular feedback about NLM and NN/LM products and services from individuals and constituent groups; and
- c. Participate in a formal contract site visit and review of the regional program, to be conducted at least once during the contract, by selected representatives from NLM, the RAC and/or Network members, and at least one other RML

### Applicable NN/LM Goal

Understand how the products and services of the NN/LM and NLM contribute to improved access to health information by health professionals, and the public

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### Objective & Rationale:

Objective:

- NN/LM MCR is effective in assisting Network members in the delivery of health information services

The effectiveness of the NN/LM MCR in primary access to health information, is a primary goal of the NN/LM MCR. We focus on creating assessment and evaluation tools that will generate data to ensure the resources and services we provide meet the needs of our members in delivering health information services. The Assessment and Evaluation Coordinator is responsible for coordinating this program.

We use logic models in our annual planning process to articulate the work we will do and to relate that work to the goals of the NN/LM program and our region. Logic models are a means of organizing our work according to the goals of the NN/LM. The model includes the goals articulated for the NN/LM, the objectives that the NN/LM MCR believes will move the Region toward achieving those goals, outcomes that define the progress we expect to make in our work and indicators that represent how we measure our success.

Every fall, the NN/LM MCR staff develops the logic model for programming the activities of the next year. The models are the foundation for our web based system called the Activity Reporting System (ARS); this system is used by NN/LM MCR staff to record activities that can be aggregated into monthly, quarterly and annual reports. Coordinators enter nearly 1,400 reports

annually. The Activity Reporting System data is used to determine how closely MCR staff activities match plans for the year and what activities contribute to achieving the goals and outcomes articulated for the RML. Coordinators summarize their work quarterly, sharing their progress with their colleagues, discussing their successes and noting where more attention is needed. Using the Activity Reporting System the Associate Director and Project Coordinator create quarterly reports for the National Network Office that describes the activities of each state and special projects coordinator. Through the use of logic models and ARS, the NN/LM MCR staff understand how their work relates to each others', what efforts are required to carry out RML activities, and which activities and types of work are most effective in meeting the articulated goals of the RML.

To evaluate whether we are serving the needs of our Network members, NN/LM MCR administers Network Member Questionnaires and conducts focus groups to elicit input. During the fall of 2002, a questionnaire was designed and administered to obtain baseline information and feedback from NN/LM MCR libraries. The questionnaire was repeated in 2005 and the data compared to the baseline data. Also, in 2003, NN/LM MCR conducted a series of six focus groups in which thirty-three librarians from all states of the Region participated. The data provided by our Network members from the questionnaires and focus groups were used for program planning during the contract period. The Network Member Questionnaire and focus groups were repeated during the current contract to ascertain Network members' perceptions of the resources and services of the NLM and the NN/LM. Public librarians participated in focus groups on training issues held in 2007 and health sciences Network members discussed future trends in groups held in 2010. We evaluate new data for the knowledge we can gain and also compare it to previously collected data to better understand changes occurring in health sciences libraries and identify progress being made through our work of supporting access to health information. Reports from the three Network Member Questionnaires and three series of focus groups are posted on the RML web site in the Member Input section of Evaluation. (<http://nnlm.gov/mcr/memberinput>)

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### **Approach & Methodology:**

Outcome: - Evaluation data demonstrates the effectiveness of the Region's programs

A9a: Evaluate and/or assess selected regional programs in consultation with the NN/LM Outreach Evaluation Resource Center and the Regional Advisory Committee

The NN/LM MCR uses both formal and informal methods to collect data about the effectiveness of its programs and services. All project coordinators build assessment into their programs, and this approach is included in each section of this response narrative.

**Formal Assessment**

The NN/LM MCR uses questionnaires and focus groups periodically during the five year contract to solicit Network member input about programs, services and resources. These tools are developed with the assistance of the Outreach Evaluation Resource Center and the Regional Advisory Board. Both groups are asked to review drafts of questions being considered and also to help test the tools once they are in final draft form.

The NN/LM MCR will administer the Network Member Questionnaire during 2012. We will again review and revise the questions in consultation with the Outreach Evaluation Resource Center and Regional Advisory Board. We have employed an outside consultant, who, together with NN/LM MCR staff, analyzed the data from the 2002, 2005, and 2008 Network member questionnaires and wrote final reports. We will continue our practice of employing a qualified consultant to analyze and write the report for the 2012 Network Member Questionnaire. We will compare data collected to data obtained from earlier questionnaires and use that to inform future planning and programs.

Focus groups will be held in Year 3 to ascertain Network members' perception of the impact of health care reform, e-science, and new developments in health information on their work and services. We successfully used web conferencing for our 2010 focus groups allowing Network members from all over the region to participate. This approach broadened the pool of participants since it eliminated the need to live near or travel to a focus group session location. The effect of health care reform on our Network members and what the NN/LM MCR can do to support Network members' work as it is affected by health care reform, particularly related to electronic health records and personal health records, will be added to the question sets. A consultant will be employed for the analysis and technical writing required to report the results of the focus groups that are planned.

The results of the questionnaire and focus groups will be shared with Network members, Regional Advisory Board, NLM, and other NN/LM regions. In response to the analysis of information obtained during earlier Network Member Questionnaires and focus groups the NN/LM MCR:

- Increased the number of online educational opportunities
- Offered classes that teach DOCLINE skills
- Introduced new and emerging technologies
- Continued to push information to our Network members through our listserv
- Developed a suite of advocacy tools for hospital librarians to use in demonstrating their value

The NN/LM MCR distributed model was untested when it was proposed for the contract beginning in 2001. In questionnaires, focus groups, and other feedback, Network members have made it clear that they are extremely happy with the model. They speak of "their" coordinator and repeatedly voice their support for having coordinators distributed in each state. While the main NN/LM MCR administration occurs at the University of Utah library,

Resource Library Directors have also taken on an administrative role for the MCR. Each coordinator reports both to the NN/LM MCR Associate Director and also to the Resource Library Director. The success of this model depends on Resource Libraries viewing this model as a benefit not only to the Region but also to their libraries. A questionnaire will be administered in the last year of the contract soliciting input from the directors. They will be asked specific questions and also given opportunities to provide additional comments. The first evaluation revealed that the directors support the model and that they feel having an NN/LM MCR coordinator on their library staff has increased awareness of the NN/LM MCR and its programs. ~~Some suggested that the model added an administrative burden but all felt that the benefits outweighed any negatives.~~ **While Resource Library Directors indicated that having an MCR coordinator on their staff resulted in a certain overhead for their operations they also said that the burden of this overhead was more than offset by the benefits realized from having the MCR coordinator available. The overhead included providing space and infrastructure support while the benefits included:**

- **(It) helped the existing library staff to take a broader view in some issues, particularly outreach. The coordinator models outreach behavior, and this has made it easier for me to talk with staff about the importance of outreach activities.**
- **It has extended both our outreach activities and provided a better understanding of what is going on with other programs around the country. There are certainly financial advantages for the library.**
- **We are more aware of the needs of our state and I believe we are more connected to the state as a result of that outreach.**
- **(We) have incorporated her expertise in evaluation and assessment into library programs; clearly (have) a greater sense of membership in the NN/LM community among library staff; (it) has provided a mechanism for greater outreach through the promotion of MedlinePlus.**
- **Having someone dedicated to a national program such as the RML has brought some additional recognition to the library that would not otherwise have happened.**

**Coordinators and directors have worked together to make any desired adjustments and coordinators actively work at contributing expertise and time in support of their home library's programs and services.** This process will be repeated in Year 5 of the next contract.

While the distributed model requires the cooperation and support of the Resource Libraries, staffing adds another dimension to the model. Coordinators in the NN/LM MCR must be self-directed and able to work independently. At the same time they must work with their NN/LM MCR colleagues to carry out Regional programs. They must be facile with technology; comfortable traveling, presenting and teaching; able to develop comfortable working relationships with their Resource Library colleagues; and always be aware of how their plans or programs intersect with other coordinators' work. The NN/LM MCR administers a questionnaire

once during a contract soliciting coordinators' feedback and input on issues related to working in a distributed model. The questionnaire will be repeated in Year 5 of the current contract and in Year 5 of the next contract.

Internally, NN/LM MCR will continue to employ logic models for annual planning as well as use the Activity Reporting System to collect data about its work. Outcome evaluation is built into the logic model and an ongoing review tracks progress toward achieving the goals and outcomes. Activity reports will be reviewed monthly. We will review our progress quarterly and will modify activities to ensure that goals and outcomes are addressed. The year's activities will be matched against the planned goals, outcomes and activities in the logic model, enabling us to evaluate each of our program areas.

Annual analysis of ARS data related to outcomes achieved is another means of understanding the impact of the NN/LM MCR. We specifically review our work in terms of improved access to health information. We have learned over the four years that we have conducted this analysis that improved or increased access is frequently achieved at the end of a continuum that begins with developing awareness, building skills, and encouraging behavior change. With this understanding, we develop programs that meet our Network members' needs wherever they are on the continuum.

### ***Informal Assessment***

NN/LM MCR uses participant responses to polls during online presentations, evaluations of face-to-face and online classes, and periodic questionnaires addressing specific programming areas to gather data. Informal feedback obtained during conversations, visits, and meetings will be recorded in the ARS to ensure inclusion in quarterly reports to NLM.

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### **Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Review achievements during previous contract in terms of outcomes and indicators met and the kinds of change each represents and evaluate for the effect on ongoing work	X				
Develop questions for Network Member Questionnaire and consult with Regional Advisory Board and Outreach Evaluation Resource Center on Network Member Questionnaire	X				
Consult with Regional Advisory Board and Outreach Evaluation Resource Center on focus group questions		X			
Administer Network Member Questionnaire		X			

	Year 1	Year 2	Year 3	Year 4	Year 5
Hold focus groups			X		
Develop logic models for next contract year	X	X	X	X	X
Reports of activities entered in ARS are produced and reviewed monthly; adjustments to planned activities will be identified during the review process	X	X	X	X	X
Review of year’s activities against planned goals/outcomes/activities in logic model	X	X	X	X	X
Investigate and implement additional methods for obtaining information about our Network members’ needs	X	X	X	X	X
Conduct coordinator feedback assessment					X
Conduct Resource Library feedback assessment					X

A9b: Provide NLM with regular feedback about NLM and NN/LM products and services from individuals and constituent groups access to electronic consumer health information at the local, state, and regional levels

The NN/LM MCR regularly solicits feedback from Network members and others attending regional programs and presentations. The polling feature is used for every session offered using Adobe Connect. Every in person and online class (whether synchronous or asynchronous) has an evaluation form for participant feedback. Coordinators regularly receive comments from Network members. All responses pertaining to NLM or NN/LM products and services are shared with NLM. In addition to these evaluation tools, the NN/LM MCR uses a comprehensive questionnaire to obtain Network member input and feedback and conducts at least one series of focus groups during each five year contract.

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**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Share results of Network Member Questionnaire with Regional Advisory Board, NLM and other regions			X		

A9c: Participate in a formal contract site visit and review of the regional program, to be conducted at least once during the contract, by selected representatives from NLM, the RAC and/or Network members, and at least one other RML

During the last NN/LM site visit, the NN/LM MCR had participation from all around the Region. Using videoconferencing technology, team members heard from and conversed with Resource Library Directors, Regional Advisory Board members, and Network members who gathered at Resource Libraries. We welcome another site visit so that RML staff and Network members can share their regional experience. In preparation for the visit, we will review the last site visit report, gather information to demonstrate the program’s effectiveness, develop presentations in response to questions from NLM, and publicize and invite Network members to participate either in person or via videoconferencing.

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**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Review report from previous site visit in preparation for visit		X			
Host site visit			X		

## A10 – Participate in Tests, Usability Studies, and User Needs Assessments

**Statement of Work**

Participate in tests, usability studies, and user needs assessments of NLM and NN/LM products and services

**Applicable NN/LM Goal**

Understand how the products and services of the NN/LM and NLM contribute to improved access to health information by health professionals, and the public

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## Objective & Rationale:

### Objective:

- Develop a mechanism to provide NLM with regular feedback about NLM and NN/LM products and services from individuals and constituent groups

One program objective of the RML is health information outreach to populations that include Network members, health professionals, and consumers. As stated in *Measuring the difference: guide to planning and evaluating health information outreach*, “The outreach planning process thus begins with a community assessment to understand the context of the group...” “This process is a critical beginning to planning and evaluating a health information program as it sets the stage for developing overall program goals and objectives.”<sup>21</sup>

In order for products and services of the NLM and NN/LM to continue to meet the needs of its users, testing and feedback is necessary. During the current contract, NN/LM MCR staff have both formally and informally assessed the use of NLM and NN/LM products and services by Network members, health professionals, and members of the community. We have reported our informal findings from exhibits, meetings, and workshops and our formal findings from questionnaires and focus groups in regular reports to NLM.

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## Approach & Methodology:

Outcome: - NLM and NN/LM products and services better reflect the needs of users

### ***Use of NLM Products***

The MCR administers a comprehensive Network Member Questionnaire every three years and holds a series of focus groups with Network members once or twice during each contract period. One of the purposes is to ascertain Network members’ perception of the resources and services of the NLM and the NN/LM. The table below compares hospital library Network member responses to questions about NLM products and services on the questionnaires administered in 2002, 2005, and 2008.

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<sup>21</sup> Burroughs, Catherine M. *Measuring the difference: guide to planning and evaluating health information outreach*. Seattle, Wash.: National Network of Libraries of Medicine, Pacific Northwest Region; Bethesda, MD.: National Library of Medicine, 2000. Pp xx

**NLM Products and Services Use and Assessment, Hospital Libraries**

NLM Products and Services	Very Useful or Useful (Like)			Not Useful (Don't Need)			Haven't Used Yet			Don't Know What It Is	
	2002 n= 86	2005 n=105	2008 n=81	2002	2005	2008	2002	2005	2008	2005	2008
DOCLINE	84	92	71	1	1	0	0	2	2	1	1
PubMed	81	89	72	1	0	0	0	2	2	1	0
MedlinePlus	81	87	71	0	0	0	2	5	3	1	0
Household Products Database*	n/a	23	35	n/a	5	0	n/a	46	33	19	6
Genetics Home Reference™*	n/a	17	28	n/a	4	0	n/a	50	37	22	9
Partners website*	n/a	5	13	n/a	2	0	n/a	36	44	50	13
Weekly update subscriptions to NLM services*	n/a	36	28	n/a	1	2	n/a	39	32	16	6

\*New item on 2005 questionnaire

Table 8.

During 2003, NN/LM MCR conducted a series of six focus groups in which 33 librarians from all states of the Region participated. Public librarians were invited to participate in focus groups held in 2007 and health sciences Network members in groups held in 2010. The 2010 Network member focus group sessions were held via teleconference allowing more librarians to participate since the need to travel or live near the session site was eliminated. Reports from the three Network Member Questionnaires and three series of focus groups are posted on the RML web site in the Member Input section of Evaluation. (<http://nnlm.gov/mcr/memberinput/>)

Coordinators will continue to elicit information from members, health professionals, and the community during classes, exhibits, visits, and meetings. NN/LM MCR will hold a series of focus groups with a subset of Network members. These sessions will explore the effects of health care reform on participants' libraries and information services and will help the NN/LM MCR identify services and programs that can support Network members working in the changing health care landscape.

### **Testing of Products and Services**

During the current contract, NN/LM MCR staff have provided feedback on the usability of the NN/LM web site, Serhold® policy revisions, and the Regional Class Registration system as well as an NLM resource on cultural competency. We have also tested new versions of NLM resources, including PubMed, and forwarded suggestions by users to improve NLM systems. Results of the Network Member Questionnaire concerning NLM products and NN/LM products and services have been and will continue to be shared with NLM in the RML's quarterly reports.

NN/LM MCR participated in the NN/LM web usability study in 2005 and as a result redesigned the entire NN/LM MCR web site. Feedback from Network members continues to indicate that the site is useful and that they can find information they need. In a Spring 2009 questionnaire, seventy-eight of 103 respondents (76%) agreed that the NN/LM MCR web site increased their awareness of health information resources and regional activities. The site was rated useful or very useful by 56% of respondents who indicated a rating of the site on the 2008 Network Member Questionnaire.

We will continue to participate in testing and usability studies so that NLM resources will meet the needs of Network members, health professionals, patients, and communities.

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### Schedule:

	Year 1	Year 2	Year 3	Year 4	Year 5
Develop questions for the Network Member Questionnaire to be administered in Year 2	X				
The 2013 Network Member Questionnaire will ask members about their use of NLM and NN/LM products and services		X			
Hold focus groups			X		
Analyze and report on data obtained from Network Member Questionnaire			X		
Analyze and report on data obtained from focus groups				X	
Coordinators will elicit information from members and health professionals during classes, exhibits, visits, and meetings	X	X	X	X	X
RML staff will participate in tests as requested by NLM and provide feedback	X	X	X	X	X

## A11 – E-Licensing Support

**Statement of Work**

Assist Network members with negotiating e-licensing agreements that meet the needs of their institutions and support the mission of the NN/LM by providing resources on and training in e-licensing issues;

**Applicable NN/LM Goal**

Develop, promote, and improve electronic access to health information by Network members, health professionals, and organizations providing health information to the public

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### Objective & Rationale:

**Objective:**

- Librarians in the NN/LM MCR provide programs and services that improve the transfer of health care and biomedical information

Having license agreements for electronic resources that meet the needs of Network member institutions is an important objective for the NN/LM MCR. In a 2004 assessment of Network members, a significant number of respondents indicated they would benefit if the NN/LM MCR provided licensing negotiation services. As a result, the NN/LM MCR established and managed the NN/LM MCR Licensing Consortium. The goals of the consortium were to:

- Provide access to high quality resources at reduced rates
- Ensure little or no interaction with product sales representatives
- Make available contracts with terms already negotiated

In partnership with the Bibliographic Center for Research (BCR), and with guidance from an advisory group consisting of Network members, the consortium began providing licensing services to NN/LM MCR Network members. Several online products, primarily health provider decision support applications, were offered (EBSCOHost, Elsevier, and Access Medicine) with ACP PIER being the most successful. In late 2007, many Network members were still not licensing online products through the consortium despite heavy promotion by the NN/LM MCR and the advisory group. To identify reasons for poor participation, a study was conducted. The results indicated that although Network members were interested in consortia purchasing, they either 1) did not have funding to purchase, 2) had existing licenses for products offered or, 3) had existing licenses to products offered through local consortia. In mid 2008, BCR determined it could no longer sustain the negotiating and billing services it had originally agreed to provide. In order to continue the licensing relationship with BCR, the RML would have to increase BCR's annual fee approximately 1000%. Coupled with the results of the study and the fee increase, the NN/LM MCR dissolved the consortium in fall 2008.

The NN/LM MCR learned that there is truly a need for assistance with negotiating e-licenses, but conducting the negotiations for Network members was neither practical nor sustainable. The NN/LM MCR responded by directing more energy towards providing resources and training/consultation services to increase knowledge and skill of Network members in negotiating e-licenses.

The online class “Librarians are from Venus, Vendors are from Mars: Strategies for Developing Respectful Vendor Relationships and Strong Contracts,” created by the NN/LM MCR, teaches Network members how to work with and communicate with vendors, discusses the fundamental of contract terms important to libraries, and introduces electronic management systems. Participants evaluating the class have given it high marks for content, delivery, and its online venue. Class participants earn continuing education credits from the Medical Library Association. The NN/LM MCR offers this as an online course and approximately 30% of the participants come from outside the Region. The NN/LM MCR has also been invited to teach the class at the 2010 Online Florida Health Sciences Library Association conference.

The NN/LM MCR maintains a web page of current vetted resources on licensing electronic resources (<http://nmlm.gov/mcr/rsdd/licensing>). This page provides links to effective methods of managing collections and licensing strategies for Network members to increase their knowledge and skills in this aspect of librarianship.

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## **Approach & Methodology:**

Outcome: - Network members and other organizations are better able to support access to health information resources

### ***Licensing Electronic Resources Training***

The NN/LM MCR will continue to provide training that assists Network members with negotiating e-licensing agreements. We will continue to schedule the class “Librarians are from Venus, Vendors are from Mars: Strategies for Developing Respectful Vendor Relationships and Strong Contracts” on a regular basis. This class will be updated as necessary to reflect the changing licensing environment. The class evaluation will also inform improvements to the class.

### ***Develop and Maintain Resources on Licensing Electronic Resources***

The NN/LM MCR will continue to maintain a web page containing current and vetted information on licensing electronic resources (<http://nmlm.gov/mcr/rsdd/licensing>). This page will continue to provide links to effective methods of managing collections and strategies Network members can use to increase their knowledge and skills in this aspect of librarianship.

Network members also have free access to NetLibrary, through a license negotiated by the NN/LM MCR. The current collection consists of e-books in the areas of technology and library management. In the next contract, we will add e-books on negotiation and licensing. Members

will be given an opportunity to provide feedback on the content on the web page and e-books collection.

### ***Provide Consultation Services on Negotiating e-licenses***

NN/LM MCR staff will continue to provide consultation services for members needing assistance in negotiating e-licensing agreements, and will continue to encourage members to contact us, so we can work with them on questions or concerns they may have. After each consultation, members will be given an opportunity to provide feedback about their experience.

### ***Participation in Licensing Consortia***

For members that would prefer benefits from group licensing, the NN/LM MCR has identified active consortia within the region (Colorado Council of Medical Librarians and Health Sciences Library Network of Kansas City Consortium) and outside the region (The Statewide California Electronic Library Consortium) that negotiate e-licenses for their members. Some have been amenable to extending their services to members not in their geographic scope of service. Discussions are underway with consortia leadership to encourage them to test the feasibility of extending their geographic service area. At this stage, the concept holds promise to benefit Network members. The NN/LM MCR is also working with companies that are resellers of online resources (e.g., LYRASIS). These types of service providers are potential resources for NN/LM MCR Network members.

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## **Schedule:**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Identify health sciences consortia willing to extend their group licensing services to NN/LM MCR Network members	X				
Create a consultation feedback tool	X				
Quarterly offering of the class “Librarians are from Venus, Vendors are from Mars: Strategies for Developing Respectful Vendor Relationships and Strong Contracts”	X	X	X	X	X
Conduct an annual review of NN/LM MCR web resources on licensing electronic resources	X	X	X	X	X
Conduct a quarterly review of available e-books on negotiating electronic licenses in NetLibrary	X	X	X	X	X

	Year 1	Year 2	Year 3	Year 4	Year 5
Compile an annual list of recommended e-books on negotiating electronic licenses	X	X	X	X	X
Quarterly promotion of consultation services on negotiating electronic licenses	X	X	X	X	X
Quarterly promotion of health sciences consortia willing to extend their group licensing services to NN/LM MCR Network members		X	X	X	X

## A12 – Consultation on NLM and NN/LM Funding

### Statement of Work

Provide consultation to Network members as well as community-based, faith based and other organizations representative of special populations on preparing proposals for projects to compete for NLM and NN/LM funding

### Applicable NN/LM Goal

Develop, promote, and improve electronic access to health information by Network members, health professionals, and organizations providing health information to the public

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### Objective & Rationale:

#### Objective:

- Network members and other organizations have resources to support and improve information services for health professionals and others

The NLM and NN/LM both provide funding opportunities for small institutions and hospital libraries to offer a service or conduct research that may be beyond the capabilities of local budgets. For libraries, pursuing such funding opportunities is an excellent advocacy strategy, as it increases the perceived value of librarians to their institutions.

The funding process can be intimidating with complex instructions and innumerable forms to be completed. Even experienced proposal writers must carefully examine the fine print so that all the stipulations are met. Principal Investigators (PIs) may also need to call the funding agency for clarification. Providing proposal consultation services for Network members as well as for community-based, faith based, and other organizations representative of special populations will increase the quality of the proposals received by the NLM and the NN/LM.

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## Approach & Methodology:

Outcome: -Network members have the necessary skills to develop projects and programs

Throughout the current contract, NN/LM MCR coordinators have been available to consult with Network members and other organizations applying for NLM and NN/LM funding. As part of our consultation service, we discuss the feasibility of the project, help develop an idea, recommend funding sources, review proposals before submission, and when appropriate, write a letter of support. Our service is very effective when Network members take advantage of it and carry out our recommendations. For RFPs issued by the NN/LM MCR, we have noticed that proposals are more successful when a coordinator has provided assistance. Proposals that were not funded were rejected for common mistakes (e.g., not following instructions) that would have been fixed in a consultation.

As part of our consultation, we recommend partnerships between CBOs and Network members as fundable projects. The NN/LM MCR offers several resources to those who are proposing projects with a community-based organization; for example, the Navigating Collaboration toolkit (<http://nmlm.gov/mcr/resources/community/collaboration.html>) developed by the Community Outreach Working Group, provides Network members with resources to use as a starting point in developing collaborations. Entries in the Library Success Wiki include descriptions of Network member/CBO partnership funded projects. Collaborations provide a way for health information to reach a wider audience from trusted community resources. The Library Success Wiki (<http://www.libsuccess.org/>) is a resource for librarians to share and to find ideas and information on effective practices occurring in all types of libraries. The "Services for Health Information Consumers" category serves to collect and organize activities dedicated to providing increased access to health information for health care providers and the general public.

During the current contract, we provided sixteen online technical sessions to Network members who were interested in applying for the Continuity of Health Information Award. In each session, we reviewed the entire process of applying for funding by walking through the RFP:

- Developing an idea
- Working with appropriate partners
- Developing a budget
- Building evaluation into the proposal
- Program sustainability

The technical sessions will be offered again in Years 1-4 in conjunction with the offering of the different awards in the Region.

The Community Outreach and Consumer Health Coordinators are offering the Medical Library Association Continuing Education Class “Grant and Proposal Writing” in June 2010 at the Denver Public Library. The Associate Director will be offering a 90-minute proposal writing session for the Utah Academic Library Consortium meeting in the summer of 2010. In the next contract, coordinators will promote the availability of these classes to health sciences library consortia groups.

The NN/LM MCR promotes our consultation services on a regular basis using all of our communication tools, including the NN/LM MCR blog/weekly news, the Bringing Health into the Community blog, the NN/LM MCR Facebook page, and the NN/LM MCR web site. We believe that it is important to provide Network members with resources throughout the year, so when an opportunity to pursue funding arises, they are prepared. We will track our consultation efforts through follow up contacts.

**Schedule:**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Promote consultation services on preparing proposals for funding	X	X	X	X	X
Provide Network members resources on successful partnership practices with CBOs	X	X	X	X	X
Offer continuing education classes on proposal writing	X	X	X	X	X
Offer technical sessions in conjunction with offering funding opportunities	X	X	X	X	

**A13 – Promote Applications for NLM Grants**

**Statement of Work :**  
 Promote and encourage the submission of applications for NLM-sponsored grants

**Applicable NN/LM Goal:**  
 Develop, promote, and improve electronic access to health information by Network members, health professionals, and organizations providing health information to the public

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## Objective & Rationale:

### Objective:

- Network members and other organizations have resources to support and improve information services for health professionals and others

For small institutions and for hospital libraries in particular, grants provide opportunities for funding that may be beyond the capabilities of local budgets. Equally important, pursuing grants is an excellent survival strategy, as bringing in outside funding increases the perceived value of librarians to their institutions. The grants process can be intimidating with lengthy instructions and innumerable forms to be completed. Even experienced grant writers must carefully examine the fine print so that all the stipulations are met. It is common practice to call the grants officer for clarification. Because of the rapidly changing environment and increasing demands on health science librarians, encouraging health sciences libraries to submit proposals for NLM grants is more important than ever.

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## Approach & Methodology:

Outcome: -Network members and other organizations are aware of NLM grants available for application and funding

NN/LM MCR coordinators will track the announcements of relevant health information grants announced on the Grants.gov resource (<http://www.grants.gov/>). This resource now includes all grants offered by the U.S. government and is working with agencies to standardize their forms. All National Library of Medicine grants can be found on the site as well as those of the Institute for Museum and Library Services (<http://www.ims.gov/>), two major funding sources for library projects.

NN/LM MCR staff will promote NLM's Extramural Programs using our normal communication tools. Through the *RML News*, we will announce upcoming deadlines for NLM grants. We will also seek input and participation in promotion from Regional Advisory Board members who may have ideas of how to promote these grants to the constituents they represent and serve who are not part of the health sciences library community.

In our presentations about the NN/LM and the NLM, we will include information about the availability of funding from the National Library of Medicine so that more health professionals and community-based organizations will view NLM as a funding agency.

Potential principal investigators for NLM grants are Network members in the Region who have successfully proposed and carried out NN/LM MCR funded awards. As NN/LM MCR coordinators manage subcontracts, they will consider whether projects could be pilots for larger efforts and whether they would be appropriate for NLM grants. If pilots could be

expanded, the coordinator will encourage the Network member to apply for an NLM grant. A potential source of information on the types of projects being funded is the NIH RePorter (<http://projectreporter.nih.gov/>). NN/LM MCR coordinators will use and recommend this source when consulting with interested Network members.

NN/LM MCR staff will announce successful proposals from Network members using NN/LM MCR communication tools, for example: articles in the quarterly newsletter, *Plains to Peaks Post*, or “Breezing Along with the RML” webinars. For example, successful project managers will be featured in “Breezing Along with the RML” webinars; they will describe their projects, the development process, and possible methods others could use to implement a similar project. This will provide those thinking of writing a proposal with a successful example to emulate.

To evaluate the success of our efforts, we will annually document the number of proposals being submitted to NLM on which we consult. Consultation activities will be documented in our Activity Reporting System.

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### Schedule:

	Year 1	Year 2	Year 3	Year 4	Year 5
Promote NLM grants using our communication tools	X	X	X	X	X
Include NLM funding in presentations about the Network	X	X	X	X	X
Seek input and participation in promotion from Regional Advisory Board members	X	X	X	X	X
Identify potential NLM projects from NN/LM MCR funded projects	X	X	X	X	X
Document the number of NLM proposals on which NN/LM MCR staff consult	X	X	X	X	X
Promote NLM funded proposals awarded to Network members using NN/LM MCR communication tools	X	X	X	X	X

## A14 – Changing Role of Information Professionals

**Statement of Work:**

Develop programs, which may include pilot projects, to assist the information professional in promoting evidence based health information in the institution. The programs shall identify health information issues and address the changing role of the information professional with a special emphasis on hospital librarians. The programs may include but not be limited to: advocacy, education and training to address knowledge management, clinical information systems, patient safety programs, electronic health records, health literacy, or patient education.

**Applicable NN/LM Goal:**

Promote awareness of, access to, and use of biomedical information resources for health professionals and the public, with a particular emphasis on contributing to the Healthy People 2020 goal of eliminating health disparities.

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### Objective & Rationale:

**Objective:**

- Network members, especially hospital librarians, promote evidence based health information

The health sciences librarians' environment is changing rapidly and increasing in complexity. The evolution of online materials and databases has created competition for librarians' expertise. A common perception is that the skills that the library profession values are no longer necessary to the user. At the same time, the costs associated with health care have increased tremendously. "According to the Congressional Budget Office, in the past 30 years, health care spending has risen two percent faster annually than the rest of the economy. In 2007 the total U.S. health care bill came to \$2.3 trillion—more than we spent last year on food."<sup>22</sup> This increases the economic competition that libraries face within their institutions.

Economic and perceptual challenges are increasing. The practice of health care is becoming more complex. As more conditions are identified, more treatments are developed, and global travel increases the likelihood of epidemics. This increased complexity offers opportunity to those who are alert and positioned to take advantage of changes and emerging needs.

While opportunities are being presented daily, they require new skills and awareness. These changes are occurring so rapidly that graduate library schools are lagging behind in preparing students for the new environment. Most practicing librarians did not receive any business

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<sup>22</sup> Brownlee, Shannon. Why does health care cost so much? AARP Magazine [Internet]. July-August, 2008. [cited 2010 April 25]; Available from: [http://www.aarpmagazine.org/health/health\\_care\\_costs.html?NLC-WBLTR-CTRL&DET=F5-62708](http://www.aarpmagazine.org/health/health_care_costs.html?NLC-WBLTR-CTRL&DET=F5-62708) 4/25/2010.

training in their graduate studies and must rely on conference attendance and continuing education to develop awareness and skills needed in the current environment. This means that many health sciences librarians need additional exposure and training in order to position themselves to take advantage of new and emerging opportunities.

The NN/LM MCR's programming will bridge the gap between traditional library approaches and new opportunities. Professional organizations such as MLA and MCMLA provide high-quality training in traditional areas such as expert searching. NN/LM MCR will reach out into new areas such as knowledge management, patient safety, health information literacy, clinical information systems and electronic health records. The NN/LM MCR will also bridge the gap that practicing librarians have in business knowledge. This will enable librarians to successfully advocate for their positions within the financial structure of their institutions.

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### **Approach & Methodology:**

Outcome: - Network members, especially hospital librarians, participate in emerging practices to promote evidence based health information in the institution

***Workshop: Knowledge Management/Knowledge Sharing Role for Librarians in Hospitals***  
**As funding becomes available**, NN/LM MCR will sponsor a 1.5 day workshop for hospital librarians and an accompanying team member from the same hospital to explore how the concepts of knowledge management and transfer as applied in a corporate environment can be incorporated in the hospital/health care environment. This workshop will prepare librarians to adopt an expanded role in their institution.

Elements of the workshop include:

- Determining of how hospital librarians and others define knowledge management
- Sharing of best practices of knowledge transfer activities in hospitals
- Using experiences to illustrate existing responsibility for knowledge sharing
- Developing descriptions of envisioned projects, and formulating ways to support the proposed roles in hospitals - One example is addressing how an expansion of the information professional's role in knowledge management/transfer can affect organizational learning about error and quality improvement
- Developing team projects to be carried out in the participating hospitals
- Establishing relationships among the hospital teams attending the workshop to create a support group to test assumptions, discuss barriers, measure impact and share lessons learned

The workshop will be preceded by two sessions conducted through Adobe Connect to establish a common definition of knowledge management and review the processes that will be used in

the workshop. It will be followed by four sessions conducted through Adobe Connect for teams to share experiences and help each other to achieve success of their projects in their respective hospitals. Participants will be asked to share their experiences and project implementations through presentations on “Breezing Along with the RML” webinars and articles in *Plains to Peaks Post*.

### ***Patient Safety Online Classes***

The NN/LM MCR will sponsor a series of online classes on patient safety entitled “Patient Safety at the Sharp End.” The “sharp end” refers to the point where patient care is delivered and the most immediate risks and visible failures can occur. In order to contribute to safe and high quality patient care, librarians need to understand the information and knowledge exchange activity both at the hospital care unit level and the bedside.

### ***Patient Safety Symposium***

Building on the education previously offered in knowledge sharing and patient safety, the NN/LM MCR will offer a 2-day symposium focused on bringing together patient safety and knowledge management experts to explore linkages between complexity theory, learning organizations, safety culture, evidence-based management, and librarians’ roles in making those linkages reliable in the healthcare environment. Learning objectives for the symposium include:

- Understand the basics of systems thinking, complexity theory and the learning organization
- Learn how to apply those concepts to enable strategic thinking about knowledge sharing programs in the hospital through the use of dialogue, project planning and prioritization exercises
- Apply skills to engage with multidisciplinary groups and explore information and knowledge sharing programs to affect patient safety and experience sharing
- Envision and plan ways to disseminate learned content to reduce opportunities for failure in a complex environment based on clinical and librarian practice
- Identify opportunities for improved teamwork to enhance safety efforts in hospitals
- Look at the information/evidence/knowledge continuum and identify key opportunities for knowledge services process improvement and crosswalk those improvements to reduce medical errors

**Content from the Patient Safety Symposium will be shared through the various communication methods used by the MCR. We will consider videobroadcasting or recording key presenters for later viewing. Following the symposium, articles will be published in *Plains to Peaks Post* by the Advocacy Coordinator and attendees of the symposium. These articles will be made available to RMLs interested in posting them on their blogs or re-printing them in their newsletters. A summary of the content will be posted on the MCR web site, and any bibliographic material referenced in the symposium will be posted also. Additionally, a *Breezing Along with the RML* session containing material from the symposium will be**

**developed and presented in one of our regularly scheduled sessions following the symposium.**

### ***Health Literacy Summit***

The NN/LM MCR has identified health information literacy as an issue of significant concern and an area where librarians can have an impact on both health professionals and health consumers. In order to focus librarians' attention on this issue and to develop effective practices on health information literacy, the NN/LM MCR will co-sponsor a Health Literacy Summit with Health Literacy Missouri. Health Literacy Missouri has organized and run health literacy summits for several states in the past two years. Individuals from the six states in the region will be invited to attend including Network members, Regional Advisory Board members, health professionals, professionals from community based organizations, and others interested in this topic. A significant feature of this summit will be a health information literacy track. The objective of the Health Literacy Summit is to establish a coalition of stakeholders who will work together to build health literacy skills. The objective of the health information literacy track will be to identify the roles librarians can play in health literacy projects. Network members who attend will be asked to contribute their experience and knowledge gained through presentations to the Region and articles in *Plains to Peaks Post*. (See response to SOW section B2b for more information on the Health Literacy Summit)

### ***Business Practices***

Librarians are called to perform many business activities, and to advocate for their work in a business context in their practice. Unfortunately, few librarians are trained to perform and interact successfully in this area. In the current contract, the Library Advocacy Coordinator and the Assessment and Evaluation Coordinator have developed online calculators for determining the retail value of services provided, the cost/benefit analysis and return on investment of library books, journals and databases. These calculators have been presented at national and regional meetings as well as in online training sessions. Also, a Hospital Librarians' Toolkit has been established which furnishes librarians with brief descriptions of various business practices, including networking, marketing and promotion, as well as links to content developed by other professional organizations such as the Medical Library Association. All of these tools are available on the NN/LM MCR web site (<http://nmlm.gov/mcr>).

In the next contract, the NN/LM MCR will continue to build on the work done in the current contract. NN/LM MCR has been a leader in training librarians in project planning and evaluation. Co-developed in 2004 by the Assessment and Evaluation Coordinator, "Measuring Your Impact: Using Evaluation for Library Advocacy," has been taught more than nine times in the Region, reaching 149 librarians and more than forty times in the U.S. and Canada, reaching nearly 600 librarians. The class introduces students to environmental assessment, goal setting, articulating desired outcomes through the development of a logic model and the importance of planning for evaluation from the beginning of any proposed project. "Measuring Your Impact" will be held at least two more times in Year 5 of the current contract – at MLA 2010 and in St Louis. The class continues to be relevant and well received and will continue to be offered in the NN/LM MCR during the contract period. An online curriculum will be developed offering the

class in one hour segments over six weeks. In addition, online sessions discussing evaluation tools, including the online calculators for determining library value and institutional return on investment from library services (<http://nmlm.gov/mcr/evaluation/tools.html>) will be held periodically.

The NN/LM Outreach Evaluation Resource Center developed a series of three and four hour classes which, as a whole, address community assessment, project development and planning, data collection and data analysis and reporting. These complement the six hour “Measuring Your Impact” class, enabling students to spend more time on each concept than is available during the longer class. Two of the classes, “Answering the Right Questions: Data Collection for Health Information Outreach” and “Finding Information in Numbers and Words: Data Analysis for Health Information Outreach” will be offered in the MCR during the contract. Students in the “Measuring Your Impact” class regularly comment on the need for and the difficulty of doing data collection and analysis. These classes will offer NN/LM MCR librarians another source of training in this vital area.

The Assessment and Evaluation Coordinator will co-teach the first time the OERC classes are offered and then will be able to teach alone or with OERC staff in the future. The workshops will be offered in person and also using distance education technology, if the OERC has developed the necessary materials and curricula for teaching online. In order to determine whether Network members have acquired needed skills, we will include a question in the post-class evaluation for all classes asking if Network members feel that they are more proficient in project planning and evaluation. We will also follow up with students six months and one year after the class to find out how the students have used their planning and evaluation skills.

The NN/LM MCR will offer partial scholarships to five librarians for each of five online business classes offered by a well-known trainer and business consultant in the library industry. These classes are each approximately six weeks long, and have each been approved for eight MLA CE credits. The classes are:

- Everyday Leadership - getting people to get out of the tasks of medical librarianship and into leadership
- Influence - politics class for medical librarians
- Change Management - what mistakes do managers and leaders make when making changes
- Supervision
- Strategic planning

Individuals receiving scholarships will be required to apply their knowledge in their practice, and to share the results with colleagues through communication tools such as “Breezing Along with the RML” and articles in the *Plains to Peaks Post*.

The NN/LM MCR will continue the work begun in Year 5 of the current contract by the Woods Hole Bioinformatics Course alumni group. This is a group of librarians from the MCR and the

Pacific Southwest Region who have attended the Woods Hole Bioinformatics course and are interested in advising the regions on methods for librarians to become involved with bioinformatics projects. The group is working on identifying those librarians who have successfully participated in their institution's electronic health records (EHR) program and/or in the development of clinical information systems. The group has asked them to present their experiences, recommendations and best practices to Network members through "Breezing Along with the RML" webinar or articles in the *Plains to Peaks Post*, the NN/LM MCR quarterly newsletter. The emphasis of this program will be to illustrate the roles that librarians can play within a specific institution, for instance, serving on an EHR implementation committee to recommend links to evidence-based medicine or personal health information. The webinars and articles will build a base of knowledge throughout the Region.

The NN/LM MCR is very interested in facilitating pilot projects conducted by Network members where changing roles of librarians are tried. The NN/LM MCR will offer funding for pilot projects which may be granted for the development of new roles for librarians through the Continuity of Health Information Award and the New Collaborations for Health Sciences Librarians Award. (See our response to SOW section B6 for more information on our award program)

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### Schedule:

	Year 1	Year 2	Year 3	Year 4	Year 5
Hold Knowledge Sharing Workshop	X				
Hold Health Literacy Summit		X			
Offer Scholarships for librarians taking business classes	X	X			
Patient Safety Classes offered online			X		
Patient Safety Symposium offered				X	
Network members report on training activities and implementation in "Breezing with the RML" and <i>Plains to Peaks Post</i>	X	X	X	X	X
Individuals participating in electronic health records and/or clinical information systems projects share their experience and knowledge through Breezing with the RML sessions and <i>Plains to Peaks Post</i> articles	X	X	X	X	X

## A15 – Historical and Unique Materials

**Statement of Work**

Assist NLM in identifying collections of historical and unique materials related to the health sciences and developing ways to increase access to these materials (Appendix 3)

**Applicable NN/LM Goal**

Develop collaborations among Network members and other organizations to improve access to and sharing of biomedical information resources throughout the nation

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### Objective & Rationale:

Objective:

- Librarians in the NN/LM MCR provide programs and services that improve the transfer of health care and biomedical information

Because history of medicine collections represent our past and the path to our current state of health care and biomedical research, the National Library of Medicine (NLM) includes a directory to other libraries that house historical collections. NLM's web site also provides information on its historical collection and the Exhibition Program. These resources reinforce the commitment of the NLM to "collect, preserve, and make available to researchers and the public, print and non-print materials that document the history of medicine, health, and disease in all time periods and cultures."<sup>23</sup>

The NN/LM MCR, in support of this commitment, will focus on three initiatives with regard to historical and unique materials: 1) to promote the multiple historical collections that exist within the NN/LM MCR, 2) to promote the History of Medicine division of the National Library of Medicine and 3) to promote the Exhibition Program of the National Library of Medicine, including both online and traveling exhibits.

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### Approach & Methodology:

Outcome: -Network members are aware of and have access to historical collections within the region as well as those from the National Library of Medicine

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<sup>23</sup> National Library of Medicine, History of Medicine, About Us [Internet]. Bethesda (MD): National Library of Medicine (US), [updated 9 Jun 2009; cited 2010 May17]. Available from: <http://www.nlm.nih.gov/hmd/about/index.html>.

**Regional Collections**

Eight collections in four states of the NN/LM MCR, (Colorado, Kansas, Missouri and Nebraska) are registered with the National Library of Medicine's Directory of History of Medicine Collections (<http://wwwcf.nlm.nih.gov/hmddirectory/directory/locations.cfm>).

- Aurora, Colorado
  - James J. Waring, M.D., History of Medicine and Health Sciences Collection, University of Colorado Denver, Health Sciences Library
- Leawood, Kansas
  - Center for the History of Family Medicine, American Academy of Family Physicians Foundation
- Kansas City, Kansas
  - Clendening History of Medicine Library and Museum, University of Kansas Medical Center
- Columbia, Missouri
  - Western Historical Manuscript Collection - Columbia
- Kansas City, Missouri
  - Western Historical Manuscript Collection - Kansas City
- Kirksville, Missouri
  - Still National Osteopathic Museum and the National Center for Osteopathic History
- St. Louis, Missouri
  - Archives and Rare Books Section, Becker Medical Library, Washington University School of Medicine
- Omaha, Nebraska
  - Special Collections Department/UNMC Archives, McGoogan Library of Medicine, University of Nebraska Medical Center

In 2009, four archivists presented in a “Breezing Along with the RML” webinar session. Each highlighted special parts of their collection. A reprisal of this event is planned with the additional inclusion of other archivists. These individuals may be identified through the Network Member Questionnaire, which is used to gain information on our members on a number of different areas and will be conducted in Year 2. This query would focus on the following criteria: whether the members have medically-related unique and historical collections, whether they are open to the public, whether they serve public patrons upon presentation of a valid request, whether they answer reference requests on their collections and would, within their policies, provide limited interlibrary loan service. Should members answer in the affirmative to all of the above, the NN/LM MCR would ensure that the repository librarian or staff member submit an entry for the NLM's Directory of History of Medicine Collections.

During the five years of the contract, each archival librarian who manages historical collections in the Region will be asked to write an article for the *Plains to Peaks Post* newsletter highlighting their collections.

### ***National Library of Medicine - History of Medicine***

The National Library of Medicine maintains a History of Medicine web site, complete with multiple collections:

- Books and Journals
- Archives and Manuscripts
- Prints and Photographs
- Films and Videos
- Digital Collections

A speaker from the NLM History of Medicine division will be featured on a “Breezing Along with the RML” webinar to offer attendees a tour of the multiple resources available at this web site.

### ***National Library of Medicine - Online Exhibitions and Digital Projects***

The NLM’s Long Range Plan for 2006-2016, Goal 2.3 Promote knowledge of the Library’s services through exhibits and other public programs, states:

“Primarily via the Regional Medical Libraries and other members of the National Network of Libraries of Medicine, NLM’s products and services are exhibited and in some cases featured in Continuing Education classes and program sessions ...the NLM should continue this program.”<sup>24</sup>

In the current contract, two Resource Libraries (Creighton University and the University of Kansas), and a number of public libraries hosted programs from the Exhibition Program featuring an exhibit at their libraries. A speaker from the NLM will be invited to present to members on the “Breezing Along with the RML” session to highlight available exhibits, considerations for exhibiting, and the application process.

To encourage members within the region to apply for traveling exhibits, the Continuity of Health Information award may also be used to allow members to apply for funding to host exhibits, if the exhibit is part of a health information outreach effort.

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<sup>24</sup> Charting the Course for the 21<sup>st</sup> Century: NLM’s Long Range Plan 2006-2016, [Internet]. Bethesda (MD): U.S. Dept. of Health and Human Services, Public Health Service, National Institutes of Health, National Library of Medicine, 2006 [cited 2010 May 17] Available from : [http://www.nlm.nih.gov/pubs/plan/lrp06/NLM\\_LRP2006\\_WEB.pdf](http://www.nlm.nih.gov/pubs/plan/lrp06/NLM_LRP2006_WEB.pdf).

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## Schedule

	Year 1	Year 2	Year 3	Year 4	Year 5
Articles in <i>Plains to Peaks Post</i> highlight historical collections in the Region	X	X	X	X	X
<b>A speaker from the NLM History of Medicine Division presents at “Breezing Along with the RML” webinar session</b>	X				
National Library of Medicine Exhibition Program speaker presents at “Breezing Along with the RML” webinar session	X				X
Archivists present at “Breezing Along with the RML” session to highlight their collections			X	X	

## A16 – Training Facility

### Statement of Work

Provide a training facility equipped with personal computers as well as technologies supporting distance learning, including webcasts for conducting NLM training classes as outlined in the NLM Training Center Statement of Work. There will be one personal computer for every student. Equipment requirements are in (Appendix 4). Priority shall be given for scheduling regional training. When not in use for regional training classes, the facility may be used for other types of training.

### Applicable NN/LM Goal

Develop, promote, and improve electronic access to health information by network members, health professionals, and organizations providing health information to the public

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## Objective & Rationale:

### Objective:

- Health information resources are within easy reach of practicing U.S. health professionals

The National Library of Medicine Training Center (NTC) staff travel around the country providing classes to health sciences librarians, health care providers, public librarians, members of the public health workforce, and anyone interested in learning to effectively retrieve information from the National Library of Medicine’s health information resources. In order to

offer these hands-on classes, the training center requires the use of facilities equipped with proper hardware and software.

**Approach & Methodology:**

Outcome: -Health professionals, librarians, students and members of other organizations have increased skills to use resources for health information

The Spencer S. Eccles Health Sciences Library will provide a training facility outfitted with twenty computers to host the NLM Training Center classes in Salt Lake City. During the current contract, the library has used laptop computers set up classroom style in the Health Sciences Education Building whenever the Training Center instructors trained in Utah. The School of Medicine, and Colleges of Nursing, Pharmacy, and Health are given priority in reserving rooms for their classes in this building. The use of these rooms is so competitive that it is almost impossible to find a classroom of the size needed to accommodate Training Center classes except during the summer or during school breaks.

In Year 5 of the current contract, the Spencer S. Eccles Health Sciences Library will be renovating two rooms in the library to create a single computer lab of adequate size to meet the NLM Training Center requirements. It will be outfitted with twenty computers, a projector, telephone, and speakers necessary to provide in-person and distance education classes. The RML will have priority access for scheduling the room. Hardware and software within the facility will be maintained and supported by the Spencer S. Eccles Library Systems Department.

The NN/LM MCR’s seven Resource Libraries have also agreed to make their facilities available to host the NLM Training Center classes. This increases the number of training facilities so that there is at least one facility in each of the states in the Region where students can participate in NLM Training Center classes.

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
The expanded computer lab at Eccles Library is outfitted with computers and distance education technology	X				
The NN/LM MCR hosts the NLM Training Center at 2-3 sites in the Region	X	X	X	X	X

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## **Regional Services Plan**

### **Section B: Outreach Programs**

## B1 – Outreach Programs Health Professionals and Public Health Workers

### Statement of Work

The contractor shall develop, implement, and evaluate outreach programs that bring biomedical information resources within easy reach of U.S. health professionals and the public health workforce, who are not directly affiliated with an institution with a medical library. In carrying out these programs, the contractor shall focus on unaffiliated health professionals located in rural, inner city, and Medically Underserved Areas (MUA), public health workers, and minority health practitioners or those who serve minority populations. The outreach to health professionals program shall enlist the assistance of Network members through the use of subcontracts, agreements and other mechanisms. Specifically, the contractor shall undertake the following:

- a. Develop programs that reach practicing health professionals, including but not limited to: physicians, physician assistants, nurses, pharmacists, complementary and alternative medicine and allied health practitioners, veterinarians, public health workers, and health educators, with particular emphasis on collaborations with organizations/institutions that represent these groups;
- b. Develop programs that reach minority health practitioners and students in Historically Black Colleges and Universities, Hispanic Serving Institutions, Tribal Colleges, Community Colleges, and Vocational Schools, including institutions and organizations that focus on Native Hawaiians and Alaska Natives and the health professionals serving those populations or working in those disciplines. Programs should also focus on subject disciplines that have been identified as priority initiatives (e.g., health disparities, consumer health, health information literacy, HIV/AIDS, health services research, toxicology and environmental health);
- c. Develop pilot projects, which may include professional schools and organizations, to identify and promote the roles of libraries in institutions that have e-science initiatives;
- d. Develop programs, which may include pilot projects, with recently funded DHHS regional extension centers (RECs) (<http://www.hhs.gov/news/press/2010pres/02/20100212a.html>) to assist health professionals with implementing and using health information technology; and
- e. Develop culturally and linguistically appropriate resources and provide training in the effective use of electronic health information resources. Before developing any training materials, the MLA Educational Clearinghouse will be checked to avoid duplication. Copies of all training materials developed will be registered with the MLA Educational Clearinghouse. Training should include, but not be limited to: PubMed, MedlinePlus, and other NLM resources.

### Applicable NN/LM Goal

Promote awareness of, access to, and use of biomedical information resources for health professionals and the public, with a particular emphasis on contributing to the Healthy People 2020

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## Objective & Rationale:

### Objectives:

- Health information resources are within easy reach of practicing U.S. health professionals (applies to B1a, B1b, and B1e)
- Librarians in the NN/LM MCR provide programs and services that improve the transfer of health care and biomedical information (applies to B1c)
- Personal health information and access to evidence-based health information are incorporated into EHR systems (applies to B1d)

The National Library of Medicine's core mission includes outreach programs "to help assure that its users, including researchers, health professionals, and the lay public, are aware of and make effective use of health information available from NLM."<sup>25</sup> The NN/LM MidContinental Region will advance this mission by building on and enhancing outreach efforts to the unaffiliated health professional workforce currently in the Region. Over the past four years, coordinators have sought opportunities to exhibit and present to health professionals and the public health workforce practicing in urban and rural areas. During 2006-2010, over 1,000 health care providers and 460 public health workers received training. The NN/LM MCR has a unique distribution of the health care workforce, with many states illustrating a high percentage of Medically Underserved Areas (MUAs). These are areas or populations designated by Health Resources and Services Administration as having: too few primary care providers, high infant mortality, high poverty and/or high elderly population.<sup>26</sup>

Practicing in a MUA can impact health care providers' ability to access health information – they can be hundreds of miles from an academic health sciences or hospital library. The NN/LM MCR's distributed model allows coordinators to connect with the healthcare workforce in these areas through the public library, an often overlooked professional resource in the community. **Individuals at public libraries that are NN/LM MCR Network members will become knowledgeable in ordering articles from medical and scholarly biomedical related journals through Loansome Doc from health sciences libraries. Public libraries could become a Loansome Doc access point for health professionals or could provide Loansome Doc information so health professionals can set up their own Loansome Doc accounts.**

**Public libraries in the MCR are not full DOCLINE members nor do they lend medical or scholarly journal articles. Each state has interlibrary loan systems in place for public libraries to borrow medical and scholarly journal articles for their patrons. We believe that establishing public libraries as Loansome Doc access points is a more efficient way to deliver medical articles to the end user. ~~Public libraries can provide access to articles through their interlibrary loan services, as well as assist users with consumer health information questions.~~**

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<sup>25</sup> Charting a course for the 21<sup>st</sup> Century – NLM's long range plan 2006-2016 [Internet]. Bethesda (MD): National Library of Medicine; 2006 September [cited 2010 May 17]. Available from: [http://www.nlm.nih.gov/pubs/plan/lrp06/report/LRP\\_Goal2.html#R2\\_1](http://www.nlm.nih.gov/pubs/plan/lrp06/report/LRP_Goal2.html#R2_1).

<sup>26</sup> Find shortage areas: MUA/P by state and county [Internet]. Rockville: Health Resources and Services Administration [cited 2010 May 17]. Available from: <http://muafind.hrsa.gov/>.

NN/LM MCR coordinators have worked closely with public library staff in rural areas, conducting in-person and virtual train-the-trainer sessions on NLM resources such as PubMed and MedlinePlus. Coordinators promote the public library as a source for health information, as well as Loansome Doc (connecting providers to document delivery service via health sciences libraries) through one-on-one contact with care providers, and through contacts at professional conferences.

Having a presence at conferences and meetings where these geographically dispersed workforces convene is vitally important. It is a strategic way to reach a wide audience, and reduce the cost of travel to individual practices, clinics, medical centers and hospitals.

Nationwide, nearly 12% of the population lives in a MUA.<sup>27</sup> Figure 9 illustrates the total number of MCR counties in comparison to the number of rural counties and Medically Underserved Areas.<sup>28</sup> Overall, 60-75% of the MCR counties have MUA status.

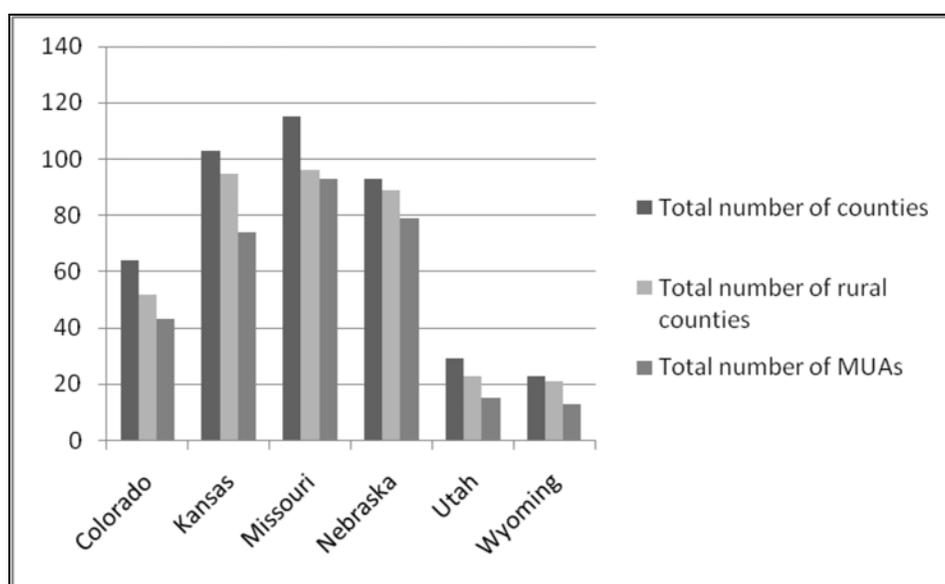


Figure 9. Medically Underserved Areas in the MCR

Individuals in rural areas face some distinctive health issues, especially those in MUAs. These issues include shortages of health professionals and limited or no access to health services. The Kansas Health Institute notes that patients often travel longer distances for care than people in cities and suburbs.<sup>29</sup> Geography also impacts the ability of unaffiliated health providers to access health information for themselves and their patients. The NN/LM MCR remains

<sup>27</sup> National report card on women's health [Internet]. Washington: National Women's Law Center [cited 2010 May 17]. Available from: <http://hrc.nwlc.org/status-indicators/Womens-Access-to-Health-Care-Services/People-in-Medically-Underserved-Areas.aspx>.

<sup>28</sup> Find shortage areas: MUA/P by state and county [Internet]. Rockville: Health Resources and Services Administration [cited 2010 May 17]. Available from: <http://muafind.hrsa.gov/>.

<sup>29</sup> Rural health topics [Internet]. Topeka: Kansas Health Institute [cited 2010 May 17]. Available from: <http://www.khi.org/news/rural-health/>.

committed to serving unaffiliated health professionals and encouraging the development of programs linking the unaffiliated to health information (e.g., document delivery, Loansome Doc, and electronic resource access). Public health departments tend to be a key source of healthcare access in rural areas. Roughly one-half of all local public health departments in the United States are both small and rural.<sup>30</sup>

Advances in public health have increased the average life expectancy more than twenty-five years, while advances in medicine have increased life expectancy by four years.<sup>31</sup> Yet the public health workforce remains one of the largest bodies of contributors to health that lacks access to health information. The need for improved access to evidence-based public health information has been recognized by public health practitioners, researchers, policy makers, and librarians. A 2006 study of public health found the major challenges to be limited or no access to full-text journals, unpublished research and systematic reviews. The study participants indicated a high need for access to free full-text, grey literature and conference proceedings, systematic reviews, and evidence-based guidelines related to public health.<sup>32</sup>

New opportunities are opening up for health sciences librarians to enhance access to health information. Innovations in collaborative information distribution initiatives play a role in the sharing of biomedical information resources. Integrating health sciences librarians in the implementation of e-science, Clinical and Translational Science Awards (CTSA) initiatives, and electronic health records is key. Understanding the technology and collaboration required in implementing these programs will ensure that evidence-based health information is incorporated and shared through all of these programs.

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## Approach & Methodology:

The NN/LM MCR has a high number of rural and frontier areas (fewer than 6 people per square mile), which isolates health care providers seeking health information, or excludes some communities not only from access to health information, but to healthcare providers themselves. Bolstering the number of Network members participating regionally in health information outreach will increase the opportunities for practitioners to learn about NLM resources.

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<sup>30</sup> Public health at the crossroads [Internet]. Topeka: Kansas Health Institute [cited 2010 May 17]. Available from: <http://www.khi.org/news/2006/mar/02/public-health-crossroads/>.

<sup>31</sup> Ten great public health achievements – United States, 1900-1999 [Internet]. Atlanta: Centers for Disease Control [cited 2010 May 17]. Available from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm>.

<sup>32</sup> Hatheway Simpson, E, LaPelle N, Russo Martin, E. Improving access to public health information: a study of information needs in a state health department [Internet]. Baltimore: University of Massachusetts Medical School; 2006 [cited 2010 May 17] 20 p. Available from: [http://escholarship.umassmed.edu/cgi/viewcontent.cgi?article=1061&context=lib\\_articles](http://escholarship.umassmed.edu/cgi/viewcontent.cgi?article=1061&context=lib_articles).

- 85% of Missouri counties are designated Health Professional Shortage Areas<sup>33</sup> (areas designated as having a shortage in primary medical care, dental or mental health providers)
- 15 of 38 frontier counties in Nebraska have no health care providers for almost all categories of health professionals<sup>34</sup>
- 11% of Colorado's physicians serve 73% of the state<sup>35</sup>
- Wyoming is ranked forty-fifth among the fifty states in physicians per 100,000 population<sup>36</sup>
- 86% of Utah counties are designated Health Professional Shortage Areas<sup>37</sup>
- Kansas currently is short about 500 to 750 doctors including about 400 primary care or family practice physicians<sup>38</sup>

B1a: Develop programs that reach practicing health professionals, including but not limited to: physicians, physician assistants, nurses, pharmacists, complementary and alternative medicine and allied health practitioners, veterinarians, public health workers, and health educators, with particular emphasis on collaborations with organizations/institutions that represent these groups

**Objective:**

- Health information resources are within easy reach of practicing U.S. health professionals

**Outcome:** - Health professionals, librarians, students, and members of other organizations have increased skills to use resources for health information

<sup>33</sup> Shortage designations: HPSAs, MUAs and MUPs [Internet]. Rockville: Health Resources and Services Administration [cited 2010 May 17]. Available from: <http://bhpr.hrsa.gov/shortage/>.

<sup>34</sup> Mueller K, Nayar P, Shaw-Sutherland, K, Nguyen, A, Xu L, Vanosdel N, Hummel D. A critical match: Nebraska's health workforce planning project final report [Internet]. Omaha: Nebraska Center for Rural Health Research; 2009 September [cited 2010 May 17] 216 p. Available from:

<http://www.unmc.edu/rural/documents/NebraskaWorkforceProjectFinal091509.pdf>.

<sup>35</sup> Sustainable towns: rural innovation, development, expansion and success [Internet]. Aurora: Colorado Area Health Education Center [cited 2010 May 17]. Available from: <http://hschealth.uchsc.edu/ahec/strides/index.asp?cat=strides>.

<sup>36</sup> Rural health care [Internet]. Laramie: Center for Rural Health Research and Education [cited 2010 May 17]. Available from: <http://www.uwyo.edu/health/TopicView.aspx?TopicId=5>.

<sup>37</sup> Find shortage areas: HPSA by state and county [Internet] Rockville: Health Resources and Services Administration [cited 2010 May17]. Available from: <http://hpsafind.hrsa.gov/HPSASearch.aspx>.

<sup>38</sup> Primary care grants to underserved areas to expand [Internet]. Topeka: Kansas Health Institute [cited 2010 May 17]. Available from: <http://www.khi.org/news/2009/oct/19/primary-care-grants-underserved-areas-expand/>.

The NN/LM MCR will advance programs that reach practitioners by engaging Network member hospital and academic librarians to represent the NN/LM MCR at local, state or regional conferences and other public programs by offering the Training Health Professionals Award. The Network member who applies for the award to teach classes and/ or exhibit will be expected to attend a webinar training class offered by the NN/LM MCR, and is “certified” as an NN/LM MCR representative, to ensure they have a working knowledge of NLM databases and services.

Network members in the NN/LM MCR can be an important component to the extension of RML staff outreach efforts. Though few Network members do outreach, those who are involved have a long history of offering and supporting outreach programs beyond the walls of their institutions. Table 9 illustrates the outreach conducted by hospital and academic libraries in the NN/LM MCR. These members promote their services to public health departments, public libraries, rural health professionals, inner city health professionals, Native Americans, Spanish language speakers, immigrants and new Americans, and African Americans. A Network Member Questionnaire conducted in 2008 found that one-fifth of hospital libraries and one-third of academic libraries in the NN/LM MCR engage in training groups or individuals outside of their institutions.<sup>39</sup> This outreach, when expanded, will contribute greatly to the NN/LM mission of improving access to health information. With many institutions unable to fund professional development due to institutional budget cuts, the awards provide not only an incentive, but an opportunity for health sciences librarians to participate in professional development offerings at the conferences.

**Network members in the MCR can be an important component to the extension of existing RML staff outreach efforts. Network member collaborations with the community healthcare workforce through face-to-face training can bolster community building and engagement. Hospital and academic health sciences librarians have experience in the instruction of NLM resources (e.g., PubMed, MedlinePlus), Internet searching skills, web 2.0 tools, and mobile devices for information access. This outreach, when expanded, will contribute greatly to the NN/LM mission of improving access to health information. The Training Health Professionals Award will encourage members to connect with unaffiliated healthcare providers in their communities to raise awareness of NLM resources and full text article access through programs such as Lonesome Doc and PubMed Central.**

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<sup>39</sup> NMQ, pg. 27

<b>2008 NMQ Outreach Targets</b> <sup>40</sup>	Hospital Libraries		Academic and Other Libraries	
	2005	2008	2005	2008
<b>Communities</b>				
General Public	21	11	8	7
Unaffiliated Health Care Providers	12	8	9	10
Public Health Depts., Agencies	6	2	4	7
Public Libraries	12	7	5	9
Other	6	4	3	6
<b>Populations</b>				
Special Populations	12	2	7	5
Urban Health Professionals	2	3	2	5
Rural Health Professionals	9	5	5	6
Primary Language not English	2	1	1	1
AIDS Community	1	1	2	2
Substance Abuse	3	1	0	0
Refugee (added in 2008)		0		0
Other	5	3	1	5

Table 9. NMQ Outreach Targets

Results from the Network Member Questionnaire (Figure 10) in the area of library training topics indicated hospital and academic libraries having experience in the instruction of NLM databases (e.g., PubMed, MedlinePlus), Internet searching skills, web 2.0 tools, and mobile devices for information access.<sup>41</sup>

<sup>40</sup> NMQ, pg. 26

<sup>41</sup> NMQ, pg. 19

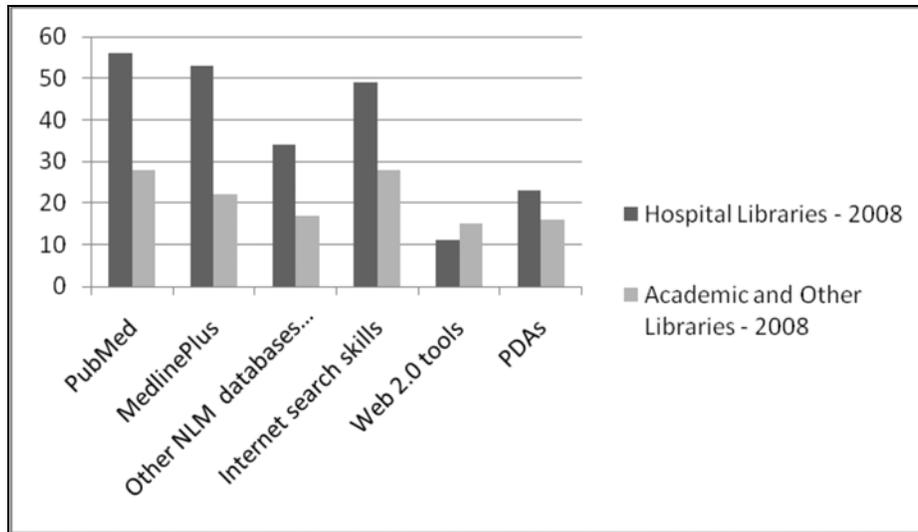


Figure 10. Numbers of Hospital and Academic/Other Libraries Offering Training

In April 2010, the Regional Advisory Board for the NN/LM MCR was asked what they thought about offering a training award. Some of their responses were:

- “It enfranchises more folks in advancing the mission and messages of the NN/LM program, which is bound to have a number of downstream positive outcomes not the least of which is community-building around the NN/LM program.”
- “It has the potential of expanding and reinforcing knowledge about the NN/LM’s resources and services among those members who participate as awardees but also the co-workers and contacts of those engaged members.”
- “I really like the concept of encouraging our presence at healthcare professionals’ conferences, as opposed to library conferences.”
- “I think you guys have come up with a very good idea. You’ve taken away a lot of the obstacles that keep libraries from doing outreach and made it a much more attractive option.”

The NN/LM MCR will develop metrics for measuring the effectiveness and impact of this award program. Based on feedback from Network members who conduct outreach, we will adapt the program to increase participation and garner best practices to share with all participants.

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Identify appropriate conferences and community health events to exhibit at and make presentations	X	X	X	X	
Recruit Network members to participate in exhibit and training certificate trainings	X				
Schedule and promote certification training for Network members via webinars	X	X	X	X	X
Develop a toolkit which will consist of training and presentation materials to be used by Network hospital and academic libraries at exhibits and in presentations	X				
Offer the Training Health Professionals Award	X	X	X	X	X
Evaluate outreach activities via metrics developed in Year 1 and 2, and adapt program based on awardees' feedback			X	X	X
Collect data from Network member awardees to understand the impact of the outreach on their institutions and on their professional development	X	X	X	X	X

**Health Ministry Outreach**

**The MCR has established successful relationships with The International Parish Nurses Resource Center, located in St. Louis, Missouri, and the Health Ministries Association.** The NN/LM MCR exhibits at the International Parish Nurses Resource Center's annual conference, the Westberg Symposium. The NN/LM MCR will be presenting *"Helping Patients Thrive with Knowledge: Health Information Literacy's Role in Patient Care"* at the 2010 Symposium being held September 17-29, 2010 in Saint Charles, Missouri. The NN/LM MCR also presented *"Making the Most of Web Resources to Enhance Health Disparities Information Programs"* at the 2007 Symposium held in St. Louis. In addition, the Community Outreach Coordinator has worked with the Nebraska Chapter of the Health Ministries Association, and exhibited along with the NN/LM Pacific Northwest Region when the national Health Ministries Association conference was held in Nebraska.

The NN/LM MCR will develop specific strategies to work with parish nurses in the Region by using these two organizations to contact and collaborate with member parish nurses. The Health Ministries Association has two state chapters in the region: Nebraska and Missouri. The

International Parish Nurses Resource Center maintains a list of Parish Nurse Coordinators by state (<http://www.parishnurses.org/DocumentLibrary/Coordinators%20by%20State.pdf>); there are currently eight coordinators in the NN/LM MCR. We will work with the coordinators and chapter leaders to reach practicing parish nurses in the NN/LM MCR. A series of four articles per year will be distributed to parish nurse newsletters. A brochure, similar to the racial and ethnic health information brochures (<http://nmlm.gov/mcr/resources/community/minority.html>), and a “Health on the Internet” series will be developed with parish nurses as the audience. While exhibiting at the Westberg Symposium in Year 1, a questionnaire will be handed to everyone who comes to the booth soliciting input regarding their health information needs. **Should it be discovered that access to journals is an issue for parish nurses, we will develop training tools, such as an online webinar, print brochures, and/or a presentation at the 2012 conference to inform parish nurses of ways they can access journal articles.** A new tool will be developed in Year 2 in response to the identified needs, and will be demonstrated the following year at the symposium, as well as included in newsletter articles distributed to the parish nurses. Possible tools that may be developed after the assessment include a CE class, a webinar, or a web page on the NN/LM MCR web site that focuses on specific information needs. The tool will continue to be evaluated and updated as well as promoted through the exhibit and newsletter articles.

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### Schedule:

	Year 1	Year 2	Year 3	Year 4	Year 5
Write and distribute four articles a year for Parish Nurses in the MCR region	X	X	X	X	X
Exhibit at Westberg Symposium, highlighting brochure and tools	X	X	X	X	X
Develop a brochure for Parish Nurses	X				
Solicit feedback on health information needs at Westberg Symposium	X				
Develop, maintain, evaluate and promote health information tools for Parish Nurses		X	X	X	X
Offer a class for faith-based nurses (sensitive issues for a faith-based community)		X	X	X	X

B1b: Develop programs that reach minority health practitioners and students in Historically Black Colleges and Universities, Hispanic Serving Institutions, Tribal Colleges, Community Colleges, and Vocational Schools, including institutions and organizations that focus on Native Hawaiians and Alaska Natives and the health professionals serving those populations or working in those disciplines. Programs should also focus on subject disciplines that have been identified as priority initiatives (e.g., health disparities, consumer health, health information literacy, HIV/AIDS, health services research, toxicology and environmental health)

**Objective:**

- Health information resources are within easy reach of practicing U.S. health professionals

Outcome: - Health professionals, librarians, students, and members of other organizations have increased skills to use resources for health information

Minority serving institutions are committed to helping African American, Hispanic, and Native American students reach their full academic potential. The Obama administration has shown its commitment to minority serving institutions, supporting the inclusion of \$2.5-billion for those colleges in the student-loan legislation the President signed in March of 2010.<sup>42</sup> The NN/LM MCR has seven Hispanic Serving Institutions, two Historically Black Colleges and Universities, and four Tribal Colleges.

- Hispanic Serving Institutions:
  - Adams State College, Colorado
  - Colorado State University, Pueblo, Colorado
  - Community College of Denver, Colorado
  - Otero Junior College, Colorado
  - Pueblo Community College, Colorado
  - Trinidad State Junior College, Colorado
  - Donnelly College, Kansas
- Historically Black Colleges:
  - Harris-Stowe State University, Missouri
  - Lincoln University of Missouri, Missouri
- Tribal Colleges:
  - Haskell Indian Nations University, Kansas

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<sup>42</sup> Kelderman E. White House adviser urges historically black colleges to change how they are seen [Internet]. Washington: Chronicle of Higher Education; 2010 Apr 22 [cited 2010 May 17]. Available from: <http://chronicle.com/article/White-House-Adviser-Urges/65218/>.

- Nebraska Indian Community College, Nebraska
- Little Priest Tribal College, Nebraska
- Wind River Tribal College, Wyoming

Though a smaller presence in the NN/LM MCR than in other regions of the country, these institutions have longstanding health science programs: Haskell Indian Nations University offers an Associate Degree in Health and Physical Education and Little Priest Tribal Colleges offers an Associate of Arts Degree in Alcohol & Drug Counseling. The libraries for Wind River Tribal College and the Nebraska Indian Community College support at least one class related to health. If health information is not already part of the curriculum, NN/LM MCR state coordinators will work with these sites to integrate it into the curriculum or as student electives. Each state coordinator has already demonstrated and/or provided training on NLM resources at each library at the institutions noted above. One library became a Network member as a result of the visit. In the next contract we will continue to encourage all libraries to become Network members.

A review of the level of health information involvement of the Tribal Colleges and Universities will be conducted in Year 5 of the current contract through an informal shadowing program at all locations. Coordinators will conduct an informal health information needs assessment, promote a stronger bond with librarians, and gain a better understanding of the librarians' and their constituents' needs. The shadowing program will bring to light whether and how information resources are included in the health courses, and the experience of the librarian in teaching health information resources as it applies to the health profession courses being offered.

### ***Allied Health Community Colleges***

A new area of outreach in the next contract will be the allied health field. The term Allied Health (or Health-Related Professions, at some institutions) is used to identify a cluster of health professions, encompassing as many as 200 health careers. Outreach conducted under the current contract has shown that health professionals are very receptive to learning about accessing professional level health information resources. With over 5 million allied health care providers in the United States,<sup>43</sup> the potential audience is huge. Allied health encompasses more than eighty different professions<sup>44</sup> and represents approximately 60% of all health care professionals. The NN/LM MCR has seventy-eight accredited allied health schools. Reflecting the overall ethnic makeup of the region, the majority of students are White, but the schools do have some representation for American Indian; Black, non-Hispanic; Asian/Pacific Islander, and Hispanic (Figure 11).

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<sup>43</sup> What is allied health? [Internet]. Reston (VA): Health Professions Network [cited 2010 May 17]. Available from: [http://www.healthpronet.org/docs/1342\\_AH\\_BrochUpdate\\_06.pdf](http://www.healthpronet.org/docs/1342_AH_BrochUpdate_06.pdf).

<sup>44</sup> Featured health professions [Internet]. Reston (VA): Health Professions Network [cited 2010 May 17]. Available from: [http://www.healthpronet.org/ahp\\_month/index.html](http://www.healthpronet.org/ahp_month/index.html).

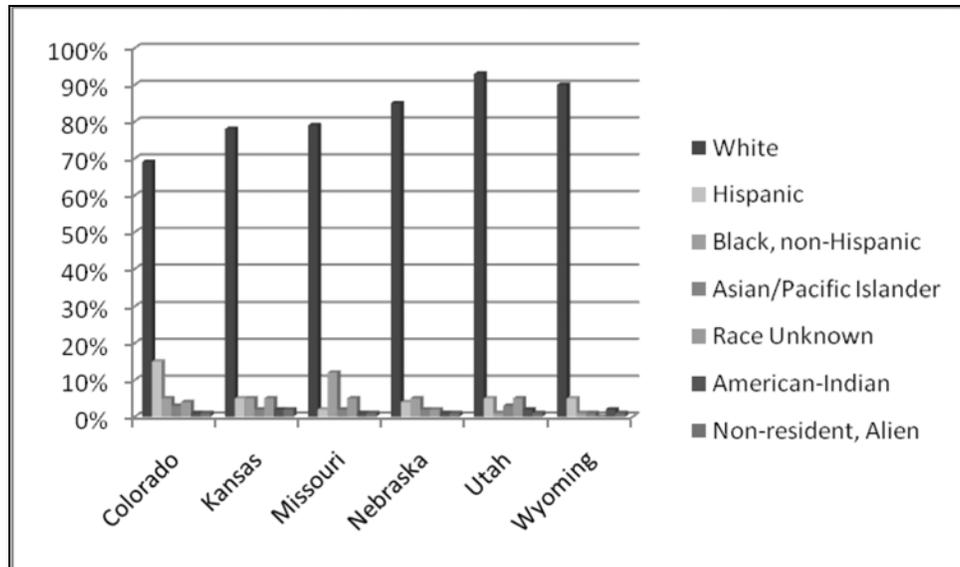


Figure 11. MCR Community College Student Ethnicity<sup>45</sup>

To gain a better understanding of the minority populations in allied health programs in the region, state coordinators will conduct an environmental scan of the seventy-eight schools and community colleges in the region to determine the minority populations enrolled in their allied health programs. State coordinators will work with librarians and faculty at selected sites to integrate health information into the curriculum and provide training. The NN/LM MCR piloted a program in the current contract to integrate health information into the curriculum of schools with a public health programs. Eight public health schools in the region now have this in their curriculum. Informatics, or the understanding of how to acquire, store, retrieve and use information about health and medicine, is a growing area for allied health education (see response to SOW section B1d for information about health informatics training in community colleges). Librarians play a significant role in health and medical informatics. NN/LM MCR coordinators will assist librarians at institutions with allied health programs to understand this new role by providing training on health information databases, such as PubMed.

<sup>45</sup> Community college enrollment [Internet]. Washington: American Association of Community Colleges [cited 2010 May17]. Available from: <http://www.aacc.nche.edu/AboutCC/Trends/Pages/enrollment.aspx>.

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Conduct environmental scan to identify community colleges in the region that have minority populations enrolled in allied health programs	X				
Develop programs to integrate health information into the curriculum at minority serving institutions and identified community colleges	X	X	X	X	
Conduct evaluation at each college/community college to measure impact of health information integration into the curriculum	X	X	X	X	
Build on the work conducted in 2002-2006 to survey and collect curriculum materials from libraries that offer allied health programs	X	X	X	X	

B1c: Develop pilot projects, which may include professional schools and organizations, to identify and promote the roles of libraries in institutions that have e-science initiatives.

**Objective:**

- Librarians in the NN/LM MCR provide programs and services that improve the transfer of health care and biomedical information

**Outcome:** - Network members, especially hospital librarians; participate in emerging practices to promote evidence based health information in the institution

The National E-Science Centre in the United Kingdom defines e-science as, “the large scale science that will increasingly be carried out through distributed global collaborations enabled by the Internet.” Typically, a feature of such collaborative scientific enterprises is that they will require access to very large data collections and very large scale computing resources (<http://www.nesc.ac.uk/nesc/define.html>).

For the purposes of NN/LM MCR program planning, we will operate under a broader definition of e-science; we will use e-science to refer to collaborative scientific activities carried out via the Internet. E-science includes the collection, organization, validation, and preservation of data. Examples of e-science activities include:

- Collaboration wikis or other web services designed for scientists to share data and information during the research process; for example, UsefulChem (<http://usefulchem.wikispaces.com/>);
- Sharing data sets over the network; for example, GenBank<sup>®</sup> (<http://www.ncbi.nlm.nih.gov/genbank/>);
- Utilizing a distributed network to carry out computationally intensive research; for example, the Enabling Grids for E-science (EGEE) computing project (<http://www.eu-egee.org/>) which provides a computing support infrastructure for over 13,000 researchers in a wide variety of disciplines.

E-science initiatives face both technological and policy challenges. Data structures and tools to access data may not be inter-operable. Data sets can be so large that the available server space to house one data set becomes extremely expensive. Distributed computing, or “cloud” computing, may be a solution. Scientists are also concerned about open access policy issues. A group of U.K. scientists from the Open Knowledge Foundation Working Group on Open Data in Science published the Panton Principles (<http://pantonprinciples.org/>), which states “data related to published science should be explicitly placed in the public domain.” Not all scientists are in agreement with the Panton Principles. Librarians need to understand these challenges in order to participate in e-science projects.

The Association of Research Libraries (ARL) E-Science Working Group conducted a survey<sup>46</sup> of their member libraries in 2009 to discover the level of library involvement with e-science activities. Out of 123 ARL libraries that responded to the survey, sixty-one reported an e-science program of some kind at their institution. Seventy-three percent of the institutions that responded reported that libraries were involved with e-science initiatives. Library involvement in e-science projects covered a wide range of support activities, including offering web sites with e-science information, data management training, and policy issue support.

As practicing librarians need to develop skills in order to participate in new e-science initiatives, library schools need to develop new curricula in order to prepare new generations of librarians for the changing work place. The development of e-science initiatives in 73% of the institutions responding to the ARL 2009 survey indicates that future academic and organizational librarians will be required to have these skills when entering the workforce. The three graduate library programs currently accredited in the MCR are the University of Missouri, Emporia State University, and the University of Denver.

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<sup>46</sup>ALA:2009 E-Science Survey Resource Page [Internet]. Washington, DC: Association of Research Libraries: Transforming Research Libraries; [cited 2010 April 4].  
<http://www.arl.org/rtl/eresearch/escien/esciensurvey/surveyresearch.shtml>.

E-science is an emerging area for the library profession. Few institutions in the NN/LM MCR are currently involved with e-science projects, and Network members located in other institutions (for example, hospital librarians) have little or no awareness of e-science. The NN/LM MCR will explore the potential for librarians working in e-science by:

- Developing a pilot project for its personnel
- Offering subcontracts for Network members (see our response to SOW section B6 for information on funding opportunities) for pilot projects that identify roles for librarians in e-science
- Investigating the possibility for one of the Region's graduate library programs to develop an e-science curriculum

### ***NN/LM MCR Pilot Project***

The NN/LM MCR will develop the e-science skills and awareness of its personnel by developing a pilot project using its own data collected on its members from the Network Member Questionnaires administered in 2002, 2005 and 2008. The data included in the project will describe the services, resources, and experiences collected on our membership. From this project, the NN/LM MCR will understand what is needed to curate the data, add metadata, anonymize the data and put it into a format that enables sharing with researchers. NN/LM MCR will explore the possibility of sharing and comparing this data with that collected by other regions. Through the implementation and execution of this project NN/LM MCR personnel will better understand the challenge and issues of researchers and librarians working in the e-science area.

### ***Pilot Project Subcontract Opportunity***

NN/LM MCR will offer an e-science two year subcontract opportunity to Network member libraries in the region. The intent of this subcontract is for one library to develop a role for librarians working collaboratively with an e-science initiative to identify the skills, competencies, and roles for librarians. It will build on the presentations in the e-science forums (see our response to SOW section B4 for a description of the forums). The project opportunity will be funded in Year 2 and run through Year 4, and will develop suggested practices for librarians working with e-science initiatives. The results of the project will be distributed through NN/LM MCR communication channels during Year 5.

**E-science is a newly emerging area for librarians. Currently, knowledge of the scope and intricacies of the area is limited. We believe that three years are necessary to investigate and learn enough about e-science in order to craft an appropriate subcontract opportunity. However, if the parameters of e-science become more clearly defined faster than anticipated, so we are able to move this project forward more quickly, we will move the pilot project up in the contract time period.**

**The MCR is very interested in completing the e-science project by the end of 2013. In order to accomplish this, we need to develop a request for proposal for a subcontract opportunity,**

**evaluate submissions, and award a subcontract in Year 1. The subcontract would be scheduled to run in calendar years 2012-3 with reports being submitted in 2013. The information gathered from these reports can then be scheduled to be released in late 2013. However, due to current budget restrictions we will not have any funding to offer for this subcontract opportunity. Should there be significant positive changes in the budget amounts, we will reevaluate our ability to proceed with this pilot project.**

### ***Graduate Library School Curriculum***

In addition to exploring the role for librarians in e-science projects in the workplace, the NN/LM MCR is concerned about the preparation of new librarians entering the field. E-science projects are complex, and require awareness, knowledge and many skills that may not be covered in more traditional course work. A number of library schools have begun offering courses in this area to produce a library professional ready to work with researchers and their data. Illinois Urbana-Champaign Graduate School of Library & Information Sciences offers a Data Curation Education Program, the University of North Carolina School of Information & Library Science offers a Digital Curation Curriculum, and Syracuse University's School of Information Studies is developing an e-Science Librarianship program. During Years 3 and 4, the NN/LM MCR will communicate with the three graduate library school programs in the Region to assess interest in add an e-science course curriculum for their students. The three graduate library programs currently accredited in the NN/LM MCR are the University of Missouri, Emporia State University, and the University of Denver.

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### **Schedule:**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
NN/LM MCR pilot project with its personnel to further understand e-science	X	X	X	X	X
NN/LM MCR subcontracted pilot project identifies skills, competencies and roles for librarians in e-science		X	X	X	
Investigate adding an e-science curriculum to a graduate library program in the region			X	X	

B1d: Develop programs, which may include pilot projects, with recently funded DHHS regional extension centers (RECs) (<http://www.hhs.gov/news/press/2010pres/02/20100212a.html>) to assist health professionals with implementing and using health information technology.

**Objective:**

- Personal health information and access to evidence-based health information are incorporated into EHR systems

**Outcome:** - RECs and health IT programs are aware of the value of incorporating personal health information and access to evidence based medicine resources in EHR systems

***Regional Extension Centers***

To help make health information technology (HIT) available to thousands of hospitals and clinics across the country by the year 2014, several programs have been created through the American Recovery and Reinvestment Act of 2009 (ARRA).<sup>47</sup> One of these programs is the Health Information for Economic and Clinical Health Act (HITECH) that provides financial assistance at the state level, over a four-year period, to facilitate health care providers' efforts to adopt and use electronic health records (EHRs).

Thirty-two non-profit organizations will be funded to support the development of Regional Extension Centers that will offer technical assistance to primary-care providers as they implement HIT in their clinics and become meaningful users of EHRs. *Meaningful use*, as defined by the Centers for Medicare and Medicaid<sup>48</sup> (CMS), is broken down into two stages. Stage 1 refers to capturing health information in a coded format, such as the International Classification of Diseases (ICD9), and using that information to track clinical conditions, and communicating that information to healthcare professionals to facilitate continuity of care and services. Stage 2 includes support for patient access to their own health information, self management tools, and improving population health outcomes.

Four of the six MCR states have received Regional Extension Centers funding:

- Colorado RHIO
- Kansas Foundation for Medical Care
- CIMRO of Nebraska
- HealthInsight, Utah-Nevada

<sup>47</sup>HITECH Programs [Internet]. Department of Health and Human Services. [cited 2010 May 17]. Available from: [http://healthit.hhs.gov/portal/server.pt?open=512&objID=1487&parentname=CommunityPage&parentid=1&mode=2&in\\_hi\\_userid=10741&cached=true](http://healthit.hhs.gov/portal/server.pt?open=512&objID=1487&parentname=CommunityPage&parentid=1&mode=2&in_hi_userid=10741&cached=true)

<sup>48</sup> CMS Proposes Definition of Meaningful Use of Certified Electronic Health Records (EHR) Technology [Internet]. Fact Sheets. Centers for Medicare & Medicaid Services. [cited 2010 May 17]. Available from: <http://www.cms.gov/apps/media/press/factsheet.asp?Counter=3564>

Sally Patrick, Outreach Librarian at the University of Utah Eccles Health Sciences Library, is currently part of the Community Task Force working on the HealthInsight, Utah-Nevada project. The vision of HealthInsight is to focus on improving the quality and effectiveness of health care.<sup>49</sup> The program includes health management tools for healthcare providers and consumers.

### ***Evidence-based Health Information at the Point of Care***

The practice of evidence-based medicine, as defined by MEDLINE<sup>®</sup>'s medical subject headings (MeSH<sup>®</sup>) is "the approach of practicing medicine with the goal to improve and evaluate patient care. It requires the judicious integration of best research evidence with the patient's values to make decisions about medical care."<sup>50</sup> In 1997, a study was conducted at the Nuffield Department of Medicine, University of Oxford, England to see if it was possible for healthcare providers to find and apply evidence-based health information at the point of care. An evidence cart was created that included a laptop computer with Internet access, a projector and screen, and print materials. The wheeled cart accompanied students and physicians on rounds for one month. Two interesting pieces came out of the study; first, it was found that if evidence was available on-demand during rounds, the clinical approach was changed 48% of the time. And second, when access to evidence was not available on demand, the clinicians did not search for answers to their questions.<sup>51</sup> The results of the Neuffield study are consistent with the findings of the Rochester Study done in the early 1990s, where 80% of the physicians reported that they changed their clinical approach as a result of the evidence provided to them by the library<sup>52</sup> (albeit, on-demand was not available as we know it today). Another study done in 2001 at Duke University Medical Center reported that Residents obtained 77% of their useful data from MEDLINE, and that obtaining useful data altered their approach 47% of the time.<sup>53</sup> These studies show the importance of accessible information at the point of care.

### ***Personal Health Records***

The Robert Wood Johnson Foundation defines a personal health record as "a platform that gathers patient data from multiple sources and hosts a suite of applications that use those data to help patients understand and improve their health."<sup>54</sup> There are many companies and organizations currently working to bring this definition to practical fruition; Google Health, Microsoft HealthVault, the Surgeon General's Family Health History Initiative, the NLM's

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<sup>49</sup> HealthInsight [Internet]. Salt Lake City. [cited 2010 May 17]. Available from:

<http://www.healthinsight.org/about/about.html>

<sup>50</sup> Medical Subject Headings [Internet]. Evidence-Based Medicine. Bethesda (MD): National Library of Medicine (US). [cited 2010 May 17]. <http://www.ncbi.nlm.nih.gov/mesh?term=evidence%20based%20medicine>

<sup>51</sup> Sackett, David L. Finding and Applying Evidence During Clinical Rounds. *JAMA*. 1998. 280(15):1336-1338.

<sup>52</sup> Marshall, JG. (1992). The impact of the hospital library on clinical decision making: the Rochester study. *Bulletin of the Medical Library Association*. April; 80(2): 169-178.

<sup>53</sup> Crowley, SD. (2003). A Web-based compendium of clinical questions and medical evidence to educate internal medicine residents. *Academic Medicine*. 78(3):270-4.

<sup>54</sup> Feature: The Power and Potential of Personal Health Records [Internet]. Princeton: Robert Wood Johnson Foundation; c2010 [cited 2010 May 17]. Available from: <http://www.rwjf.org/pr/product.jsp?id=49988>

MyMedicationList, and Medicare.gov all offer individuals a means to create a personal health record.

The National Library of Medicine (NLM) has been working with the Institute for Family Health in New York to create patient health record links to MedlinePlus, in order to provide quality health information to their patients. The Institute uses Epic as its electronic health record system; the patient view is called MyChart-MyHealth. The EHR tells MedlinePlus the appropriate ICD9 code; MedlinePlus translates the code into a MedlinePlus health information page, and delivers the page to the patient's browser view.

### ***Community College Consortia***

One of the programs created under the HITECH Act is the *Community College Consortia to Educate Health IT Professionals in Health Care Program*. The program awarded five regional consortia, which includes 70 community colleges, to create curriculum for a six month, non-degree training program to expand the availability of skilled health IT professionals to assist with the implementation of electronic health records. Creation of the training programs will be funded over a 2-year time period which began in March 2010. At the end of the 2-year funding period, the participating community colleges will have programs in place, with the capacity to train an estimated 10,500 students annually.

There are five community colleges in the MCR that will offer the training programs that are set to begin in September 2010.

1. St. Louis Community College, Meramec – Kirkwood, MO
2. Johnson County Community College – Overland Park, KS
3. Metropolitan Community College – Omaha, NE
4. Pueblo Community College – Pueblo, CO
5. Salt Lake Community College – Salt Lake City, UT

NN/LM MCR coordinators will contact the librarians at the five community colleges in the MCR to discuss the inclusion of educational materials in the curriculum that address the ability to integrate clinical-decision support tools and consumer-level health information tools into the EHR. Success will be measured by the number of community colleges that include this information in their training programs.

### ***Educating Ourselves***

The NN/LM MCR and Network members will investigate EHR systems to learn about their features, options and interoperability potential. Specifically, the NN/LM MCR would like to know which systems can interface with an evidence-based, clinical decision support tool, as well as interface with consumer health information resources, such as MedlinePlus. The NN/LM MCR, and involved Network members, will write a report of their findings and share this with Network members.

***Regional Extension Centers***

Funding of the Regional Extension Centers has already begun and will end by January 2013. Because of the short time frame of the Regional Extension Centers (a 4-year project), the NN/LM MCR has already begun to make initial contact with the Regional Extension Centers during Year 4 of the current contract or has an established relationship with the organizations on which to build. Sally Patrick, Outreach Librarian at the Spencer S. Eccles Health Sciences Library at the University of Utah, is a member of the HealthInsight Regional Extension Center in Utah; Nebraska Coordinator, Marty Magee has a working relationship with CIMRO of Nebraska; and Rebecca Brown, the Kansas Coordinator, has made initial contact with the Kansas Regional Extension Center. NN/LM MCR coordinators and Network members will attempt to get on appropriate committees of the Regional Extension Centers located in the region. In addition, because Nevada and Utah are covered by the same Regional Extension Centers, there is the possibility for inter-regional collaboration with the Pacific Southwest Region. Success will be measured by the number of health science librarians in the Region who serves as a contributing member of a Regional Extension Center committee.

Many of the groups that the Regional Extension Centers are reaching out to are physicians who are based in small practices that do not have access to libraries, physical or virtual. These unaffiliated physicians are one of our primary audiences. Working with the Regional Extension Centers has the potential for collaboration between the NN/LM MCR and the primary care physicians. We will assist Network members who want to be involved by developing a resource packet on Regional Extension Centers. These resources will be produced by a task force made up of members serving on the Regional Extension Center Committees.

***Electronic Health Records and Patient Health Record Links***

The NN/LM MCR and its Network members will work with electronic health record selection committees, in states that have Regional Extension Centers, to encourage the use of an electronic health record system that has the ability to integrate with clinical decision support tools and consumer health information resources. By working with the Regional Extension Centers, we hope to provide training and assistance to health professionals on using their electronic health record systems to deliver reliable health information resources to their patients. Success will be measured by the number of electronic health record users in the NN/LM MCR who provide a consumer-level module for their patients.

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Work with Regional Extension Centers during their funding period that ends in 2013	X	X	X		
Work with librarians at <del>the five</del> community colleges that are offering the 6-month health IT certification program to educate them on incorporating evidence based health information and NLM consumer health resources into electronic health record systems so they will be able to work with faculty to incorporate this information into the curriculum	X	X	X	X	X
Continue to educate ourselves and monitor new developments and advancements on the implementation and use of electronic health records.	X	X	X	X	X
The NN/LM MCR and its Network members become members of Regional Extension Centers committees	X				
Develop a resource packet on Regional Extension Centers to assist Network members	X				
The NN/LM MCR will form a Task Force of its members that are on Regional Extension Centers committees to share effective practices on adopting the electronic health record model	X				

B1e: Develop culturally and linguistically appropriate resources and provide training in the effective use of electronic health information resources. Before developing any training materials, the MLA Educational Clearinghouse will be checked to avoid duplication. Copies of all training materials developed will be registered with the MLA Educational Clearinghouse. Training should include, but not be limited to: PubMed, MedlinePlus, and other NLM resources

**Objective:**

- Health information resources are within easy reach of practicing U.S. health professionals

Outcome: - Health professionals, librarians, students, and members of other organizations have increased skills to use resources for health information

“It is a truism of health education that programs and interventions will be more effective when they are culturally appropriate for the populations they serve.”<sup>55</sup> Many health care systems and organizations have adopted the *National Standards for Culturally and Linguistically Appropriate Services in Health Care* issued by the U.S. Department of Health and Human Services Office of Minority Health. The ultimate goal of the standards is to contribute to the elimination of racial and ethnic health disparities and to improve health, with Standard 7 stating “Health care organizations must make available easily understood patient-related materials”<sup>56</sup> and Standard 11, “Health care organizations should maintain a current demographic, cultural, and epidemiological profile of the community as well as a needs assessment to accurately plan for and implement services that respond to the cultural and linguistic characteristics of the service area.”<sup>57</sup>

Linguistically, the majority of the population in the region speaks English as their primary language. Spanish ranks second, German third, and French fourth. A few MCR states have a small percentage of Vietnamese and Native North American only-speakers. Although the NN/LM MCR is primarily Caucasian, it is growing in diversity with an increasing number of refugees resettled in the region. In 2008, nearly 4,200 refugees were resettled in Colorado, Kansas, Missouri, Nebraska and Utah.<sup>58</sup> Due to this influx, medical providers may interact with patients and family members from different cultural and linguistic backgrounds. Refugee populations have been shown to have a high prevalence of several mental disorders, including post-traumatic stress disorder (PTSD), depression, substance abuse, somatization disorder (a long-term condition in which a person has physical symptoms that are caused by psychological problems), and traumatic brain injuries. The prevalence of psychiatric symptoms is high in non-clinical as well as clinical refugee populations.<sup>59</sup> While the refugee populations are small, they can require substantial medical care.

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<sup>55</sup> Kreuter M, Lukwago S, Bucholtz D, Clark E, Sanders-Thompson, V. Achieving cultural appropriateness in health promotion programs: targeted and tailored approaches [Internet]. Thousand Oaks (CA): Sage Publications; *Health Education Behaviors* 2003: 30:133 [cited 2010 May 17]. Available from: <http://heb.sagepub.com/cgi/reprint/30/2/133>.

<sup>56</sup> National standards on culturally and linguistically appropriate services [Internet]. Washington: The Office of Minority Health [cited 2010 May 17]. Available from:

<http://minorityhealth.hhs.gov/templates/browse.aspx?vl=2&vlID=15>.

<sup>57</sup> *ibid*

<sup>58</sup> Fiscal year 2008 refugee arrivals [Internet]. Washington: Administration for Children and Families - Office of Refugee Resettlement [cited 2010 May 17]. Available from:

<http://www.acf.hhs.gov/programs/orr/data/fy2008RA.htm>.

<sup>59</sup> Savin D, Seymour D, Littleford L, Bettridge J, Giese A. Findings from mental health screening of newly arrived refugees in Colorado [Internet]. Bethesda: PubMed Central [cited 2010 May 17]. Available from:

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1497730/pdf/16134561.pdf>.

Access to culturally and linguistically appropriate resources and training has the potential to improve the quality of care and health outcomes, and assist patients and consumers to make informed decisions about their health. However, there are barriers to accessing appropriate resources. A 2008 report exploring refugee populations identified three key issues in providing culturally and linguistically appropriate health information:<sup>60</sup>

1. Lack of existing materials in appropriate languages
2. Expense of buying or producing materials in appropriate languages
3. Finding qualified interpreters and translators

Figure 12 illustrates the top seven countries representing the largest percentage of refugees that resettled in the MCR in 2008. Many of these countries have multiple languages spoken, adding to the complexity of providing appropriate health information. The region also has a small number of refugees from the former Union of Soviet Socialist Republics, Vietnam, and the Democratic Republic of Congo that are not represented in Figure 12.

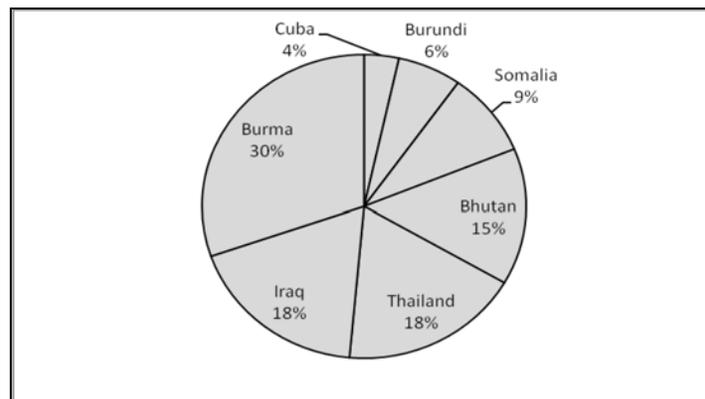


Figure 12. Top seven countries of origin for resettlement in the MCR, 2008<sup>61</sup>

### **Promoting Language Resources**

The NN/LM MCR will continue to advance access to and training in culturally and linguistically appropriate resources. We will promote these resources at exhibits and presentations at state and local public health conferences and meetings. NN/LM MCR coordinators will promote resources highlighted on the national NN/LM *Consumer Health Information in Many Languages Resources* site (<http://nnlm.gov/outreach/consumer/multi.html>). This site, a collaboration of the NN/LM Consumer Outreach Librarians provides links to:

- Minority health resources
- Racial and ethnic resources

<sup>60</sup> Flewelling K. Addressing the need for culturally and linguistically appropriate health information for newly arriving refugee populations: project report [Internet]. Bethesda: PubMed Central; p 13-14[cited 2010 May 17]. Available from: [http://rhin.org/document\\_view.aspx?id=5143](http://rhin.org/document_view.aspx?id=5143).

<sup>61</sup> Fiscal year 2008 refugee arrivals [Internet]. Washington: Administration for Children and Families - Office of Refugee Resettlement [cited 2010 May 17]. Available from: <http://www.acf.hhs.gov/programs/orr/data/fy2008RA.htm>.

- Multi-language resources
- Cultural competency
- Health disparities
- Statistical data and government reports

In addition to promoting the multi-language resources in MedlinePlus, there are numerous authoritative resources dedicated to multi-language health resources (e.g., Refugee Health Information Network (RHIN), EthnoMed, Healthy Roads Media, and SPIRAL: Selected Patient Information Resources in Asian Language), which NN/LM MCR coordinators will promote to health professionals serving culturally and linguistically diverse populations. For the NN/LM MCR's web presence, a professional translator will be hired to translate Spanish sections of the NN/LM MCR state pages (see our response to SOW section B2d for more information).

### ***Training on Cultural and Language Resources***

Developing culturally and linguistically appropriate resources is a complex process – high level translation can be costly and time-consuming. Organizations such as the Office of Refugee Resettlement have mechanisms in place to identify minority communities and translate health information pertinent to those groups. Identifying the organizations, including regional Refugee Health Coordinators, that develop these resources will be key to assisting health care providers in the region locate authoritative resources. Developing relationships with the regions five Refugee Health Coordinators and voluntary resettlement agencies (VOLAGS) can also assist NN/LM MCR state coordinators locate developers of culturally and linguistically appropriate health information and promoting access to appropriate health information. NN/LM MCR coordinators will continue to raise awareness regarding the impact of culture and language on health outcomes by offering National Network of Library classes such as the “Health Information Literacy Curriculum,” “¿No Comprende? Spanish Health Information Resources for English Speakers,” “Promoting Health Literacy through Easy-to-Read Materials,” “MedlinePlus® for Health Professionals,” and “Finding Native Health Info Online.”

A new area for the NN/LM MCR will be facilitating relationships between health care providers and the groups tracking cultural and linguistic shifts in the region. Tracking shifts in population is tricky. The Flewelling report noted that health agencies depend on state agencies for health information materials, while health agencies employ resettlement agencies for cultural orientation.<sup>62</sup> The flow of refugee information touches many agencies and follows a very specific process. For instance, the State Department notifies resettlement agencies and public health officials about the incoming populations. The Office of Refugee Resettlement contracts with VOLAGs and participating states for services to refugees. The Centers for Disease Control and VOLAGs communicate with state and local public health agencies when specific individuals arrive. Finally, local health agencies or contracted clinics conduct initial health screenings. NN/LM MCR coordinators will assist local health providers by raising awareness of the agencies that track pertinent information on refugee populations, and encouraging groups translating health information, such as the Refugee Health Coordinators, to share their resources with sites

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<sup>62</sup> Flewelling, pg. 18

like Refugee Health Information Network (RHIN). The NN/LM MCR will continue to encourage health care organizations to collaborate and consult with community based organizations, community groups, health ministries, and local public libraries who share common outreach goals.

**In order to reach providers serving new refugees and facilitate relationships between healthcare providers and Refugee Coordinators, the MCR will exhibit and present at rural and minority health state conferences, promoting RHIN and language resources available in MedlinePlus and sharing the SORC resources and contacts. These conferences provide an excellent venue for face-to-face contact with healthcare providers, and for facilitating relationships between healthcare providers who serve refugee populations and the SORC staff. At these events, MCR staff will have an opportunity to inform providers of the SORC resources appropriate for their community, and contact information of SORC staff in their state. In addition, the MCR will work the Area Health Education Centers (AHEC) to share resources from SORC. Communication with the AHECs allows the MCR to reach direct patient care providers who serve these populations as preceptors in community hospitals, clinics, and private practice.**

#### ***Outreach Connections: Native Health Information***

The NN/LM MCR has been a steering committee member of Outreach Connections: Native Health Information since its inception. This project, coordinated by the University of New Mexico's Health Information Center, was funded through the NN/LM MCR. Since 2006, the Outreach Connections steering committee has worked to develop a collaborative space for those involved and interested in health information outreach to native populations. This includes American Indians, Alaska Natives, and Hawaiians. Members of the steering committee come from all over the country. The collaborative space is a wiki where those who are conducting health information outreach to native populations can share their projects. The NN/LM MCR coordinators will continue to add descriptions of their work to this collaborative space and encourage others who are involved in this type of outreach to do the same.

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#### **Schedule:**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Evaluate collaborative activities to measure impact, and make changes based on results of evaluation					X
Translate Spanish section of the NN/LM MCR state pages	X		X		
Maintain list of web-based resources and ethnic/racial tri-folds for African American Health, Latino Health, Native American Health, and Asian American Health	X	X	X	X	X

Collaborate with Refugee Health Coordinators to identify developed culturally and linguistically appropriate resources	X	X	X	X	X
Identify local public health agencies and organizations serving multiple ethnic and refugee populations	X	X	X	X	X
Exhibit and present at state and local public health conferences, promoting culturally and linguistically appropriate electronic resources	X	X	X	X	X
Provide training on cultural and language resources	X	X	X	X	X
Contribute to and promote Outreach Connections: Native Health Information	X	X	X	X	X

## B2 – Consumers

### Statement of Work

The contractor shall develop, implement, and evaluate outreach programs to increase the public's awareness of and access to high quality electronic health information. In carrying out these programs, the contractor shall work with a variety of intermediaries including Network members, health professionals, public health workers, information professionals, educators, community, faith-based, volunteer, and other types of organizations, including those serving minorities, special and underserved populations, health advocacy and self-help groups, through the use of subcontracts, agreements, and other mechanisms.

- a. Develop programs that reach special populations (e.g. minorities, seniors, teens, veterans' groups, low income populations, etc.), focus on special topics (e.g. health disparities, health information literacy, HIV/AIDS, public health, culturally and linguistically appropriate information, personal health records, emergency preparedness, etc.), and promote NLM resources to consumers;
- b. Foster collaborations and encourage outreach partnerships among Network members, community, faith-based, and volunteer organizations including those serving minority and underserved populations, and other types of organizations, to improve access to electronic consumer health information at the local, state, and regional levels;
- c. Provide consultation for Network members in project planning, preparation, writing and evaluation;
- d. Develop culturally and linguistically appropriate resources and provide training in the effective use of electronic health information resources. Before developing any training materials, the NLM Training Center and MLA Educational Clearinghouse will be checked to avoid duplication. Copies of all training materials developed will be registered with the MLA Educational Clearinghouse. Training should include, but not be limited to: PubMed, MedlinePlus, and other NLM resources; and
- e. Develop pilot projects to identify and promote the roles of libraries in institutions that have received or are seeking NIH Clinical and Translational Science Awards (CTSA) with a focus on community engagement.

### Applicable NN/LM Goal

Promote awareness of, access to, and use of biomedical information resources for health professionals and the public, with a particular emphasis on contributing to the Healthy People 2020

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### Objective & Rationale:

#### Objectives:

- The NN/LM MCR increases the public's awareness of and access to health information
- Librarians in the NN/LM MCR provide programs and services that improve the transfer of health care and biomedical information

The NN/LM MCR has demonstrated the value collaboration plays in outreach through the use of the distributed model. State coordinators are members of their state library association and

of state or local health sciences library consortia; they are embedded in local public and community health organizations. They can participate in these local organizations because they live in the states the NN/LM MCR serves. The NN/LM MCR coordinators have developed projects and tools, such as the Navigating Collaboration Toolkit (<http://nnlm.gov/mcr/resources/community/collaboration.html>) with the assistance of Network members, as a way to develop a cadre of leaders in health information outreach within our region. We recognize the truth of the statement: "Hospitals, clinicians, public health departments, and other service providers are learning that when it comes to delivering health care, it no longer pays to go it alone."<sup>63</sup>

The NN/LM MCR works with intermediary groups, such as libraries, community and faith based organizations, and governmental agencies that already have developed trusted relationships with consumers. Working with these entities allows us to integrate health information into programs that have been successful in reaching the health information consumer, especially special populations. Health Sciences libraries are an integral piece of the health care system, and they have always been collaborative within their institutions; public libraries are integral members of their communities' infrastructure. The NN/LM MCR works with Network members to assist them as they take steps outside their institutions and bring their collaborative skills to work in the greater community, partnering with public health departments and community organizations to increase consumer access to health information.

Cultivating partnerships with public libraries will continue to be a major strategy in the MCR in order to promote access to consumer health information. Public libraries are largely supported by their local community or government and are highly focused on serving their local constituency. A study done by the PEW Internet & American Life Project "challenge(s) the assumption that libraries are losing relevance in the Internet age. Libraries drew visits by more than half of Americans (53%) in the past year for all kinds of purposes."<sup>64</sup> We wish to empower public libraries to provide health information services and improve health information literacy in the region as well. We see health information literacy as impacting health information providers and end users as it advances the identification of and access to health information resources; improves the ability to evaluate, analyze and understand the content; and increases the use the health information to make informed decisions.

Our work to facilitate access to consumer health information also supports NLM's strategic objective to "[e]xpand partnerships among various types of libraries and community-based organizations with the goal of forming community coalitions to improve access to health

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<sup>63</sup> Torres GW, Margolin FS. The Collaboration Primer: Proven Strategies, Considerations and Tools to Get You Started [Internet]. Chicago, IL: Health Research and Education Trust, 2003. 24 p. [cited 2010 April 1] Available from <http://www.hret.org/hret/programs/content/colpri.pdf>

<sup>64</sup> Raine L, Estabrook L, Witt E. Information Searches That Solve Problems [Internet]. PEW Internet & American Life Project: 2007 December 30. 43p. [cited 2010 April 1] Available from <http://www.pewinternet.org/Reports/2007/Information-Searches-That-Solve-Problems.aspx>

information for members of minority and underserved populations as well as health professionals serving these populations.”<sup>65</sup>

The demographic make-up of the NN/LM MCR is more homogenous than the national average. With a white population of 73%, Colorado has the most diverse population, as shown in the table below, taken from the Kaiser State Health Facts<sup>66</sup> web site and based on the Census Bureau's March 2008 and 2009 Current Population Survey. The other states in the NN/LM MCR have white populations that range from 80-89% of the state's overall population. The United States, on the whole, is much more diverse with a white population of 65%.

	White	Black	Hispanic	Other
Colorado	73.40%	3.79%	18.50%	4.32%
Kansas	80.34%	5.73%	8.50%	5.43%
Missouri	81.78%	11.25%	3.12%	3.85%
Nebraska	83.98%	4.37%	8.15%	3.50%
Utah	83.26%	1.06%	11.58%	4.10%
Wyoming	87.82%	NSD	7.93%	3.24%
United States	65.00%	12.13%	15.77%	6.71%

Table 10. Population Distribution by Race/Ethnicity<sup>67</sup>

The NN/LM MCR is becoming more diverse and with that growth in diversity come challenges to our region. Examples of such challenges include towns in Nebraska that operate meat packing plants which rely heavily on immigrant workers. One such town is Lexington, Nebraska. "In April 1990 the U.S. Census counted 6,601 people in Lexington (Loughry, 1991a). It classified 7.3% of Lexington's population as minority; 4.9% of the population was reported to be Hispanic." After the meatpacking plant opened, "the 1990 Census, county officials requested a recount, which was conducted on February 24, 1993. This special census enumerated 8,544 persons in Lexington — an increase of 1,943, or 29.6% (U.S. Bureau of Census 1993). Hispanics, virtually all of them new immigrants, increased to 24% of the population."<sup>68</sup> In looking at the Census 2000 Demographic profile of Lexington Nebraska, the population of the city is now

<sup>65</sup> National Library of Medicine Strategic Plan for Addressing Health Disparities 2004-2008 [Internet] [cited 2010 April 1] Available from [http://www.nlm.nih.gov/pubs/plan/nlm\\_health\\_disp\\_2004\\_2008.html](http://www.nlm.nih.gov/pubs/plan/nlm_health_disp_2004_2008.html)

<sup>66</sup> The Kaiser Family Foundation, statehealthfacts.org. Data Source: 50 State Comparisons. [Internet]. Menlo Park, CA: Kaiser Family Foundation; [cited 2010 March 23] Available from <http://www.statehealthfacts.org/>

<sup>67</sup> Kaiser State Health Facts "Population Distribution by Race/Ethnicity, states (2007-2008)", U.S. (2008) [Internet]. Menlo Park, CA: Kaiser Family Foundation; [cited 2010 March 30] Available from <http://www.statehealthfacts.org/comparetable.jsp?typ=2&ind=6&cat=1&sub=1>

<sup>68</sup> Gouveia L, Donald DS. Latino Immigrants, Meatpacking, and Rural Communities: A Case Study of Lexington, Nebraska, East Lansing, Michigan: The Julian Samora Research Institute, Michigan State University; 1997. 22p. JSRI Research Report #26.

10,011, with 51.2% of that population listed as Hispanic or Latino, and the white population listed as 64.2%. This example of rapid and ongoing growth in diversity in rural regions of the MCR being attributed to immigrant populations is typical of all our states. Outreach to this scattered minority population in the NN/LM MCR is done by working with community groups as trusted gatekeepers who already have the ability to reach this audience.

An outreach matrix has been described in the literature on levels of collaboration, beginning with simple exchanges of information and extending to full partnerships and collaboration efforts. **The outreach matrix is a planning and professional development tool for the MCR. It is important for staff to understand the value of outreach at each level, allowing us to assess next steps in our outreach efforts. We begin getting to know organizations by networking through exhibits, presenting at conferences, etc. The next level of outreach involves more time and trust. Using the matrix allows us to evaluate which groups are ready to move onto the next steps of working more collaboratively. The outreach matrix serves as a foundation as we carry out our outreach endeavors. We also utilize the matrix as a teaching tool for our members. The “Navigating Collaboration” webinar series referred to the matrix in one of the episodes. (See “Outreach Levels Matrix” below).**

The NN/LM MCR coordinators move through all the levels of outreach, bringing awareness of NLM and NN/LM resources to local and state groups through visits and presentations that have information exchange as the main outcome.

Coordinators build on those information exchanges over time, developing deeper relationships with organizations as they coordinate activities, cooperate and share resources, and finally collaborate fully through shared activities and resources. In addition to coordinators participating in these levels of outreach, tools and resources are created for Network members to find opportunities to step outside their libraries. Such outreach activities allow them to move from awareness activities to development of collaborative efforts, working side by side with community groups in their institution’s neighborhood to provide/improve health information access.

	<b>Networking</b>	<b>Coordinating</b>	<b>Cooperating</b>	<b>Collaborating</b>
<b>Definition</b>	Exchanging information for mutual benefit	Exchanging information for mutual benefit, and altering activities to achieve a common purpose	Exchanging information for mutual benefit, and altering activities and sharing resources to achieve a common purpose	Exchanging information for mutual benefit, and altering activities, sharing resources, and enhancing the capacity of another to achieve a common purpose
<b>Relationship</b>	Informal	Formal	Formal	Formal
<b>Characteristics</b>	Minimal time commitments, limited levels of trust, and no necessity to share turf ; information exchange is the primary focus	Moderate time commitments, moderate levels of trust, and no necessity to share turf; making access to services or resources more user-friendly is the primary focus	Substantial time commitments, high levels of trust, and significant access to each other's turf; sharing of resources to achieve a common purpose is the primary focus	Extensive time commitments, very high levels of trust and extensive areas of common turf; enhancing each other's capacity to achieve a common purpose is the primary focus
<b>Resources</b>	No mutual sharing of resources necessary	No or minimal mutual sharing of resources necessary	Moderate to extensive mutual sharing of resources and some sharing of risks, responsibilities, and rewards	Full sharing of resources, and full sharing of risks, responsibilities, and rewards

Figure 13. Outreach Levels Matrix<sup>69</sup>

<sup>69</sup> Himmelman AT. Collaboration for a Change: Definitions, Decision-making models, Roles and Collaboration Process Guide [Internet]. Minneapolis, MN: Himmelman Consulting 23p. [cited 2010 April 14] Available from [http://www.partneringintelligence.com/documents/5.02\\_Collaboration%20for%20a%20Change.doc](http://www.partneringintelligence.com/documents/5.02_Collaboration%20for%20a%20Change.doc)

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## Approach & Methodology:

B2a: Develop programs that reach special populations (e.g. minorities, seniors, teens, veterans' groups, low income populations, etc.), focus on special topics (e.g. health disparities, health information literacy, HIV/AIDS, public health, culturally and linguistically appropriate information, personal health records, emergency preparedness, etc.), and promote NLM resources to consumers access to electronic consumer health information at the local, state, and regional levels

### Objective:

- The NN/LM MCR increases the public's awareness of and access to health information

Outcome: - Network members and other organizations are better able to support access to health information resources

The Health Information Literacy project area is responsible for coordinating health information literacy in the Region. Our health information literacy program will advance the identification of and access to health information resources; improve the ability of information providers and users to evaluate, analyze and understand the content; and increase the use the health information to make informed decisions. The Health Information Literacy Coordinators will work with the Consumer Health Coordinators from the other NN/LM regions to identify common needs and share the responsibility of developing the resources (e.g., educational materials, workshops, promotional materials) to meet those needs. The NN/LM MCR will continue to expand consumer health information outreach beyond the public library and into community and faith based organizations through the following programs.

### ***Public Library Outreach***

Public libraries continue to be an excellent conduit for transferring health information to community members because there is one in almost every community, no matter how small. Public library outreach is especially important for meeting the digital divide gap as they provide access to computers and technology for those in the US with low or no online access. The NN/LM MCR will continue to work with public libraries to improve access to consumer health information in the region's communities. In the current contract, we conducted 133 activities that included demonstrations and training sessions to 1179 public librarians. This number does not include the librarians we talked to at state library association meetings. During these outreach activities we have introduced public librarians to MedlinePlus and other appropriate NLM consumer resources. Introducing and training public librarians on the use of NLM consumer health information resources will continue to be a foundation of our program. Outreach to public libraries falls in the "Coordinating" and "Cooperating" levels of the Outreach Matrix; hands on training often takes place at the public library, and in coordination with staff who organize and sometimes co-present with coordinators.

The NN/LM MCR has had success in the current contract in offering online sessions on “Emergency Preparedness for Public Librarians.” The webinar classes, using Adobe Connect, were scheduled early in the day, so public librarians would be free to attend before the library was open to the public. The sessions focused on resources that were freely available to the public and assisted public librarians in answering questions about public emergencies relevant to the region, such as flooding and tornados. Online sessions will be offered in the next contract on health information literacy, emergency preparedness, and other topics requested by public librarians in the region. State coordinators will continue to exhibit and present at state library association meetings.

State coordinators all work closely with their state library. Many success stories have come out of this outreach.

- The Missouri Coordinator has traveled the state with the Adult Services Coordinator for the Missouri State Library, teaching classes on senior health and health information literacy which were sponsored by the Missouri State Library
- The Nebraska Coordinator, Health Information Literacy Coordinator, and the Colorado Coordinator have been written into the State Library’s application for ARRA funding in the Broadband Technology Opportunity Program (BTOP) section, with health information access highlighted in the applications. (See Nebraska: *Library Broadband Builds Nebraska Communities* (<http://www.nlc.state.ne.us/lbbnc/>); Colorado: *Bridging Colorado’s Digital Divide* (<http://www.cde.state.co.us/cdelib/BTOP/>))
- The Wyoming State Librarian will be the keynote speaker at the annual Wyoming Symposium 2010

### ***Bringing Health Information to the Community Blog***

The Health Information Literacy Coordinator maintains the “Bringing Health Information to the Community” (BHIC) blog (<http://nnlm.gov/mcr/bhic/>). BHIC blog readers are members of community organizations, public health departments, health sciences and public libraries, and others who work with underserved and minority groups. The BHIC blog is used as an intermediary communication tool, providing readers with health information resources that they in turn provide to the consumers they serve. Posts to the blog fall into the following categories: articles, conferences, environmental health, HIV/AIDS, inner city, minority health concerns, public library, public health, regional information, rural, and scholarships/grants. The blog has garnered national recognition over the years, and periodic questionnaires of readers indicate that the blog makes an impact in their daily workflow. Beginning May 1, 2011, the BHIC blog will become a national communication tool, with collaborative authors from four additional NN/LM regions, the Greater Midwest Region, the Southeastern/Atlantic Region, the Pacific Northwest Region and the South Central Region.

Evaluations conducted by the NN/LM MCR in 2005 and 2009 have confirmed that the BHIC blog makes a difference in the work of its readers. The 2009 evaluation confirmed that readers are using the blog postings by sharing them with colleagues, developing and maintaining projects,

locating and applying for funding and more. The BHIC blog remains a useful tool that has the ability to impact high numbers of readers, assisting them as they work directly with consumers.

As web 2.0 technology emerges, the ability of the NN/LM MCR to reach additional readers has grown. The BHIC blog now feeds into a twitter account, shows up on the NN/LM MCR Facebook page, and has been used by Network members as a feed onto pages such as the Missouri WebJunction's Health Literacy section (<http://mo.webjunction.org/mohealth>). The NN/LM MCR will continue to find ways to expand the reach of the BHIC blog through the use of social networking tools.

With the blog becoming a national resource, it is important to continue to measure the impact and use of the blog. The NN/LM MCR will continue to send questionnaires to BHIC blog readers to determine how postings are used by readers in their work, and to determine what impact the change to a collaborative authorship has made. In addition, the use of social networking sites will be evaluated. It is possible to see what items on Twitter have been "retweeted" for example. An overview of the comments and re-postings of BHIC blog items will be undertaken in Years 2 and 4.

### ***Coordinator Collaboration***

NN/LM MCR state coordinators are also involved in community and public health organizations that serve special populations in the region. All outreach coordinators joined a local group at the board or committee level, and worked on providing hands-on training to the groups. The groups joined are:

- Colorado:
  - Colorado Public Health Association, Professional Education
- Kansas:
  - Mother and Child Health Coalition, Adolescent Health Committee
- Missouri:
  - Health Literacy Missouri, Resource Inventory Committee
  - Health Literacy Missouri, Librarian Expert Group
  - Public Health Practice Research Network of the Missouri Institute for Community Health
- Nebraska:
  - HELP Adult Services, Board of Directors
  - Rural Health Education Network
  - Lincoln Metropolitan Medical Response System
- Utah:
  - Utah Multicultural Health Network, Conference Planning Committee
  - Utah Library Association Multicultural Services Roundtable
- Wyoming:
  - Wyoming Comprehensive Cancer Control Consortium, Cancer & Environment Working Group

NN/LM MCR coordinators become involved in organizations at the “Cooperative” and “Collaborative” Level of the Outreach Matrix. In this way, the coordinators are able to learn more about community needs, provide a service (e.g. promoting/training on NLM resources and services) to meet those needs, and gain hands-on experiences in identifying how to effectively incorporate health information access into an organization’s operations.

In Year 5 of the current contract, an evaluation of the impact of this immersion project will be conducted to capture effective practices to better carry on this collaborative work. Coordinators will be asked if they wish to continue their relationship with their current community group, or if they have identified a new organization they wish to pursue.

### Schedule:

	Year 1	Year 2	Year 3	Year 4	Year 5
Offer online training to public librarians on health information literacy, emergency preparedness, and other topics identified during the contract as relevant to needs of the region	X	X	X	X	X
Continue to post health information tools and resources to the BHIC blog	X	X	X	X	X
Continue to explore social networking and other technology tools to expand the outreach of the BHIC blog	X	X	X	X	X
Evaluate impact of the change in authorship of the BHIC blog to a national resource; Provide overview of spread of BHIC blog postings through social networking tools		X			
Evaluate use of the BHIC blog by readers; Provide overview of spread of BHIC blog postings through social networking tools				X	
Develop a plan of action based on Year 5 evaluation to continue collaborative partnerships for MCR coordinators	X				
Coordinators remain involved and active in community and public health organizations		X	X	X	X
Evaluate collaborative activities and make changes based on results of evaluation				X	
Work with Nebraska and Colorado State Libraries to follow up on ARRA projects	X	X	X	X	X

B2b: Foster collaborations and encourage outreach partnerships among Network members, community, faith-based, and volunteer organizations including those serving minority and underserved populations, and other types of organizations, to improve access to electronic consumer health information at the local, state, and regional levels

Objective:

- Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information

Outcome: - Network members have the necessary skills to develop projects and programs

The NN/LM MCR has a strong foundation in fostering collaborations and encouraging outreach partnerships. Many of these programs will be continued and expanded on in the next contract.

***Health Information Literacy***

Health information literacy advances the identification of and access to health information resources; the ability to evaluate, analyze and understand the content; and the ability to use the health information to make informed decisions. In the current contract, the NN/LM MCR held *Café to Go* sessions in each state to bring together Network members and staff from public health and community organizations to network and develop projects together. The *Café to Go* sessions were held to promote the Continuity of Health Information Award as a way to fund collaborative projects. The NN/LM MCR will continue to hold collaborative meetings in the next contract around the topic of health information literacy. Health Literacy Missouri has assisted several states in the past two years organizing and running summits in health literacy, including New Jersey, Arkansas, and Kentucky. The NN/LM MCR and Health Literacy Missouri will co-sponsor a Health Literacy Summit that includes a health information literacy tract. The objective of the Health Literacy Summit is to establish a coalition of stakeholders that will work together to build health literacy skills. The objective of the health information literacy tract will be to identify the roles librarians can play in health literacy projects and within their institutions.

Participation at the summit will come from each state in the region. The NN/LM MCR will invite Network members, Regional Advisory Board members, and health care providers concerned with health information literacy to attend the summit, and specifically to attend the sessions developed for the health information literacy tract. Time will be set aside during the summit for this group to meet, network, and brainstorm on ways they can facilitate collaboration when they return to their home states. The attendees will be contacted in Year 3 to determine what activities were developed after attending the summit; appropriate entries will be added to the Library Success Wiki. The Library Success Wiki (<http://www.libsuccess.org/>) is a resource for librarians to share and to find ideas and information on effective practices occurring in all types

of libraries. In addition, selected attendees will be asked to share their experiences and knowledge gained from the summit through presentations to the Region and articles in *Plains to Peaks Post*.

In the first quarter of Year 4, a core group of health information experts in the MCR will be identified and brought together to assist the NN/LM MCR in developing a strategic plan for health information literacy outreach in the next 5-10 years. We expect that participants inspired by the Health Literacy Summit will comprise a portion of this group. The NN/LM MCR will draw on their experiences and expertise in the field to identify future opportunities, current challenges, and assets within the Region that are not being tapped.

#### ***Public Library/Public Health Department Award***

NN/LM MCR coordinators have attempted to facilitate collaborations between public health departments/workforce and NN/LM MCR member public libraries with little success. In an effort to bring to the forefront successful collaborations that have occurred in the Region, and to identify models that public libraries and public health institutions can emulate, the NN/LM MCR recognizes public library/public health department collaborations through the “Outstanding Public Library/Public Health Partnership Awards.” In Year 4 of the current contract, four awards were given to collaborations and the awards will be offered again in Year 5. This program will be carried over into the next contract with six awards offered each year, one per state. In the next contract, the award will be co-sponsored by the public health departments and state libraries in the region, with the award being acknowledged at state public health meetings and state library association meetings each year. The NN/LM MCR will identify partnership models from the applications submitted for this award. These models will be promoted and similar partnerships encouraged by the coordinators through activities for health departments and public libraries.

#### ***Community Outreach Working Group***

In the current contract the NN/LM MCR developed tools for Network members to develop and maintain collaborative efforts and partnerships with community organizations. The “Navigating Collaboration Toolkit” (<http://nnlm.gov/mcr/resources/community/collaboration.html>) was developed by the Community Outreach Working Group, a collaborative group of medical and public librarians and staff of community based organizations. The working group will develop a social networking tool in Year 5 of the current contract. The purpose of the tool is to provide a collaborative environment where Network members can share effective practices, identify tools and resources available for outreach, and network with each other. As a result of this online collaboration, Network members will gain confidence and skills with a support group to call on as they develop outreach programs with community groups. The potential audience for the social networking tool includes MCR Network members who have:

- Taken the NN/LM OERC classes or used the Planning and Evaluating Evaluation Guides
- Responded to the MCR Network Member Questionnaire as conducting outreach
- Received outreach subcontracts from the NN/LM MCR

- Indicated interest in outreach by responding to promotions from the MCR news and BHIC blog

In Year 1, the NN/LM MCR will measure the impact of this collaborative space on members. Success will be measured using metrics such as the number of visits to a site, the time spent on the site, the number of discussions held in forums, the types of members on the networking site (public librarians, solo librarians, etc), the number of overt “aha” moments posted by members, etc. In addition to this quantitative data, it is also important to analyze the type of content being added to the space, the trails that outline the development of projects with input from members and the tool’s impact. The purpose for creating the social networking tool is to provide Network members with skills and knowledge they can use to increase access to health information for populations outside their institutions. The results of the evaluation will be used to make modifications to make the tool more valuable.

The Community Outreach Working Group is an active and forward thinking group of individuals. In Year 4 of the current contract, the group held an in-person meeting and developed a strategic plan. The group will hold additional in-person meetings in Years 1 and 3. These face-to-face meetings will provide brainstorming time for strategizing next steps for the group, as well as providing support for the group members in the outreach and collaborative work they are doing. The Community Outreach Working Group will also use this time to evaluate the collaboration of the group itself. It is vital to the success of the group to evaluate its effectiveness and determine its value to the members and to the supporting organization, in this case, the NN/LM MCR. Possible outcomes of the evaluation include the dissolution of this specific working group to be replaced by a new group, refocusing of the group in other areas, or maintenance and growth of ongoing projects.

#### ***Continuity of Health Information Award: Health Information Literacy***

In the current contract, the NN/LM MCR offered the Continuity of Health Information Award to Network members in Years 3 and 4. The award was divided into three categories, Health Information Literacy, Library Advocacy, and Emergency Preparedness. During the current contract, seven Continuity of Health Information projects were funded, including five in the area of Health Information Literacy. The NN/LM MCR will offer the Continuity of Health Information Award in the next contract, and the focus will remain on Health Information Literacy. During the 2011-2016 contract period, RFPs will be announced to Network members and will fund projects up to \$15,000 each. Health Information Literacy projects receiving funding will be designed to provide a new service within an institution or develop partnerships outside the institution that enhance access to health information for consumers with low health literacy and/or for health care providers providing health information to consumers with low health literacy. Promotion of the awards is done via the NN/LM MCR web site, the RML News blog, and the MCMLA listserv.

The NN/LM MCR has adapted the Library Success Wiki (<http://www.libsuccess.org/>) by adding the category “Services for Health Information Consumers” ([http://www.libsuccess.org/index.php?title=Services\\_for\\_Health\\_Information\\_Consumers](http://www.libsuccess.org/index.php?title=Services_for_Health_Information_Consumers)).

Network members who receive outreach awards from the NN/LM MCR are required to make entries to the Library Success Wiki. This growing database of successful library outreach practices will provide Network members with successful tools and ideas and potentially reduce duplication of effort. The activities that develop from funded outreach projects will continue to be added to the Library Success Wiki.

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**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Hold Health Information Literacy Summit		X			
Follow up with an evaluation on collaborations generated by attendees; entries added to Library Success Wiki			X		
Health Information Literacy Strategic Planning Meeting will be held				X	
Offer the Public Health/Public Library Partnership Award	X	X	X	X	X
Hold Community Outreach Working Group Evaluation and Strategy Meeting	X				
Develop and apply out success metrics measurement tool for collaboration social networking site; adapt networking tool based on results of assessment	X		X		
Maintain and develop collaboration social networking site	X	X	X	X	X
Announce, review, award, and manage Continuity of Health Information Awards	X	X	X	X	
Add entries from projects funded by the Continuity of Health Information Awards to the Library Success Wiki	X	X	X	X	X

B2c: Provide consultation for Network members in project planning, preparation, writing and evaluation

**Objective:**

- Librarians in the NN/LM MCR provide programs and services that improve the transfer of health care and biomedical information

Outcome: - Network members have the necessary skills to develop projects and programs

Project planning and evaluation are important to librarians in managing their libraries and demonstrating the impact of their services. Both advocacy and outreach activities are enhanced when librarians have the skills to articulate the goals and objectives of the project and show key stakeholders how their efforts have been successful.

Logic models are a tool for developing a project plan. The model guides the project planners through the process of articulating goals and objectives, selecting activities, identifying necessary resources, stating desired outcomes and developing an evaluation plan that defines how success and impact will be measured. Because logic models have been used successfully for over eight years for organizing NN/LM MCR work, coordinators are well qualified to advise Network members on project planning, evaluation, and the use of logic models. NN/LM MCR will offer classes in project planning and evaluation both online and face-to-face and will promote the consultation service to Network members. The messages will convey our willingness to consult with members and other organizations considering project funding or project design.

The NN/LM MCR has been a leader in training librarians in project planning and evaluation. Co-developed in 2004 by the Assessment and Evaluation Coordinator, “Measuring Your Impact: Using evaluation for library advocacy,” has been taught more than nine times in the region, reaching 149 librarians and more than forty times in the U.S. and Canada, reaching nearly 600 librarians. The class introduces students to environmental assessment, goal setting, articulating desired outcomes through the development of a logic model and the importance of planning for evaluation from the beginning of any proposed project. “Measuring Your Impact” will be held at least two more times in Year 5 of the current contract – at MLA 2010 and in St Louis. The class continues to be relevant and well received and will continue to be offered in the MCR during the contract period. An online curriculum will be developed offering the class in one hour segments over six weeks. In addition, online sessions discussing evaluation tools, including the online calculators for determining library value and institutional return on investment from library services (<http://nnlm.gov/mcr/evaluation/tools.html>) will be held periodically.

The NN/LM Outreach Evaluation Resource Center(OERC) developed a series of three and four hour classes which, as a whole, address community assessment, project development and planning, data collection and data analysis and reporting. These complement the six hour “Measuring Your Impact” class, enabling students to spend more time on each concept than is available during the longer class. Two of the classes, “Answering the Right Questions: Data Collection for Health Information Outreach” and “Finding Information in Numbers and Words: Data Analysis for Health Information Outreach” will be offered in the MCR during the contract. Students in the “Measuring Your Impact” class regularly comment on the need for and the difficulty of doing data collection and analysis. These classes will offer NN/LM MCR librarians another source of training in this vital area.

The Assessment and Evaluation Coordinator will co-teach the first time the OERC classes are offered and then will be able to teach alone or with OERC staff in the future. The workshops will

be offered in person and also using distance education technology, if the NN/LM Outreach Evaluation Resource Center has developed the necessary materials and curricula for teaching online. In order to determine whether Network members have acquired needed skills we will include a question in the post-class evaluation for all classes asking if Network members feel that they are more proficient in project planning and evaluation. We will also follow up with students six months and one year after the class to find out how the students have used their planning and evaluation skills.

### Schedule:

	Year 1	Year 2	Year 3	Year 4	Year 5
Offer “Measuring Your Impact” at two sites in the MCR	X		X		
Develop online curriculum for “Measuring Your Impact” that will introduce members to creating logic models and developing evaluation plans	X	X			
Offer “Measuring Your Impact” online in one hour segments per week for six weeks		X		X	
Offer online or face-to-face OERC “Answering the Right Questions: Data Collection for Health Information Outreach” and “Finding Information in Numbers and Words: Data Analysis for Health Information Outreach”		X		X	
Collect data from students in the OERC classes to understand the impact of the classes on their planning and evaluation activities			X		
Promote the consultation service provided by RML staff regularly using all NN/LM MCR communication tools	X	X	X	X	X

B2d: Develop culturally and linguistically appropriate resources and provide training in the effective use of electronic health information resources. Before developing any training materials, the NLM Training Center and MLA Educational Clearinghouse will be checked to avoid duplication. Copies of all training materials developed will be registered with the MLA Educational Clearinghouse. Training should include, but not be limited to: PubMed, MedlinePlus, and other NLM resources

**Objective:**

- The NN/LM MCR increases the public's awareness of and access to health information

**Outcome:** - Network members and other organizations are better able to support access to health information resources

***Increasing Awareness***

Each NN/LM MCR coordinator presents multiple times each year to a variety of audiences. Given the increased culturally diverse populations in each of our respective states, each NN/LM MCR coordinator will be tasked with adding at least one slide, or comment, regarding the availability of “culturally and linguistically appropriate resources” that exist in our states, where it is appropriate. That slide or comment will promote the state page that is applicable for that audience. Coordinators will highlight the Spanish and Multiple Language resources available on MedlinePlus.

While the NN/LM MCR coordinators will not seek to create multiple language resources, every effort will be made to educate those that do of where these language resources can be deposited and shared with others who work with similar populations. Coordinators will inform refugee organizations as referenced in our response to SOW section B1 and particularly Refugee Health Coordinators from the Office of Refugee Resettlement for the six states located in the MCR region.

NN/LM MCR coordinators and people from organizations that are creating multiple language health materials, will be encouraged to check the MLA Continuing Education Clearinghouse and the MedlinePlus Multiple Language resources, first, so that there will be no duplication of effort in creating these materials.

Those seeking to suggest multiple language links for MedlinePlus, will be referred to MedlinePlus Quality Guidelines for Health Information in Multiple Languages (<http://www.nlm.nih.gov/medlineplus/languages/criteria.html>), and given the “Contact Us” information to submit such links to MedlinePlus. (<http://apps.nlm.nih.gov/medlineplus/contact/index.cfm?lang=en>)

***Web Pages***

The NN/LM MCR maintains state web pages for each of the six states in the region. Since the second most predominant language spoken in our region is Spanish, the coordinators will, as before, provide “Información en Español,” a section on each of those six state pages delineating state resources in the Spanish language for that particular state. This will include such information as United Way and HIV/AIDS information. The descriptive information about the links on these pages will be translated into Spanish. NN/LM MCR coordinators will continue to scan for Spanish language health resources available in their respective states and add them to NN/LM MCR web pages as they become available.

The NN/LM MCR web site also includes a section on minority health concerns (<http://nmlm.gov/mcr/resources/community/minority.htm>). This section includes content devoted to health information on race and ethnicity, online materials in multiple languages, and a cultural competency section. This web page was viewed 290 times in a three month period between Jan. 1, 2010 and April 1, 2010. The section will be maintained in the next contract.

### **Training**

Classes Developed by MCR Coordinators:

- The NN/LM MCR will continue to update and maintain the MLA CE “Getting Started with Information Outreach in Minority Communities” (<http://nmlm.gov/training/minorities/>)
- The South Central Region was approached by a member to develop an American Indian Health resources class; the SCR invited the NN/LM MCR to assist in developing the class. It will include culturally appropriate resources, as well as a section that focuses on cultural competence when working with American Indian communities.

The NN/LM MCR coordinators have offered the MLA CE “¿No Comprende? Spanish Health Information Resources for English Speaking Librarians” class at least once or twice each year and will continue to do so.

### **Schedule:**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Include a slide or comment in each presentation, when appropriate regarding NN/LM MCR state web pages which include the section “ Información en Español.” Also include information on Spanish and Multiple Language resources available on MedlinePlus.	X	X	X	X	X
Verify and update “Información en Español” sections on each of the six state pages on the NN/LM MCR Web site and the Minority Health Section	X	X	X	X	X
Continue to offer MLA CE courses with cultural and diversity topics	X	X	X	X	X
Translate into Spanish the descriptive information for web sites included on the MCR state pages in the “Información en Español” section	X	X	X	X	
Develop American Indian Health class with NN/LM SCR	X				

	Year 1	Year 2	Year 3	Year 4	Year 5
Contact the Refugee Health Coordinators in each state to verify that they have information on the Spanish Languages resources found on the NN/LM MCR web pages, as well as information about MedlinePlus in Spanish and the Multiple Language resources on MedlinePlus		X			

B2e: Develop pilot projects to identify and promote the roles of libraries in institutions that have received or are seeking NIH Clinical and Translational Science Awards (CTSA) with a focus on community engagement

**Objective:**

- Librarians in the NN/LM MCR provide programs and services that improve the transfer of health care and biomedical information

Outcome: -Network members, especially hospital librarians, participate in emerging practices to promote evidence based health information in the institution

Librarians can play a pivotal role with their local CTSA awardees through their natural ability to organize information, collaborate with many groups, and make connections as neutral and central agencies within university settings. Three of the NN/LM MCR’s Resource Libraries have received CTSA awards and several others are applying for such funding and recognition.

During Year 5 of the current contract, three small demonstration project awards were granted to the University of Colorado, Washington University, and the University of Utah to illustrate how librarians can partner with CTSA units and promote the translation of university research to their communities. The projects focus on three different populations providing a well-rounded approach to encouraging other regional and national Network members to adopt these projects for local application. The Washington University project will emphasize positive engagement of their public community with research being conducted at the University through their librarians working with public librarians to promote research efforts. The University of Colorado is developing a portal and collaborative space/repository for health sciences librarians who are supporting CTSA awardees as well as other researchers to share best practices, lessons learned, projects, created tools, etc. This was a need expressed at a recent Scholarly Communication/CTSA conference held at the University of New Mexico and funded by the National Library of Medicine. The University of Utah is creating MyRA (My Research Assistant), a virtual one-stop-shop that outlines the research process with attached needed forms, instructions, information sources, expertise databases, University agencies, etc. that are relevant to each step of the process. An open source template will be created for

others to use to be able to plug-and-play their own institutional information into the template. The template includes a community engagement component.

The NN/LM MCR will monitor the impact of the Year 5 projects in addressing CTSA goals by monitoring:

- Uptake of the use of the University of Utah template tool by others
- Increase in volume of content added to the librarian repository developed by the University of Colorado
- The reliance on Washington University's promotional program for sharing institutional research with communities by Network members

The NN/LM MCR will release an RFP for the New Collaborations for Health Sciences Libraries Award and the Continuity of Health Information Award. Demonstration project awards will be granted through a competitive process to regional Network members. Proposals are expected to explore and demonstrate the active role that librarians can assume with their CTSA units. Members from CTSA institutions can apply for funding for projects focused on community engagement. Those applying for the New Collaborations Award will be funded for up to \$60,000 for a two-year project. Those applying for the Continuity of Health Information award will be funded for up to \$15,000 for a one-to-two-year project.

Project outcomes include the development of models that can be easily replicated by other regional members as well as national Network members. These models will be included in the health sciences librarian repository developed by the University of Colorado in Year 5 of the current contract and will also be deposited in the MLA Core Database as well as shared with CTSA national and regional consortia. Award recipients will be required to share their project progress and results with the region through news articles, social media venues, "Breezing Along with the RML" sessions, conference posters and presentations, and professional publications.

**Acceptance by CTSA personnel as research partners and as developers of collaborative tools will be one success outcome for librarians working with CTSA's. Another will be the expressed interest, adoption, contributions to and use of the developed tools and spaces (and associated services). Usage figures of the portal, MyRA and the librarian repository will be collected and analyzed for trends; increased use over time will indicate success. Feedback will be received from CTSA personnel and librarians and incorporated as these tools are developed.**

**The Offeror will share information gained as a result of the two CTSA initiatives funded in Year 5 of the current contract period with the RMLs. Ms. Shipman will present such information at the RML Directors Meeting in May. Library directors managing the two projects already shared information at the November AAHSL meeting and have had individual conversations with several directors post that event. An MLA presentation abstract was submitted by University of Utah, but it was not accepted for the 2011 meeting program. In**

addition to sharing with the RMLs, per the two written proposals, additional means for disseminating results (that will also be available to RML staff and constituents) will be employed including:

**University of Colorado:**

The methodology for developing and marketing the proposed online community resource is intimately tied to a strong communications outreach approach. At a number of key junctures input will be sought from the community of practice, from the constituencies served by the MidContinental Region, and from the community of practice of CTSA information workers. The resource will necessarily be registered with Internet search engines, will be recommended to the national CTSA web site [see: <http://www.ctsaweb.org/> ], will be promoted to the MLA Molecular Biology and Genomics Special Interest Group membership and via listservs such as the MEDLIB-L, AAHSL memberclicks list, and those serving bioinformatics communities of interest.

**University of Utah:**

Project progress and results will be shared through news articles, social media venues, Breezing Along sessions, conference posters and presentations, and professional publications. The template will be included in the health sciences librarian repository developed by the University of Colorado in Year 5 of the MCRML contract and will also be deposited in the MLA Core Database as well as shared with CTSA national and regional consortia.

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**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Award New Collaboration for Health Sciences Librarians projects (includes CTSA projects)		X	X		
Award Continuity of Health Information projects (includes CTSA projects)	X	X	X	X	
Evaluate the impact of the five projects funded in support of CTSA initiatives					X

## B3 – Exhibits and Presentations at Meetings

### Statement of Work

The contractor shall promote NLM and NN/LM programs and services at national, regional and state meetings of health professionals and organizations that represent consumers. NLM will provide each RML with an exhibit backdrop to be used at national exhibits. The national exhibit schedule will be set for October-September. Responsibilities shall include the following:

- a. Provide full support for a minimum of eight meetings (four national and four regional, state, or local) for an exhibit, program presentation, or course offering, including making all arrangements (scheduling, fees, shipping, logistics, equipment and publications), in consultation with the NN/LM National Network Office. Coordination of course offerings, program presentations and other offerings at meetings should be appropriate with national initiatives and promotional activities identified by NLM;
- b. Designate an RML staff member who is responsible for identifying health professional and consumer focused meetings, reporting exhibits and other RML activities at all national, regional, state and local meetings;
- c. Attend state library association meetings and exhibit or make presentations to promote NLM and NN/LM programs and services;
- d. Enlist the assistance of Network members in exhibiting at national, regional, state, and local meetings.

### Applicable NN/LM Goal

Promote awareness of, access to, and use of biomedical information resources for health professionals and the public, with a particular emphasis on contributing to the Healthy People 2020

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### Objective & Rationale:

#### Objectives:

- Librarians, health care providers and consumers receive information from the NN/LM MCR and provide feedback about health information resources, services and programs
- Librarians in the NN/LM MCR provide programs and services that improve the transfer of health care and biomedical information

Exhibits and presentations at meetings continue to be one of the most visible ways that coordinators interface with librarians, health professionals, and consumers. Because the National Library of Medicine provides valuable health information and resources for each of these populations, exhibits and presentations will continue to be an effective way to reach large numbers of these populations and offer opportunities to demonstrate and instruct attendees. In addition, NN/LM MCR coordinators can ascertain health information needs, obtain feedback on resources and services, and explore new arenas for further training opportunities.

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## Approach & Methodology:

Promoting NLM and NN/LM programs and services is a shared responsibility among the MCR coordinators. With the distributed model, the coordinators are in an excellent position to identify and exhibit at local meetings. Each coordinator has purchased and maintains either a table top exhibit or banner display with graphics featuring the National Library of Medicine, as well as MedlinePlus and PubMed. The exhibits are easily transportable, durable, and successful in conveying information in a timely manner. Each NN/LM MCR coordinator exhibits at four to six local or regional conferences per year. In the current contract, NN/LM MCR coordinators exhibited at 152 local or regional conferences.

B3a: Provide full support for a minimum of eight meetings (four national and four regional, state, or local) for an exhibit, program presentation, or course offering, including making all arrangements (scheduling, fees, shipping, logistics, equipment and publications), in consultation with the NN/LM National Network Office. Coordination of course offerings, program presentations and other offerings at meetings should be appropriate with national initiatives and promotional activities identified by NLM

### Objective:

- Librarians, health care providers and consumers receive information from the NN/LM MCR and provide feedback about health information resources, services and programs

Outcome: -Librarians, health care providers and consumers in the NN/LM MCR are more aware of health information resources, services and programs

MCR coordinators will exhibit at four national meetings as determined by the National Network Office and assigned to individual MCR coordinators by the Associate Director. The NN/LM MCR coordinators assigned to the national exhibit will contact the organization suggesting presentations for the program of the conference. For example, the Consumer Health Coordinator was assigned to the following conferences in Year 4 of the current contract, where she exhibited, as well as presented;

- United States Public Health Service Scientific and Training Symposium, San Diego, CA - 2010
- National Association for Rural Mental Health, Denver, CO - 2010
- American School Health Association Annual Conference, Denver, CO - 2009
- Indian Health Summit, Denver, CO - 2009

Arrangements will be made so the equipment and materials necessary to represent the products and services of the National Library of Medicine are available. In the exhibit report, NN/LM MCR coordinators will evaluate the meeting on the basis of such factors as attendance,

receptiveness of audience, and cost to recommend whether NLM should continue to include the meeting on the national exhibit schedule.

Local meetings and health fairs are an excellent way for coordinators to make contacts for training opportunities, partnerships, and to identify representatives of organizations who have a mission similar to the NN/LM. For example, the Nebraska Coordinator exhibits at the annual Black Family Wellness conference. As a result of a contact made at this meeting, she was invited to participate in a community group providing family planning information to a local clinic. This in turn led to multiple contacts when she became part of the community group.

NN/LM MCR coordinators have prioritized meetings that they will attend in the next contract. MCR coordinators will annually exhibit meetings of:

- State library associations
- State minority health organizations
- State public health organizations
- State physician assistant associations

Coordinators are also expected to submit presentations for each of these conferences.

Coordinators will exhibit at four to six local and regional conferences throughout each contract year. Meetings for organizations not stated above will be selected by the NN/LM MCR coordinator in response to invitations or initiatives they want to pursue.

B3b: Designate an RML staff member who is responsible for identifying health professional and consumer focused meetings, reporting exhibits and other RML activities at all national, regional, state and local meetings

Objective:

- Librarians, health care providers and consumers receive information from the NN/LM MCR and provide feedback about health information resources, services and programs

Outcome: -Librarians, health care providers and consumers in the MCR are more aware of health information resources, services and programs

The NN/LM MCR Project Coordinator will coordinate meeting suggestions from staff for national meetings and for ensure that national reports written by coordinators are filed in a timely manner. NN/LM MCR coordinators will add reports of exhibits to the NLM External Exhibit Report System. In addition, NN/LM MCR coordinators will file detailed reports on exhibits in the NN/LM MCR Activity Reporting System (ARS).

B3c: Attend state library association meetings and exhibit or make presentations to promote NLM and NN/LM programs and services

Objective:

- Librarians, health care providers and consumers receive information from the NN/LM MCR and provide feedback about health information resources, services and programs

Outcome: -Librarians, health care providers and consumers in the MCR are more aware of health information resources, services and programs

State library association meetings in the six-state area provide an especially important audience and annual meetings of this group are a highlight. NN/LM MCR coordinators will exhibit and submit proposals to do presentations at these annual meetings. In the current contract, state coordinators exhibited and presented at their respective state library association meetings. Topics ranged from health resources for seniors, to those for children, to emergency preparedness.

B3d: Enlist the assistance of Network members in exhibiting at national, regional, state, and local meetings.

Objective:

- Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information

Outcome: - Network members and other organizations are better able to support access to health information resources

The NN/LM MCR coordinators regularly invite Network members to join us in the exhibit booth when we exhibit at local and national meetings. They may work for a few hours or up to a day. In the past, when an NN/LM MCR coordinator has had a conflict and could not exhibit at a local meeting, a librarian or staff member from their Resource Library filled in. In the current contract, this practice will be taken to the next level. The NN/LM MCR coordinator will train the Network member in the exhibit booth on protocol and NLM resources and services and the Network member will review the NN/LM Exhibit Manual. Once a coordinator deems that the librarian is qualified to exhibit, the librarian is issued a certificate and can volunteer to staff a local exhibit as the primary exhibitor or partner with an NN/LM MCR coordinator at a national exhibit. This gives librarians the opportunity to work beyond the walls of their libraries as well as to interact with health professionals in a different setting. Recruitment and training will take place throughout the contract. We will also offer an award, the Training Health Professionals Award, to librarians who want to be responsible for exhibiting and presenting at a local meeting.

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
National exhibits will be assigned to coordinators who will submit proposals to present	X	X	X	X	X
Each NN/LM MCR coordinator will exhibit at four to six conferences and submit proposals to present at those meetings	X	X	X	X	X
NN/LM MCR reports for local, regional and national meetings are filed in a timely manner	X	X	X	X	X
NN/LM MCR coordinators will attend respective state library association conferences and submit program proposals to present	X	X	X	X	X
NN/LM MCR coordinators regularly invite Network members to join us in the exhibit booth when we exhibit at local and national meetings	X	X	X	X	X
Offer Training Health Professionals Award	X	X	X	X	X

**B4 – Information Technology and Policy Awareness****Statement of Work**

The contractor shall develop an information technology and policy awareness program which includes:

- a. Regional forums that focus on e-science initiatives, e.g., the use of information technology to manage large stores of scientific and/or clinical data (as in clinical data warehouses), approaches to integrating data with other types of information, involvement of libraries in teaching e-science research methods, and policy issues affecting production, distribution, and access to data and information; and
- b. Monitoring current technological and policy developments and trends to identify those that will improve access to biomedical information.

**Applicable NN/LM Goal**

To develop, promote, and improve electronic access to health information by Network members, health professionals, and organizations providing health information to the public

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## Objective & Rationale:

Objective:

- The NN/LM MCR information technology and policy awareness program improves access to biomedical information

### ***E-Science***

The National E-Science Centre in the United Kingdom defines e-science as, “the large scale science that will increasingly be carried out through distributed global collaborations enabled by the Internet. Typically, a feature of such collaborative scientific enterprises is that they will require access to very large data collections and very large scale computing resources.”<sup>70</sup>

For the purposes of NN/LM MCR program planning, we will operate under a broader definition of e-science; we will use e-science to refer to collaborative scientific activities carried out via the Internet. E-Science includes the collection, organization, validation, and preservation of data. Examples of e-science activities include:

- Collaboration wikis and other web services designed for scientists to share data and information during the research process; for example, UsefulChem (<http://usefulchem.wikispaces.com/>);
- Sharing data sets over the network; for example, GenBank (<http://www.ncbi.nlm.nih.gov/genbank/>);
- Utilizing a distributed network to carry out computationally intensive research; for example, the Enabling Grids for E-science (EGEE) computing project (<http://www.eu-egee.org/>) which provides a computing support infrastructure for over 13,000 researchers in a wide variety of disciplines.

E-Science initiatives face both technological and policy challenges. Data structures and tools to access data may not be inter-operable. Data sets can be so large that the available server space to house one data set becomes extremely expensive. Distributed computing, or “cloud” computing, may be a solution.

Scientists are also concerned about open access policy issues. A group of U.K. scientists from the Open Knowledge Foundation Working Group on Open Data in Science published the Panton Principles, which states “data related to published science should be explicitly placed in the public domain.”<sup>71</sup> Not all scientists are in agreement with the Panton Principles. Librarians need to understand these challenges in order to participate in e-science projects.

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<sup>70</sup> NeSC: Defining e-Science [Internet]. United Kingdom: National E-Science Centre; [updated 2010 May 18; cited 2010 May 20]. Available from: <http://www.nesc.ac.uk/nesc/define.html>.

<sup>71</sup> Panton Principles [Internet]. Cambridge, UK: Open Knowledge Foundation Working Group on Open Data in Science; [cited 2010 May 5]. Available from: <http://pantonprinciples.org/>.

The Association of Research Libraries (ARL) E-Science Working Group conducted a survey of their member libraries, in 2009, to discover the level of library involvement with e-science activities.<sup>72</sup> Out of 123 ARL libraries that responded to the survey, sixty-one reported an e-science program, of some kind, at their institution. Seventy-three percent of the institutions reported that their libraries were involved with e-science initiatives. Library involvement in e-science projects covered a wide range of support activities, including offering web sites with e-science information, data management training, and policy issue support.

E-Science information technology and policies are in a very early stage of development within academic health sciences libraries in our region. This presents an opportunity for academic health sciences librarians to assume new roles by participating in e-science initiatives within their institutions. Roles for librarians include:

- Designing a data management web site
- Teaching classes about managing research data
- Assisting researchers with developing open access policies
- Working with researchers to add data to an institutional repository
- Assigning metadata to data sets
- Creating and maintaining specialized digital repositories
- Teaching social networking tools that can be used to share scientific data and discoveries

### ***Technology Trends and Policy***

Staying abreast of new technology developments, understanding, and visioning the implications for technology are areas of critical importance for health sciences librarians. Learning about new trends in technology, as these trends occur, gives Network members the opportunity to proactively adopt new technologies that will improve access to biomedical information and services. Providing these programs will allow Network members to:

- Be seen as valued professionals in their institutional settings
- Increase the efficiency and effectiveness of the services they offer
- Train their constituents on how to take advantage of new biomedical information resources
- Assume new roles for the profession, such as involvement in e-science projects or electronic health record and personal health record implementations

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<sup>72</sup> ALA:2009 E-Science Survey Resource Page [Internet]. Washington, DC: Association of Research Libraries: Transforming Research Libraries; [cited 2010 April 4]. <http://www.arl.org/rtl/eresearch/escien/esciensurvey/surveyresearch.shtml>.

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**Approach & Methodology:**

B4a: Regional forums that focus on e-science initiatives, e.g., the use of information technology to manage large stores of scientific and/or clinical data (as in clinical data warehouses), approaches to integrating data with other types of information, involvement of libraries in teaching e-science research methods, and policy issues affecting production, distribution, and access to data and information

Outcome: -Health sciences librarians are integrated in the conduct of e-science

***Inter-Regional E-Science Forum***

In Year 2, we will participate in an inter-regional e-science forum with the Pacific Northwest Region (PNR). The forum will focus on defining e-science and the librarian's roles in e-science initiatives. The forum will be held using dedicated videoconferencing facilities at University of Utah, University of Washington, and perhaps one other site in each region. The sites will connect to the Utah Education Network (UEN) multi-site videoconferencing bridge, which is available to NN/LM MCR at no cost.

Local participants will gather at the videoconferencing facility at each location. The videoconferencing facilities feature high quality audio and video. Local participants will be able to have nearly natural interactions with remote participants, as if they were in the same room. To put each site on an equal status, in-person speakers will be available in each region. Both regions will have in-person presentations and distance presentations. A computer projection system will broadcast PowerPoint or web demonstrations to all the locations. The event will be recorded and archived for later access by the regions. The event will be captioned in order to ensure Section 508 compliance.

We will model the forum on the annual E-Science Symposium ([http://library.umassmed.edu/escience\\_symposium09.cfm](http://library.umassmed.edu/escience_symposium09.cfm)) hosted by the University of Massachusetts and sponsored by the NN/LM New England Region (NER). The keynote speakers will focus on e-science initiatives and new roles for health sciences librarians in e-science.

Following the keynote speakers, forum participants will move into break-out rooms to discuss individual topics in more detail.

At the end of the day, attendees will offer feedback on what they believe are the next steps the RMLs should take to assist librarians with e-science initiatives within the regions. The success of the forum will be assessed through an evaluation form distributed to all attendees to gain feedback about the meeting content, the format of the interactive session and the use of the technology. We will use this feedback in planning additional forums and gain ideas on how we can promote e-science among members. The NN/LM MCR will also evaluate the impact of this program on new roles for librarians, as described in SOW section A14.

***E-Science Training***

The NN/LM MCR will create a series of training opportunities throughout the year to educate academic health sciences librarians about technical aspects of e-science. The workshops will be taught via Adobe Connect. The topics of the workshops are:

- *Introduction to Data Management*: MIT teaches a one-hour workshop entitled “Managing Research Data 101” (<http://libraries.mit.edu/guides/subjects/data/training/workshops.html>). MCR will ask the MIT instructor if they would be willing to present this workshop to MCR staff via Adobe Connect. MCR staff will adapt the workshop for presentation to Network members. The workshop covers data security, file formats, directory structures, and metadata.
- *Web 2.0 Technologies in E-Science*: this 4-hour workshop, held in four one-hour sessions, will focus on the use of wikis and professional social networking services for sharing scientific results. NN/LM MCR staff members will develop and teach this workshop.
- *Principles of Metadata and Archiving for E-Science*: this 4-hour workshop, held in four one-hour sessions, will focus on metadata and archiving issues related to e-science, including metadata assignment and terminology, digital preservation, institutional repositories, the use of Dublin Core, and the semantic web. The NN/LM MCR will seek experts in this field to teach this workshop.

These courses are not currently offered in library schools. We will continue to monitor library school curricula for new classes related to e-science.

Each workshop will conclude with a link to an evaluation form to determine if the workshop met the stated objectives.

***E-Science Web Pages***

The NN/LM MCR will develop a web page with links to e-science resources, the forum archives, and links to other education offerings about e-science. The web page will also link to the New England Region e-science portal, which will feature a definition of e-science and the relevance to librarians; educational tutorials; current practices and projects links; and a virtual community with question and answer and discussion opportunities.

The NN/LM MCR will add a question to the annual technology assessment questionnaire to determine if the e-science web pages are useful to members in their work.

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Create the e-science web pages	X				
Hold the inter-regional e-science forum		X	X	X	X
Offer three e-science workshops each year	X	X	X	X	X
Maintain the e-science web pages	X	X	X	X	X

B4b: Monitoring current technological and policy developments and trends to identify those that will improve access to biomedical information

Outcome: -Network members adopt new technologies to increase access to biomedical information

The NN/LM MCR staff will monitor developments in the following technology policy areas:

- Open access and public access policies
- Network access restrictions within institutions, which may restrict access to biomedical information resources and social networking services
- Access to broadband Internet by our members and the public
- Adoption of mobile technologies by our members and the public
- Electronic health record and personal health records standards, funding, and definitions for meaningful use
- Accessibility issues and compliance with Section 508 requirements

Much of this information is published on the web sites of government organizations, professional organizations, and private foundations. In order to ensure timely notification of this information, the NN/LM MCR staff will use the following methods:

- Subscribing to and reviewing relevant RSS news feeds
- Following organizations and individual experts on Twitter
- Reviewing research studies and white papers
- Attending webinars and conferences related to these issues

We will post information on the NN/LM MCR web site about the sources we used to gather this information.

The information will be disseminated to our members using the communication mechanisms described in our response to SOW section A7i, which include:

- RML News postings (available through an RSS feed and direct access on our web site, as well as sent to the MCMLA listserv weekly in an e-mail)
- Postings on the NN/LM MCR Twitter page
- Postings on the NN/LM MCR Facebook page
- Links sent to the NN/LM MCR Delicious social bookmarks list
- Articles in the *Plains to Peaks Post* newsletter
- Presentations at the monthly Breezing Along with the RML sessions using Adobe Connect
- Presentations at conferences

### ***Adopting New Technologies***

Technology services and resources continue to advance at a rapid pace. The last few years have seen significant adoption of a number of technologies that were barely on the radar screen in 2006. Although it is impossible to predict the “next big thing,” we expect growth related to the following trends and technologies:

- Increased use of social networking services for both professional and personal use. Currently, these take the form of services like Facebook, Twitter, and professional social networks such as Nature Network, BiomedExperts, Academia.edu, and LinkedIn, but these services continue to evolve and may expand in other ways not imagined yet. We will also monitor research collaboration tools such as Mendeley or 2collab.
- Use of mobile devices for information access and social networking, whether they are in the form of “smart” cell phones or new devices like Apple’s iPad
- Location aware services, including “augmented reality,” which blends information in new ways
- Continued advancement in the speed, quality and usability of videos and multimedia information over the web and on mobile devices, perhaps through the use of new standards such as HTML5
- Continued advancement of video collaboration tools for meetings and classes

The NN/LM MCR staff will keep up to date with new technologies by monitoring RSS feeds, Twitter lists, and recommendations from colleagues.

We will test new technologies to determine if they can be useful to our members. In some cases, we may decide to “wait and see” or place a technology on a back burner before disseminating information about it to our members. In other cases we will immediately alert our members to the technology and its possible uses through the NN/LM MCR communication mechanisms. We will continue to develop classes for those technologies that are worthy of deeper consideration by our members.

### Development of a “Technology Sandbox”

We believe it will be critical for NN/LM MCR staff not only to keep up to date and be knowledgeable about the new technologies as they become available, but also to provide a mechanism for members to experiment with them. We will develop a “Technology Sandbox” where members can “play” with new technologies under the guidance of a technology mentor.

The “Technology Sandbox” idea is a virtual version of a session at the Technology Symposium sponsored by the Medical Library Group of Southern California and Arizona (MLGSCA) and the NN/LM Pacific Southwest Region. The session was called “Technology Sherpas” where participants met one-on-one in a computer lab with experts of particular Web 2.0 technologies. For instance, there was a Sherpa available for wikis who was at a computer to meet with a participant who wanted to learn about wikis. The Sherpa answered questions or demonstrated parts of the technology of interest to the member.

The NN/LM MCR “Technology Sandbox” sessions will allow members to join our technology mentor in an Adobe Connect room at a certain time to “play” with a new technology. We will use Adobe Connect breakout rooms to match the mentor with the participant. The technology mentor will provide guidance during the sandbox times and will encourage hands-on experimentation by the participant. Screen control will be given to the participant so they can feel free to “play” and gain hands on experience with the technology. We expect that members may elect to continue communication with their mentors after the sandbox sessions.

NN/LM MCR technology staff or other experts in a particular technology would assume the mentor role. We will also solicit members of the NN/LM MCR Technology Work Group to serve as mentors for sandbox sessions to assist members. We will follow up with members who use the sandbox to determine if they decided to adopt the new technology into their work and to obtain feedback on their “playtime” in the sandbox.

### Training in New Technologies

To help members become technology leaders in their institutions, the technology coordinators offered classes and technology updates throughout the current contract period.

The NN/LM MCR has gained years of experience with distance education technologies. Our synchronous classes are taught using Adobe Connect. The advantages include: class members only need a Flash-enabled browser to participate; access to a variety of tools within Adobe Connect, such as a whiteboard, chat, polling, and screen sharing; class members can see and hear the instructor through the use of audio and video; and the class can be recorded so that it can be viewed at a later date.

In the last year, the technology coordinators also began teaching “blended” distance education classes. These classes use Adobe Connect for live, synchronous instruction in combination with an asynchronous course management system called Moodle. Within Moodle, students can ask questions of the instructor and of each other and post the results of their class assignments.

The NN/LM MCR has a repertoire of technology distance education classes that it currently offers using both Adobe Connect and Moodle. The workshops are:

- “13 Things” self-discovery class, a 10-week asynchronous class about Web 2.0 technologies using Moodle; participants are eligible for 20 hours of MLA CE credit
- “Podcasting for Advocacy,” a 4-hour MLA CE credit class using a blended approach (synchronous sessions with Adobe Connect and asynchronous exercises with Moodle)
- “Introduction to Screencasting,” a 4-hour MLA CE credit class using a blended approach (synchronous sessions with Adobe Connect and asynchronous exercises with Moodle)
- “Introduction to Blogs and Wikis,” a 4 hour MLA CE credit class taught using Adobe Connect
- “Social Bookmarking,” a 1 hour class taught using Adobe Connect
- “Using Twitter for Information Discovery,” a 1 hour class taught using Adobe Connect
- “Introduction to RSS,” a 1 hour class taught using Adobe Connect
- “Personalized Web sites with iGoogle,” a 1 hour class taught using Adobe Connect

New workshops will be developed for the next contract as new technologies become available.

In Year 3 of the current contract, the NN/LM MCR released a questionnaire to members asking if they adopted new technologies in their work due to the activities of the coordinators. Fifty two percent of the respondents said they had adopted a new technology. We will continue to ask our members this question to determine whether NN/LM MCR staff has been effective in our promotion of and training to implement new technologies.

### ***Technology Groups***

In Year 3 of the current contract, we convened a workgroup with four NN/LM MCR members to assist us in building a social bookmarking resource using Delicious (<http://www.delicious.com/>). Delicious is an online service that allows users to store and share bookmarked resources on the web. To date, work group members have tagged 158 resources that are published on NN/LM MCR’s social bookmarking page (<http://nnlm.gov/mcr/technology/>).

As more of our members become active with social networking technologies and adoption of other new technologies, we will call on them to share experiences with other members or assist with testing and troubleshooting new technologies. Work group members may become “technology mentors” to other members and participate in guiding members in the technology sandbox that we plan to create. We expect that our work group members will continue to identify, evaluate, and monitor the best authoritative technology resources to be listed on the NN/LM MCR social bookmarking site.

In addition to the technology work group, the technology coordinators will work with two additional groups:

1. A new advisory group consisting of librarians and information technology (IT) colleagues will help us with the IT issues faced by hospital librarians (see Response to SOW section B5).
2. In Year 4 of the current contract, we formed an informatics advisory group consisting of librarians in the MidContinental and Pacific Southwest Regions who previously attended the Woods Hole Bioinformatics course sponsored by NLM. The group is planning webinars and a web page of resources related to the librarian's roles in electronic health records and personal health records in Year 5 of the current contract. The group will continue this work in the new contract.

The technology groups will assist the NN/LM MCR in recognizing new technologies and resolving technology issues in the region. Our colleagues in the other NN/LM regions will also play this role for us. Both technology coordinators will continue to be members of the NN/LM Web Developer's group, attend the monthly Web-STOC conference calls, and participate in daily discussions with the group through Skype group instant messaging.

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### Schedule:

	Year 1	Year 2	Year 3	Year 4	Year 5
Regularly monitor technology policies and trends	X	X	X	X	X
Disseminate information related to technology policy and trends using the MCR communication mechanisms	X	X	X	X	X
Offer monthly Technology Sandbox sessions using Adobe Connect so that members can experiment with new technologies	X	X	X	X	X
Participate in NN/LM Web Developer's group and Technology Coordinator and Web Developer Skype group chats	X	X	X	X	X
Attend monthly Web-STOC updates	X	X	X	X	X
Form the Technology Work Group, which may include new members annually, who will continue to add new resources to the MCR social bookmarking page as well as serving in the new MCR Technology Sandbox	X	X	X	X	X
Form and meet with the Technology Advisory Group for IT issues	X	X	X	X	X

	Year 1	Year 2	Year 3	Year 4	Year 5
Meet with the Woods Hole Bioinformatics Course alumni group to plan activities related to informatics	X	X	X	X	X
Offer webinars and web page resources related to librarian's roles in electronic health records and personal health records	X	X	X	X	X
Offer 12 technology classes or workshops per year	X	X	X	X	X
Poll our members each year on their adoption of new technology as a result of our activities	X	X	X	X	X

## B5 – Technology Improvement

### Statement of Work

The contractor shall develop and implement an NN/LM technology improvement program, if needed, to encourage high quality health information access and delivery to Network members, health professionals and consumers in the Region. Emphasis should be on the “underconnected,” particularly in inner city and rural health organizations, to upgrade and maintain technology access. If no program is proposed, the contractor shall provide an explanation of why the program is not needed. Site selection requirements are found in (Appendix 5).

- a. Identify current or potential Network members that do not have onsite access to NLM resources, do not participate in Resource Sharing, and meet the minimum criteria; and
- b. Improve information services delivered to staff and consumers.

### Applicable NN/LM Goal

Develop, promote, and improve electronic access to health information by Network members, health professionals, and organizations providing health information to the public.

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### Objective & Rationale:

#### Objective:

- The NN/LM MCR information technology and policy awareness program improves access to biomedical information

### **Internet Connectivity**

The NN/LM MCR has made videoconferencing and other streaming media video broadcasting technologies an integral method for communicating with Network members regarding health information resources, instruction, and services. Our current definition of connectivity for Network and health care organizations is a minimum of a DSL or cable connection. This permits access to the graphics and multi-media available from MedlinePlus, and other NLM resources, and allows members to participate in regional activities. Much of the MCR's communication with the region and the educational opportunities that we have and will continue to offer during the proposed contract period will use videoconferencing, video broadcasting, and collaboration applications, such as Adobe Connect Pro.

In 2002, the NN/LM MCR sent a Network Member Questionnaire to 216 Network members in the region. The questionnaire asked our members about their Internet connectivity. All members but one reported that they had at least one computer that was connected to the Internet. Furthermore, we queried all members about the level of their connectivity; asking the question: "What is the speed of your Internet connection?" 120 institutions answered the question as shown in Table 11:<sup>73</sup>

	<b>Libraries Responding to the Survey</b>	<b>Libraries Responding to the Question</b>	<b>28.8 K</b>	<b>56.6 K</b>	<b>High Speed (Cable, DSL, or ISDN)</b>	<b>T-1 or Faster</b>	<b>Don't Know</b>
<b>Colorado</b>	33	32	1	3	6	18	6
<b>Kansas</b>	19	18	0	0	5	9	4
<b>Missouri</b>	40	40	1	1	10	23	7
<b>Nebraska</b>	8	8	0	0	3	4	1
<b>Utah</b>	13	13	0	2	4	9	0
<b>Wyoming</b>	9	9	0	2	1	4	1
<b>Totals</b>	122	120	2	8	29	67	19

*Table 11. Network Member Internet Connectivity (2002)*

We learned from this report that there were still a few members who were using a slow, dial-up connection, but most of our members were well connected and capable of accessing NN/LM MCR programs and NLM resources. We speculate that since 2002, even more of our members have high speed Internet connections.

<sup>73</sup> MidContinental Regional Medical Library Network: Member Survey Fall 2002; Connectivity [Internet]. Salt Lake City: National Network of Libraries of Medicine [cited 2010 May 17]. Available from: <http://medweb.wustl.edu/beckerrml/connect1.asp>

***Underconnected***

The information displayed in Table 11 has led the NN/LM MCR to expand its definition of underconnected. We are adding the ability to access new communication technologies such as social networking sites (e.g. Facebook, Twitter). Our individual experiences and communications with hospital libraries over the 2006-2011 contract period regarding web-based tools, social networking sites and services, has revealed that having a high bandwidth connection is not the reason our members are underconnected. Their connectivity issues appear to be caused by other factors, such as firewalls that block social networking sites, or institutional policies that restrict the installation of streaming media players (e.g. RealPlayer, QuickTime, or Windows Media Player) or the opening of ports that are required for videoconferencing.

In 2008, the NN/LM MCR sent another Network Member Questionnaire to 204 Network members in the region. We asked, "Are any library staff PREVENTED from using social networking sites such as Facebook, Delicious and the Bringing Health Information to the Community (BHIC) blog due to institutional policies?" We asked this question, because use of participatory, social networks to access and share information is growing. The NN/LM MCR uses Facebook, Twitter, Delicious, RSS, the NN/LM MCR blog, the BHIC blog, and wikis to disseminate health information to the region. In addition, the NLM has a Facebook and Twitter presence, and offers RSS feeds (<http://www.nlm.nih.gov/socialmedia/index.html>) and the Department of Health and Human Services has a Twitter presence as well (<http://www.hhsweets.com/>).

One hundred twenty eight of the 204 Network member institutions who replied to the questionnaire responded to the above question. Table 12<sup>74</sup> shows that approximately half of the hospital libraries reported they are prevented from using social networking sites and services. On the other hand, only a very small number of academic and other libraries reported policies that prevent use of any of the listed tools and services. We can infer from this study that hospital libraries bear the brunt of their institutions restrictive access policies, as compared to academic libraries.

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<sup>74</sup> Network Member Questionnaire 2008, pg. 12

Web-Based Tools and Services	Are any library staff PREVENTED from using any of the following due to institutional policies?			
	Academic or Other Libraries		Hospital Libraries	
	Yes	No	Yes	No
Social networking sites (e.g., Facebook, LinkedIn, Second Life)	5	33	41	17
Wikis	1	36	14	43
Blogs	1	38	18	42
RSS feeds	2	36	7	45
Chat and instant messaging	3	35	28	22
Videoconferencing such as Adobe Connect	1	34	5	57
Broadcasts, podcasts and streaming video (including YouTube)	5	35	27	38

Table 12. Member access to Web-Based Tools and Services (2008)

### **Health Information Literacy for Consumers**

The NN/LM MCR is currently addressing health information literacy for consumers, healthcare organizations and community-based organizations (CBO) that serve low income populations, the uninsured, those with limited English proficiency (LEP), migrant and seasonal farm workers, individuals and families experiencing homelessness, by funding projects that allow CBOs to extend their outreach efforts beyond the clinic setting. The NN/LM MCR has funded over 10 health information literacy outreach projects during the current contract.

One example of such funding includes the Información de Salud para Promotoras (Health Information for Lay Health Advisors) project in Kansas. This project is a collaboration between the Kansas City, KS Public Library, Dykes Health Sciences Library at the University of Kansas Medical Center, and El Centro, a community based organization whose mission is to create and sustain opportunities that empower Hispanic families. The project provides laptops and instruction to lay health advisors (Promotoras) on how to find reliable health information online in Spanish. Once trained, the Promotoras will go out into their community (health fairs and community events) and assist others with locating health reliable information. The NN/LM MCR will continue to work with and offer funding to organizations whose populations have limited Internet access or face language barriers when searching for reliable health information.

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**Approach and Methodology:**

Outcome: - Network members and other organizations are better able to support access to health information resources

B5a: Identify current or potential Network members that do not have onsite access to NLM resources, do not participate in Resource Sharing, and meet the minimum criteria.

***Internet Connectivity***

Based on the findings reported above in Tables 11 and 12, we know that our members have fast Internet connections, and that many have firewall issues, but that does not impede them from serving their population. In Year 2, the NN/LM MCR will conduct another Network Member Questionnaire (three years from now), which will allow us to review our member's need for access to Web 2.0 tools and tools unknown at this time. In three years time, institutional policies may change for some of our members, but for those who are still unable to access these tools, we will use our competitive award process to fund projects that increase access to blocked resources.

Since each Network member faces unique challenges, the NN/LM MCR works closely with individual members facing access barriers. For example, The NN/LM MCR is currently working with Via Christi Library of Via Christi Hospitals in Wichita, Kansas to provide a 3G wireless broadband modem card for an Internet connection, outside of their institution's network, that will enable them to access Web 2.0 communication tools that are currently blocked at their institution. The NN/LM MCR will continue to review barriers to health information encountered by Network members on an annual basis, reporting the results to the region and to the NLM. The NN/LM MCR will continue to be available to consult with Network members to help them find solutions to connect to health information.

***Technology Classes***

Even though many of our Network members cannot access certain web-based tools, the MCR will continue to offer classes to help our members remain current with new technologies for accessing and sharing health information (See our response to SOW section B4 for details). By offering classes, our members will be prepared, if and when their institutions remove restrictions to these tools. This also provides those members with a strong justification for their need to be able to access those tools by demonstrating that others in the profession are using them for continuing education in the field.

***Technology Advisory Group***

During the proposed contract period, the MCR will form a Technology Advisory Group, which will include Network Members and Information Technology professionals from the region. We hope that by working with professionals who have firsthand knowledge of network and security issues, we will gain insight into the unique issues that some of our members encounter within

their institutions. As we learn from our Advisory Group, the MCR will share information with its members via videoconference presentations, articles, and blog posts.

**B5b: Improve information services delivered to staff and consumers**

The NN/LM MCR staff and its Network members will be polled to determine if they are working with any underconnected organizations, with an emphasis on organizations that are located in inner city and rural parts of the region. During the proposed contract, the NN/LM MCR will conduct informal needs assessments of the targeted organizations to determine if they are familiar with NLM resources, whether or not they are connected to the Internet or if they are underconnected and meet the site requirements specified in Appendix 5 of the RFP. The NN/LM MCR will work with Network members and organizations that are interested in participating in the Health Information Literacy Connections project that will provide hardware, a 3G wireless broadband modem card for Internet access, and training on NLM resources (including multi-language resources). This effort is meant to assist the organizations to improve their connectivity, increase health information literacy and extend their outreach efforts beyond the clinic setting. For example, the funded organizations could take the laptops to health events at faith-based or other community sites, and provide instruction and assistance in finding reliable health information. We intend to fund a total of six projects during Years 1 and 2, and an additional six projects during Years 3 to 5. Each organization will be funded for a 12-month period. Beyond the funding period, the community organization will be responsible for on-going financial maintenance of the Internet connection (approximately \$50 a month). Each state coordinator will follow up to evaluate whether the project improved connectivity to biomedical information and what impact it has had on patient health information literacy and information access for the health care providers.

The NN/LM MCR will report on the process and results of working with Network members and community organizations by submitting articles for publication and proposals for meeting presentations. The funded organizations will be asked to contribute to and review articles and presentations. NLM will be kept informed of our progress through our quarterly reports.

**Schedule:**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Review barriers to health information by Network members	X	X	X	X	X
Assemble a Technology Advisory group that includes Network member and IT professionals for a two year term	X		X		X
Provide consultations and assist Network members in gaining access to blocked resources to improve their connectivity to biomedical health information resources	X	X	X	X	X
Provide NLM with reports on the results of working with Network Members to improve their connection to health information	X	X	X	X	X
Conduct informal needs assessment of targeted organizations. Fund identified organizations for the Health Information Literacy Connections Award	X	X	X	X	X
Report on the process and results of working with community organizations to improve connectivity and access to reliable biomedical health information resources	X	X	X	X	X
Provide training on NLM resources to identified organizations	X	X	X	X	X
Collect data from connectivity pilot projects to understand the impact outreach projects have on their institutions and target populations	X	X	X	X	X
Submit articles for publication and proposals for meeting presentations to report progress of connectivity pilot projects	X	X	X	X	X

## B6 – Project Funding and Administration

### Statement of Work

The RML is responsible for creating records in NLM's outreach applications database for all projects sponsored by the RML, including identifying an RML staff member who is responsible for creating and maintaining project records. All quarterly and final reports of projects will be submitted electronically using NLM's Web-based reporting tool to be developed and deployed during the first year of the 2011-2016 contract. The following funding categories are not comprehensive, but illustrate the variety of projects an RML may fund:

- Community awards (Ready America awards) to fund projects that (1) assist Network members in becoming active partners in their communities' emergency preparedness, response and recovery planning and (2) encourage emergency preparedness collaborations among Network members, community based organizations, first responders, public health workforce and other organizations.
- Exhibit awards support Network members' representing NLM and the RML at a regional, state or local meeting.
- Express awards. Support a wide range of small outreach projects that target health professionals, librarians and/or consumers.
- Information technology and policy awareness conferences may be conducted by a Network member with sponsorship by an RML to highlight the use of information technology to improve access to health information for health professionals and consumers.
- Outreach awards provide support for health information outreach to health professionals, public health workforce, and/or consumers.
- Technology improvement awards include funding to support (1) enhancement of equipment for access to and delivery of health information and for Network members, health professionals and consumers and (2) communication of the contributions of library services for the larger organization.

### Applicable NN/LM Goal

To promote awareness of, access to, and use of biomedical information resources for health professionals and the public, with a particular emphasis on contributing to Healthy People 2020 (<http://www.healthypeople.gov/HP2020/>)

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### Objective & Rationale:

Objective:

- NN/LM MCR funding opportunities improve access to biomedical information

The NN/LM MidContinental Region (MCR) will continue its rich tradition of providing funding for projects for Network members who have demonstrated their ability to execute programs to make their work more visible within their institutions and their communities. This funding

provides opportunities for members to offer a service or conduct research that may be beyond the capabilities of local budgets. Equally important, pursuing funding is an excellent advocacy strategy, as bringing in outside funding increases the perceived value of librarians to their institutions. The NN/LM MCR has been successful in awarding collaborative projects involving public libraries and community-based organizations with the purpose of promoting biomedical resources to a wider audience from trusted community organizations. The intended result is for health professionals, patients, and consumers to benefit from increased access to health and biomedical information resources.

During the current contract period, the NN/LM MCR funded twelve innovative projects with its award program for a total of more than \$145,500. Recipients of awards included Network members from community based organizations, hospital, health sciences, and public libraries. A few examples of projects funded in the current contract:

1. *Integrating the Medical Library Into Hospital Emergency Planning* is a project conducted by a hospital librarian. The project provides for the coordination of access to health information during an emergency and formally incorporates information access into the emergency operations plan for the hospital. Information services and resources of the medical library will be available to the clinical team when the emergency plan is activated.
2. *Información de Salud para Promotoras* is a partnership between a health sciences library, a community based organization and a local public library. The partnership provides training to Promotoras (lay-health advisors) who do not speak fluent English and have low computer and health literacy skills. The objective is for Promotoras to know where and how to locate reliable health information in Spanish on the Internet. The Promotoras then become advisors for access to health information and resources in the local Latino community.
3. *St. Luke's Hospital Library Advocacy*, a project, managed by a hospital's medical librarian, focused on the information needs of physicians and other clinical personnel such as nutritionists, respiratory therapists, and pharmacists. The objective is to identify library users and their information needs by using the data from several surveys and focus groups in the hospital, and to create a plan that will provide exemplary information services in the hospital.

It is clear that Network members have an interest in funding opportunities and we will continue to offer competitive funding in the 2011-2016 Contract.

Librarians play an important role as hospitals, universities and other institutions focus on new programming brought about by the American Recovery and Reinvestment Act and health care reform. Librarians have the ability to organize information, collaborate with many groups, and make connections as neutral clearinghouses and central agencies. Three institutions in the MidContinental Region received Clinical and Translational Science Awards (CTSA) funding. The NN/LM MCR is funding small demonstration projects at the libraries of these institutions during

Year 5 of the current contract. Health sciences librarians will be encouraged to develop new roles and to develop the skills and competencies to support CTSA and e-science projects.

Due to a need for more work in the area of connectivity, the NN/LM MCR will identify, with the help of Network members, inner-city, and rural-health organizations that are under-connected to high quality health information and will fund pilot projects to improve that connectivity.

Likewise, the NN/LM MCR will offer an award to Network members who will assist with promoting NLM resources to health professionals and training them to use the resources effectively.

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### **Approach & Methodology:**

Outcome: - Projects funded by the NN/LM MCR demonstrate ways to improve access to health information

#### ***Continuity of Health Information Awards***

The NN/LM MCR will offer the Continuity of Health Information Award in the next contract, with the focus on health information literacy, hospital library advocacy and emergency preparedness. The awards will be promoted via the NN/LM MCR web site, the RML News blog and the MCMLA listserv. Requests for proposals (RFPs) will be announced in Years 1-4 and the NN/LM MCR will fund projects up to \$ 15,000 each.

Health information literacy projects receiving funding will be required to provide a new service within an institution or develop partnerships outside the institution that enhance access to health information for consumers with low health literacy and/or to enhance access for health care professionals providing health information to consumers with low health literacy.

Hospital library advocacy projects will be required to strengthen the position of the library within the institution and/or community, to create institutional or public awareness about the library, to convey a message about what the library has to offer, particularly with regard to health information and why it matters to everyone in the institution/community.

Emergency preparedness projects will be required to develop partnerships that enhance access to health information in preparation for, during, and immediately following emergencies.

#### ***Health Information Literacy Connectivity Award***

Outcome: - Staff and consumers at inner-city and rural health organizations will have increased access to biomedical information

The NN/LM MCR will fund Health Information Literacy Connectivity Award to help healthcare organizations provide health information to under connected health consumers. NN/LM MCR coordinators will work with organizations that serve an under-connected population in rural or

inner city areas. This award focuses on organizations that work out in the community and need mobile access to health information. Staff of community organizations will be trained on NLM resources and will take laptops into the field (health fairs, faith-based health group meetings, etc.) to provide health information. The award will provide hardware and mobile Internet connectivity for up to \$2,025. Funding will be awarded in Years 1-5. (See our response to SOW section B5b for more information)

### ***Training Health Professionals Award***

The Training Health Professionals Award will be available to Network members who are certified, as NN/LM MCR representatives, to present and exhibit at regional conferences and meetings of health professionals and to provide training sessions. Certified members will need to have a working knowledge of NLM databases and services. The award will include funding for travel, exhibit registration, and materials for up to \$1,000. Awards will be made in each state. State coordinators will assist with promoting the awards in their states. The health professional audience will vary, in each state, depending on the type of conference where the MCR is exhibiting/presenting. Funding will be awarded in Years 1-5. (See our response to SOW section B1a for more information on this outreach effort).

### ***New Collaborations for Health Sciences Librarians Award***

The NN/LM MCR will offer the New Collaborations for Health Sciences Librarians Award to fund large projects that are meant to have a greater impact than the smaller awards. These awards are intended to attract Network members who can design projects that can be adopted for national application. Funds for up to \$60,000 will be granted to institutions for programs that may address any of several areas including patient safety, e-science, health information literacy, CTSA or clinical information systems. The RML expects that the results of these projects will be published in peer-reviewed professional journals. Funding will be awarded in Years 2 and 3.

The NN/LM MCR realizes the proposal writing process can be very complex and perplexing for applicants and that they must take care to include all the details needed before submission. NN/LM MCR coordinators have been and will be available to consult with applicants so that quality proposals will be received. As part of our consultation service, we discuss the feasibility of the project, help develop an idea, recommend funding sources, review proposals before submission, and when appropriate, write a letter of support. Our service is very effective when Network members take advantage of it. We will continue to provide technical sessions for all of our awards to help members understand the RFPs. We will promote these services to our members on the NN/LM MCR blog, NN/LM MCR web site and through other communication tools. (Our consultation service is described in our response to SOW section A12).

**Schedule:**

	Year 1	Year 2	Year 3	Year 4	Year 5
Offer Health Information Connectivity Awards	✗	X	X	X	X
Offer Continuity of Health Information Awards	✗	X	X	X	
Offer Training Health Professionals Award	X	X	X	X	X
Offer New Collaborations for Health Sciences Librarians Award		X	X		

**B7 – Enhancements****Statement of Work**

Throughout the five-year contract period, the Regional Medical Libraries are encouraged to submit proposals to conduct special projects designed to improve or enhance Network programs and services to health professionals, libraries, and the general public. These projects will be within the scope of work of the contract. In addition to regional programs, RMLs may propose joint projects with other Regions as well as programs that are national in scope. Enhancements may also be proposed by other Network libraries under subcontract to the RML.

**Applicable NN/LM Goal**

To develop, promote, and improve electronic access to health information by Network members, health professionals, and organizations providing health information to the public

**Objective & Rationale:**

Objective:

- NN/LM MCR funding opportunities improve access to biomedical information

The NN/LM MCR held many discussions, received input from its Regional Advisory Board, reviewed the results of its assessment and evaluation tools, and searched the literature for trends that would affect health information access in the future in preparation for the NN/LM RFP. However, two years occurs from the time that the proposal is written before implementation of the programming begins. Six years occurs from the time that the proposal is written until the end of the new contract. Change happens at such an astronomical speed that

it is impossible to design a program that completely addresses the unknown future. The programming and interventions that are described in this proposal based on current knowledge may not be suitable when the future becomes today. Appropriate projects that would greatly improve access to health information may be conceived by the MCR staff, by our Network members, or by a collaboration of Regional Medical Libraries.

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## Approach & Methodology

Outcome: -Projects funded by the MCR demonstrate ways to improve access to health information

The NN/LM MCR is aware of initiatives led by health sciences librarians that may need funding in the future. An example is Outreach Connections: Native Health Information. This is a project that resulted from a national meeting held in Albuquerque, New Mexico in 2006. The result of this meeting was the establishment of a volunteer steering committee to develop a collaborative space for anyone involved and interested in health information outreach to Native communities (i.e., American Indian, Alaska Natives, Hawaiian). The steering committee for this initiative is made up of librarians and others involved in health care. They are working to increase the number of activities that are contributed to the wiki to make it more useful for others involved in outreach to this population. In a few years they may reach a point where they will want to expand their space to include health information outreach to other populations or improve the usability of their collaboration space, each of these activities requires funding. The NN/LM South Central Region and the NN/LM MidContinental Region are both interested in supporting Outreach Connections: Native Health Information and would collaborate on applying for funding from the National Library of Medicine to sponsor another meeting to strategize how the next steps would be implemented.

The NN/LM MCR is occasionally approached by Network members who have project ideas that they would like the RML to fund. Usually we recommend that they apply for one of our competitive awards, but sometimes a project idea will fall outside the scope or costs more than the funding budgeted for our competitive awards. In these cases, the MCR will approach the National Library of Medicine (NLM) and seek approval to fund the project as an enhancement project.

Staff from the NN/LM MCR regularly meets with their counterparts from the other Regional Medical Libraries. Ideas are discussed at these meetings and potential collaborative efforts may be identified that were not in any RML's budget. These collaborative efforts that require funding are also potential enhancement projects that the RMLs would propose to the NLM.

**Schedule:**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Seek NLM approval for Enhancement Projects as they are proposed by the region	X	X	X	X	X
Seek NLM approval for Enhancement Projects that are developed in collaboration with other Regional Medical Libraries	X	X	X	X	X

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## **Regional Services Plan**

### **Section C: Logic Models**

**Note:** In consultation with the Outreach Evaluation Resource Center, we are deleting objectives from our logic model. Goals and outcomes provide enough of a basic structure in which to operate and measure the NN/LM MCR's impact.

**Goal #1**

Develop collaborations among Network members and other organizations to improve access to and sharing of biomedical information resources throughout the nation

	<b>Statement of work</b>	<b>Objective</b>	<b>Outcome</b>	<b>Summary of Activities</b>
<b>A1</b>	<p>Develop and implement a program designed to provide health professionals in all parts of the Region with a basic level of information services which includes:</p> <ol style="list-style-type: none"> <li>Access to books, journal articles, and audiovisuals;</li> <li>Access to online databases in the health sciences; and</li> <li>Access to reference and web services.</li> </ol> <p>The RML shall establish agreements with Network member libraries to provide these services to unaffiliated health professionals. For any areas where the RML is unable to establish such agreements, the RML will provide the service on a cost recovery basis;</p>	<p>Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information</p>	<p>Network members and other organizations are better able to support access to health information resources</p>	<ul style="list-style-type: none"> <li>– Provide basic services throughout the region</li> <li>– Sign subcontracts with Resources Libraries to provide basic services</li> <li>– Create web page for subsidized document delivery</li> <li>– Promote NN/LM Member Directory</li> <li>– Promote document delivery services</li> <li>– Promote free full text resources</li> </ul>
<b>A3</b>	<p>Manage the NN/LM Network membership program for the Region. Membership in the NN/LM Network is an integral part of the NN/LM program and defines the NN/LM Network member constituency (see Appendix 1).</p> <p>The Network members are crucial to the operation of the NN/LM Network, providing health professionals and consumers with access to needed information resources. Network membership is a way of recognizing the contributions of members. The contractor shall:</p> <ol style="list-style-type: none"> <li>Recruit new Network members from eligible libraries and information centers in the Region. Network membership certificates for the 2011-2016 time period will be provided by NLM and be personalized and distributed by the RML;</li> <li>Support Network members that participate in DOCLINE;</li> <li>Work with the NLM DOCLINE Team on DOCLINE</li> </ol>	<p>Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information</p>	<p>Network members and other organizations are better able to support access to health information resources</p>	<ul style="list-style-type: none"> <li>– Manage the NN/LM Network membership program for the Region</li> <li>– Recruit New NN/LM Network Members</li> <li>– Support DOCLINE users</li> <li>– Test and implement DOCLINE system enhancement</li> <li>– Involve Network members in RML activities</li> </ul>

	Statement of work	Objective	Outcome	Summary of Activities
	<p>system enhancement testing and implementation; and</p> <p>d. d. Actively involve Network members in NN/LM infrastructure and outreach programs, including obtaining feedback on regional and NLM programs on periodic basis.</p>			
<p><b>A5</b></p>	<p>Enter into formal agreements with a limited number of institutions in the Region to serve as Resource Libraries:</p> <p>a. Criteria for selection of Resource Libraries will be proposed by the offeror and may include, but are not limited to:</p> <ol style="list-style-type: none"> <li>1. Quality, uniqueness and/or size of the collection which add significantly to the resources of the Region;</li> <li>2. Special expertise which contributes to improving regional or national programs, in areas such as distance learning, advanced applications of technology to solving information access and delivery problems, digitization of information, commitment to the retention and preservation of print materials, library and information research, etc.;</li> </ol> <p>b. The RML will negotiate with Resource Libraries that are willing to develop projects that will build on their expertise to address the needs of the Region and to enhance the Resource Libraries' ability to contribute to their institutional goals and priorities.</p> <p>c. All Resource Libraries and the RML must agree to:</p> <ol style="list-style-type: none"> <li>1. Support DOCLINE libraries in the Region, participate fully in the DOCLINE system, and keep detailed library profile information up-to-date in the system;</li> <li>2. Contribute their institution's serial holdings</li> </ol>	<p><del>Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information</del></p>	<p>Resource Libraries are partners in carrying out the NN/LM 2011-2016 contract.</p>	<ul style="list-style-type: none"> <li>- Sign subcontracts with Resources Libraries to provide basic services</li> <li>- Monitor the implementation of the Resource Libraries subcontracts through the Activity Reporting System</li> <li>- Administer Resource Library and Coordinators questionnaires</li> </ul>

	Statement of work	Objective	Outcome	Summary of Activities
	<p>data to DOCLINE and keep holdings current by updating them online;</p> <ol style="list-style-type: none"> <li>3. Provide health professionals and other Network libraries with access to journal articles, books and audiovisuals in all formats via interlibrary lending or other legal resource sharing mechanisms;</li> <li>4. Adhere to Network performance standards for fill rate and throughput for interlibrary loan service;</li> <li>5. Participate in the Electronic Fund Transfer System (EFTS); and</li> <li>6. Participate selectively in a regional program for the retention and preservation of print serials and monographs in multiple U.S. locations.</li> </ol>			
<b>A6</b>	<p>Implement the NN/LM National Emergency Preparedness &amp; Response Plan (<a href="http://nnlm.gov/ep">http://nnlm.gov/ep</a>). Each RML is responsible to one other RML as a backup in an emergency, referred to as the Buddy System. Buddy responsibilities are located at: <a href="https://staff.nnlm.gov/wiki/Emergency_Preparedness#RML_pairs">https://staff.nnlm.gov/wiki/Emergency_Preparedness#RML_pairs</a></p> <p>Buddy relationships are as listed:</p> <ul style="list-style-type: none"> <li>MAR and SCR</li> <li>SEA and PNR</li> <li>GMR and PSR</li> <li>MCR and NER</li> </ul> <p>RMLs also serve as backup for NLM customer service inquiries</p>	<p>Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information</p>	<p>NN/LM MCR customers are satisfactorily served in time of a disaster.</p>	<ul style="list-style-type: none"> <li>– Conduct interactive online instruction on the concepts presented in the 10-Step approach</li> <li>– Conduct internal drills to test the continuity of service plans on a regular basis</li> <li>– Conduct table-top exercises to test the communication and back-up service plans with the New England Region on a regular basis</li> </ul>

	Statement of work	Objective	Outcome	Summary of Activities
<b>A7</b>	Identify and maintain effective methods of communication with current and potential NN/LM participants. All print and electronic communication should include an acknowledgment of NLM funding and the NN/LM Logo using the National Network of Libraries of Medicine Graphic Standards dated July, 1992. The contractor shall:			<ul style="list-style-type: none"> <li>– Identify and maintain effective methods of communication</li> <li>– Distribute NN/LM and NLM information</li> <li>– Coordinate development of materials with RMLs</li> <li>– Maintain NN/LM MCR web site</li> <li>– Attend NLM and RML teleconferences and meetings</li> </ul>
	a. Distribute important information about regional and national programs, policies, services, and procedures to the Region;	<del>Librarians, health care providers and consumers receive information from the MCR and provide feedback about health information resources, services and programs</del>	NN/LM MCR communications mechanisms are effective	<ul style="list-style-type: none"> <li>– Communicate with other networks and relevant organizations</li> <li>– Inform NLM of regional, state, and local activities</li> <li>– Obtain feedback from NLM and NN/LM users</li> <li>– Identify and contribute classes to the MLA Educational Clearinghouse</li> </ul>
	b. Coordinate the development of materials with other RMLs and NLM to avoid duplication of effort;	<del>NN/LM MCR will collaborate with NLM and other RMLs</del>	NN/LM MCR collaborations are valuable	<ul style="list-style-type: none"> <li>– Investigate and implement communication technologies</li> </ul>
	c. Develop and maintain a regional Web site as an integral component of the NN/LM Web site, that incorporates the guidelines of 508 compliance ( <a href="http://www.section508.gov">http://www.section508.gov</a> );	<del>Librarians, health care providers and consumers receive information from the MCR and provide feedback about health information resources, services and programs</del>	NN/LM MCR communications mechanisms are effective	<ul style="list-style-type: none"> <li>– Participate in RML Directors’ meetings</li> </ul>
	d. Participate in monthly teleconferences with NLM and the other RMLs to discuss topics of importance in the overall management of the NN/LM program;	<del>MCR will collaborate with NLM and other RMLs</del>	NN/LM MCR collaborations are valuable	
	e. Develop working relationships with other networks and relevant organizations by identifying common program interests and goals, work to develop regular lines of communication and develop appropriate cooperative programs;	<del>Librarians, health care providers and consumers in the MCR receive information and provide feedback about health information resources, services and programs</del>	NN/LM MCR communications mechanisms are effective	

	Statement of work	Objective	Outcome	Summary of Activities
	f. Inform NLM about regional, state and local activities of health professionals and health sciences libraries, networks, and other organizations as they relate to the programs of the NN/LM, NLM and the national information infrastructure;	MCR will collaborate with NLM and other RMLs	NN/LMMCR collaborations are valuable	
	g. Obtain ongoing feedback from users about their information preferences, needs and uses, and recommend ways of improving health professional and consumer access to information;	<del>Librarians, health care providers and consumers receive information from the MCR and provide feedback about health information resources, services and programs</del>	NN/LM MCR communications mechanisms are effective	
	h. Assist in the identification of training resources to be added to the MLA Educational Clearinghouse;	MCR will collaborate with NLM and other RMLs	NN/LMMCR collaborations are valuable	
	i. Participate in testing and using alternative methods of communication; and	<del>Librarians, health care providers and consumers receive information from the MCR and provide feedback about health information resources, services and programs</del>	NN/LM MCR communications mechanisms are effective	
	j. Participate in RML Directors' meetings.	MCR will collaborate with NLM and other RMLs	NN/LMMCR collaborations are valuable	
<b>A8</b>	Implement a Regional Advisory Committee (RAC). The RAC must include health professionals and health sciences librarians from hospital libraries and other large and small medical libraries within the Region. The RAC should also include representatives of state library agencies, public and school libraries, health information consumer groups, special populations, as well as	<del>The Regional Advisory Board contributes to improving access to health information in the MCR</del>	The Regional Advisory Board effectively advises the RML on outreach and programming for Network involvement and access to health	<ul style="list-style-type: none"> <li>– Reconstitute Regional Advisory Board annually</li> <li>– Assign Regional Advisory Board members a project area</li> <li>– Hold annual and virtual meetings</li> <li>– Assess member's Board experience</li> <li>– Review impact of the Regional Advisory Board on RML programming</li> </ul>

	<b>Statement of work</b>	<b>Objective</b>	<b>Outcome</b>	<b>Summary of Activities</b>
	<p>representatives of community organizations with which the RML has partnerships. The RAC need not be structured as a single body, nor is it necessary for it to meet in a physical location, as long as a system is in place that enables the RAC to:</p> <ol style="list-style-type: none"> <li>a. Advise the RML within the framework of the NN/LM contract on ways to develop and implement outreach programs to improve health professionals' and the public's access to biomedical information;</li> <li>b. Advise the RML in establishing regional priorities, policies and procedures, including the development and implementation of a regional emergency preparedness plan, and reviewing regional programs;</li> <li>c. Develop plans to encourage health professionals and health sciences librarians to participate actively in regional and national programs affecting the delivery of health information; and</li> <li>d. Assist the RML in identifying health professionals without access to health information.</li> </ol>		<p>information for health professionals and public</p>	
<b>A15</b>	<p>Assist NLM in identifying collections of historical and unique materials related to the health sciences and developing ways to increase access to these materials (Appendix 3);</p>	<p><del>Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information</del></p>	<p>Network members are aware of and have access to historical collections within the region as well as those from the National Library of Medicine</p>	<ul style="list-style-type: none"> <li>– Promote historical collections within the region</li> <li>– Invite speaker from NLM History of Medicine for “Breezing Along with the RML” webinars</li> <li>– Invite speaker from NLM Exhibitions for “Breezing Along with the RML” webinars</li> </ul>

**Goal #2**

Promote awareness of, access to, and use of biomedical information resources for health professionals and the public, with a particular emphasis on contributing to Healthy People 2020 (<http://www.healthypeople.gov/HP2020/>)

	<b>Statement of work</b>	<b>Objective</b>	<b>Outcome</b>	<b>Summary of Activities</b>
<b>A14</b>	Develop programs, which may include pilot projects, to assist the information professional in promoting evidence based health information in the institution. The programs shall identify health information issues and address the changing role of the information professional with a special emphasis on hospital librarians. The programs may include but not be limited to: advocacy, education and training to address knowledge management, clinical information systems, patient safety programs, electronic health records, health literacy, or patient education;	<del>Network members, especially hospital librarians, promote evidence based health information</del>	Network members, especially hospital librarians, participate in emerging practices to promote evidence based health information in the institution	<ul style="list-style-type: none"> <li>– Sponsor knowledge sharing workshop</li> <li>– Offer partial scholarships to attend online business classes</li> <li>– Co-sponsor Health Literacy Summit</li> <li>– Offer online patient safety classes</li> <li>– Sponsor Patient Safety Symposium</li> <li>– Support Network members involvement in electronic health record programs and/or clinical information system projects</li> <li>– Invite Network members to share their experiences in RML sponsored events</li> </ul>
<b>B1</b>	Health Professionals and Public Health Workers			
	The contractor shall develop, implement, and evaluate outreach programs that bring biomedical information resources within easy reach of U.S. health professionals and the public health workforce, who are not directly affiliated with an institution with a medical library. In carrying out these programs, the contractor shall focus on unaffiliated health professionals located in rural, inner city, and Medically Underserved Areas (MUA), public health workers, and minority health practitioners or those who serve minority populations. The outreach to health professionals program shall enlist the assistance of Network members through the use of subcontracts, agreements and other mechanisms. Specifically, the contractor shall undertake the following:			

	<b>Statement of work</b>	<b>Objective</b>	<b>Outcome</b>	<b>Summary of Activities</b>
	<p>a. Develop programs that reach practicing health professionals, including but not limited to: physicians, physician assistants, nurses, pharmacists, complementary and alternative medicine and allied health practitioners, veterinarians, public health workers, and health educators, with particular emphasis on collaborations with organizations/institutions that represent these groups;</p>	<p><del>Health information resources are within easy reach of practicing U.S. health professionals</del></p>	<p>Health professionals, librarians, students and members of other organizations have increased skills to use resources for health information</p>	<ul style="list-style-type: none"> <li>- Enlist the assistance of Network members and Regional Advisory Board members to exhibit at national, regional, state, and local meetings</li> <li>- Evaluate outreach activities to understand the impact of outreach and ways to enhance programs</li> <li>- Develop an exhibitor toolkit for Network members</li> </ul>
	<p>b. Develop programs that reach minority health practitioners and students in Historically Black Colleges and Universities, Hispanic Serving Institutions, Tribal Colleges, Community Colleges, and Vocational Schools, including institutions and organizations that focus on Native Hawaiians and Alaska Natives and the health professionals serving those populations or working in those disciplines. Programs should also focus on subject disciplines that have been identified as priority initiatives (e.g., health disparities, consumer health, health information literacy, HIV/AIDS, health services research, toxicology and environmental health);</p>	<p><del>Health information resources are within easy reach of practicing U.S. health professionals</del></p>	<p>Health professionals, librarians, students and members of other organizations have increased skills to use resources for health information</p>	<ul style="list-style-type: none"> <li>- Develop programs to infuse health information into the curriculum at minority serving institutions</li> <li>- Support integration of health information into the curriculum at institutions that have minority populations enrolled in allied health programs</li> <li>- Evaluate outreach activities to understand the impact of outreach and ways to enhance programs</li> <li>- Develop an exhibitor toolkit for Network members</li> </ul>
	<p>c. Develop pilot projects, which may include professional schools and organizations, to identify and promote the roles of libraries in institutions that have e-science initiatives;</p>	<p><del>Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information</del></p>	<p>Network members, especially hospital librarians, participate in emerging practices to promote evidence based health information in the institution</p>	<ul style="list-style-type: none"> <li>- Conduct pilot e-science project</li> <li>- Subcontract pilot project to identify skills, competencies and roles for librarians in e-science</li> <li>- Investigate opportunity for graduate library program to develop e-science curriculum</li> </ul>

	Statement of work	Objective	Outcome	Summary of Activities
	<p>d. Develop programs, which may include pilot projects, with recently funded DHHS regional extension centers (RECs) (<a href="http://www.hhs.gov/news/press/2010pres/02/20100212a.html">http://www.hhs.gov/news/press/2010pres/02/20100212a.html</a>) to assist health professionals with implementing and using health information technology; and</p>	<p><del>Personal health information and access to evidence based health information are incorporated into EHR systems.</del></p>	<p>RECs and health IT programs are aware of the value of incorporating personal health information and access to evidence based medicine resources in EHR systems</p>	<ul style="list-style-type: none"> <li>– Work with RECs during their funding period that ends in 2013</li> <li>– Support librarians at the 5 community colleges to integrate evidence based medicine and consumer health information into the Health IT program curricula</li> <li>– Continue to educate ourselves and monitor new develops and advancements on the implementation and use of EHRs</li> <li>– Involve the RML and its Network members in REC committees</li> <li>– Form a task force of Network members that are on REC committees to share effective practices on adopting the EHR model</li> <li>– Develop a resource packet on Regional Extension Centers to assist Network members</li> </ul>
	<p>e. Develop culturally and linguistically appropriate resources and provide training in the effective use of electronic health information resources. Before developing any training materials, the MLA Educational Clearinghouse will be checked to avoid duplication. Copies of all training materials developed will be registered with the MLA Educational Clearinghouse. Training should include, but not be limited to: PubMed, MedlinePlus, and other NLM resources.</p>	<p><del>Health information resources are within easy reach of practicing U.S. health professionals</del></p>	<p>Health professionals, librarians, students and members of other organizations have increased skills to use resources for health information</p>	<ul style="list-style-type: none"> <li>– Promote culturally and linguistically appropriate electronic resources at state and local public health exhibits and conferences</li> <li>– Develop and offer faith-based health information classes for parish nurses</li> <li>– Work with Refugee Health Coordinators to identify culturally and linguistically appropriate resources</li> <li>– Assess and evaluate outreach activities in order to enhance programs</li> <li>– Develop an exhibitor toolkit for Network members</li> </ul>

	Statement of work	Objective	Outcome	Summary of Activities
<b>B2</b>	<b>Consumers</b>			
	The contractor shall develop, implement, and evaluate outreach programs to increase the public’s awareness of and access to high quality electronic health information. In carrying out these programs, the contractor shall work with a variety of intermediaries including Network members, health professionals, public health workers, information professionals, educators, community, faith-based, volunteer, and other types of organizations, including those serving minorities, special and underserved populations, health advocacy and self-help groups, through the use of subcontracts, agreements, and other mechanisms. Specifically, the contractor shall undertake the following:		Network members and other organizations are better able to support access to health information resources	
	a. Develop programs that reach special populations (e.g. minorities, seniors, teens, veterans’ groups, low income populations, etc.), focus on special topics (e.g. health disparities, health information literacy, HIV/AIDS, public health, culturally and linguistically appropriate information, personal health records, emergency preparedness, etc.), and promote NLM resources to consumers;	<del>The NN/LM MCR increases the public's awareness of and access to health information</del>	Network members and other organizations are better able to support access to health information resources	<ul style="list-style-type: none"> <li>– Provide online training for public librarians</li> <li>– Continue managing Bringing Health Information to the Community blog</li> </ul>
	b. Foster collaborations and encourage outreach partnerships among Network members, community, faith-based, and volunteer organizations including those serving minority and underserved populations, and other types of organizations, to improve access to electronic consumer health information at the local, state, and regional levels;	<del>Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information</del>	Network members and other organizations are better able to support access to health information resources	<ul style="list-style-type: none"> <li>– Promote health information literacy collaborations that reach other networks and relevant organizations</li> <li>– Recognize public health/public library partnerships</li> <li>– Develop strategies with the Community Outreach Working Group to assist Network members in outreach efforts</li> <li>– Include a health information literacy focus in the Continuity of Health Information Award</li> <li>– Share effective practices through the Library Success Wiki</li> </ul>

	Statement of work	Objective	Outcome	Summary of Activities
				<ul style="list-style-type: none"> <li>– Assess state needs and promote the NLM and NN/LM through various networking and collaborative efforts</li> <li>– Maintain State Library collaborations</li> </ul>
	<p>c. Provide consultation for Network members in project planning, preparation, writing and evaluation;</p>	<p><del>Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information</del></p>	<p>Network members have the necessary skills to develop projects and programs</p>	<ul style="list-style-type: none"> <li>– Use the RML’s communication tools to promote its project consultation service</li> <li>– Offer OERC data collection and data analysis modules</li> <li>– Offer the “Measuring Your Impact” class</li> </ul>
	<p>d. Develop culturally and linguistically appropriate resources and provide training in the effective use of electronic health information resources. Before developing any training materials, the NLM Training Center and MLA Educational Clearinghouse will be checked to avoid duplication. Copies of all training materials developed will be registered with the MLA Educational Clearinghouse. Training should include, but not be limited to: PubMed, MedlinePlus, and other NLM resources; and</p>	<p><del>The NN/LM MCR increases the public’s awareness of and access to health information</del></p>	<p>Network members and other organizations are better able to support access to health information resources</p>	<ul style="list-style-type: none"> <li>– Promote culturally appropriate resources in presentations including Spanish and Multiple Language resources on MedlinePlus</li> <li>– Encourage developers of multiple language resources to use MLA Clearinghouse and MedlinePlus materials</li> <li>– Maintain state web pages with Spanish section “Información en Español”, and section on Minority Health</li> <li>– Continue to develop and support classes developed by NN/LM Coordinators with regard to minority health topics</li> </ul>
	<p>e. Develop pilot projects to identify and promote the roles of libraries in institutions that have received or are seeking NIH Clinical and Translational Science Awards (CTSA) with a focus on community engagement.</p>	<p><del>Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information</del></p>	<p>Network members, especially hospital librarians, participate in emerging practices to promote evidence based health information in the institution</p>	<ul style="list-style-type: none"> <li>– Offer funding to members to explore their involvement in CTSA efforts within their institutions</li> </ul>

	Statement of work	Objective	Outcome	Summary of Activities
<b>B3</b>	<p><b>Exhibits and Presentations at Meetings</b></p> <p>The contractor shall promote NLM and NN/LM programs and services at national, regional and state meetings of health professionals and organizations that represent consumers. NLM will provide each RML with an exhibit backdrop to be used at national exhibits. The national exhibit schedule will be set for October-September. Responsibilities shall include the following:</p> <p>a. Provide full support for a minimum of eight meetings (four national and four regional, state, or local) for an exhibit, program presentation, or course offering, including making all arrangements (scheduling, fees, shipping, logistics, equipment and publications), in consultation with the NN/LM National Network Office. Coordination of course offerings, program presentations and other offerings at meetings should be appropriate with national initiatives and promotional activities identified by NLM;</p> <p>b. Designate an RML staff member who is responsible for identifying health professional and consumer focused meetings, reporting exhibits and other RML activities at all national, regional, state and local meetings;</p> <p>c. Attend state library association meetings and exhibit or make presentations to promote NLM and NN/LM programs and services; and</p> <p>d. Enlist the assistance of Network members in exhibiting at national, regional, state, and local meetings.</p>	<p>Librarians, health care providers and consumers receive information from the MCR and provide feedback about health information resources, services and programs</p> <p>-</p> <p>-</p> <p>-</p> <p>Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information</p>	<p>Librarians, health care providers and consumers in the MCR are more aware of health information resources, services and programs</p> <p>-</p> <p>-</p> <p>-</p> <p>Network members and other organizations are better able to support access to health information resources</p>	<p>- Exhibit at national meetings as assigned and submit program proposals to present</p> <p>- Exhibit at local or regional meetings and submit program proposals to present</p> <p>- Submit exhibit reports on NLM External Exhibit Report System and in the Activity Reporting System</p> <p>- Exhibit at state library association meetings and submit program proposals to present</p> <p>- Enlist the assistance of Network members and Regional Advisory Board members to exhibit at national, regional, state, and local meetings</p>

	Statement of work	Objective	Outcome	Summary of Activities
<p><b>B6</b></p>	<p>The RML is responsible for creating records in NLM’s outreach applications database for all projects sponsored by the RML, including identifying an RML staff member who is responsible for creating and maintaining project records. All quarterly and final reports of projects will be submitted electronically using NLM’s Web-based reporting tool to be developed and deployed during the first year of the 2011-2016 contract.</p> <p>The following funding categories are not comprehensive, but illustrate the variety of projects an RML may fund:</p> <ul style="list-style-type: none"> <li>• Community awards (Ready America awards) to fund projects that (1) assist Network members in becoming active partners in their communities’ emergency preparedness, response and recovery planning and (2) encourage emergency preparedness collaborations among Network members, community based organizations, first responders, public health workforce and other organizations.</li> <li>• Exhibit awards support Network members’ representing NLM and the RML at a regional, state or local meeting.</li> <li>• Express awards. Support a wide range of small outreach projects that target health professionals, librarians and/or consumers.</li> <li>• Information technology and policy awareness conferences may be conducted by a Network member with sponsorship by an RML to highlight the use of information technology to improve access to health information for health professionals and consumers.</li> <li>• Outreach awards provide support for health information outreach to health professionals, public health workforce, and/or consumers.</li> <li>• Technology improvement awards include funding to support (1) enhancement of equipment for access to</li> </ul>	<p><del>NN/LM MCR funding opportunities improve access to biomedical information</del></p>	<p>Projects funded by the NN/LM MCR demonstrate ways to improve access to health information</p>	<ul style="list-style-type: none"> <li>– Offer funding to Network members to exhibit and present at local, state or regional conferences</li> <li>– Offer funding to members to explore their involvement in CTSA efforts within their institutions</li> <li>– Offer funding for projects in patient safety, e-science, health information literacy or clinical information systems</li> <li>– Offer funding to inner-city and rural health care organizations to provide alternative means to access health information</li> <li>– Offer funding to members on projects focused on health information literacy, library advocacy, and emergency preparedness</li> <li>– Provide technical consultations for awards</li> </ul>

	Statement of work	Objective	Outcome	Summary of Activities
	<p>and delivery of health information and for Network members, health professionals and consumers and (2) communication of the contributions of library services for the larger organization.</p>			
<p><b>B7</b></p>	<p><b>Enhancements</b> Throughout the five-year contract period, the Regional Medical Libraries are encouraged to submit proposals to conduct special projects designed to improve or enhance Network programs and services to health professionals, libraries, and the general public. These projects will be within the scope of work of the contract. In addition to regional programs, RMLs may propose joint projects with other Regions as well as programs that are national in scope. Enhancements may also be proposed by other Network libraries under subcontract to the RML.</p>	<p><del>NN/LM MCR funding opportunities improve access to biomedical information</del></p>	<p>Projects funded by the MCR demonstrate ways to improve access to health information</p>	<ul style="list-style-type: none"> <li>– Request NLM enhancement funds for projects as they are proposed by the region</li> <li>– Request NLM enhancement funds for projects developed in collaboration with other RMLs</li> </ul>

**Goal #3**

Develop, promote, and improve electronic access to health information by Network members, health professionals, and organizations providing health information to the public.

	<b>Statement of Work</b>	<b>Objective</b>	<b>Outcome</b>	<b>Summary of Activities</b>
<b>A2</b>	Assess and respond to the needs of health sciences libraries to support programs that improve the transfer of health care and biomedical information within their institutions and through their participation in the network. This includes promoting the use of relevant NLM services, testing new features of these services; and identifying the need for new or enhanced NLM services;	<del>Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information</del>	Network members and other organizations are better able to support access to health information resources	<ul style="list-style-type: none"> <li>– Conduct Network Member Questionnaire</li> <li>– Conduct focus groups with Network members</li> <li>– Promote and gather feedback on NLM products and services</li> </ul>
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<b>A4</b>	Implement the portion of the Regional Services Plan concerned with document delivery to provide health professionals, including unaffiliated health professionals throughout the Region, with efficient, rapid access to health sciences information resources, and promote network participation in the Electronic Fund Transfer System (EFTS). The plan for the Region shall conform to the NN/LM Resource Sharing Plan (Appendix 2);	<del>Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information</del>	Network members and other organizations are better able to support access to health information resources	<ul style="list-style-type: none"> <li>– Implement portions of the NN/LM Resource Sharing Plan as they relate to document delivery services:                             <ul style="list-style-type: none"> <li>o Serial Holdings Maintenance</li> <li>o Standardize Policies and Procedures</li> <li>o Test New Resource Sharing Methods</li> <li>o Support Negotiating e-journal Subscriptions</li> <li>o Emergency Document Delivery and Collection Access</li> <li>o Promote use of electronic document delivery</li> <li>o Support EFTS</li> </ul> </li> </ul>
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<b>A11</b>	Assist Network members with negotiating e-licensing agreements that meet the needs of their institutions and support the mission of the NN/LM by providing resources on and training in e-licensing issues;	<del>Librarians in the MCR provide programs and services that improve the transfer of health care and biomedical information</del>	Network members and other organizations are better able to support access to health information resources	<ul style="list-style-type: none"> <li>– Assist Network members with negotiating e-licensing agreements</li> <li>– Provide training on licensing electronic resources</li> <li>– Develop and maintain electronic resources on licensing electronic resources</li> <li>– Provide consultation services on negotiating e-licenses</li> </ul>

	Statement of Work	Objective	Outcome	Summary of Activities
<b>A12</b>	Provide consultation to Network members as well as community-based, faith based and other organizations representative of special populations on preparing proposals for projects to compete for NLM and NN/LM funding	<del>Network members and other organizations have resources to support and improve information services for health professionals and others.</del>	Network members have the necessary skills to develop projects and programs	<ul style="list-style-type: none"> <li>- Promote consultation services</li> <li>- Provide resources on developing partnerships</li> <li>- Offer proposal writing classes</li> <li>- Offer technical sessions</li> </ul>
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<b>A13</b>	Promote and encourage the submission of applications for NLM sponsored grants;	<del>Network members and other organizations have resources to support and improve information services for health professionals and others</del>	Network members and other organizations are aware of NLM grants available for application and funding	<ul style="list-style-type: none"> <li>- Publish NLM grant opportunities in NN/LM MCR communication tools</li> <li>- Review regionally funded projects as possible candidates for NLM funding</li> <li>- Promote NLM funding in presentations</li> <li>- Promote successful projects through NN/LM MCR communication tools</li> </ul>
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<b>A16</b>	Provide a training facility equipped with personal computers as well as technologies supporting distance learning, including webcasts for conducting NLM training classes as outlined in the NLM Training Center Statement of Work. There will be one personal computer for every student. Equipment requirements are in (Appendix 4). Priority shall be given for scheduling regional training. When not in use for regional training classes, the facility may be used for other types of training.	<del>Health information resources are within easy reach of practicing U.S. health professionals</del>	Health professionals, librarians, students and members of other organizations have increased skills to use resources for health information	<ul style="list-style-type: none"> <li>- Outfit Eccles Health Sciences Library computer lab with computers and distance education technology</li> <li>- Host NLM Training Center workshops at 2-3 sites annually</li> </ul>
<b>B4</b>	The contractor shall develop an information technology and policy awareness program which includes:			
	a Regional forums that focus on e-science initiatives, e.g., the use of information technology to manage large stores of scientific and/or clinical data (as in clinical data warehouses), approaches	The NN/LM MCR information technology and policy awareness program improves	Health sciences librarians are integrated in the conduct of e-science	<ul style="list-style-type: none"> <li>- Hold an inter-regional e-science forum</li> <li>- Create and maintain the e-science web pages</li> <li>- Offer e-science education webinars</li> </ul>

	Statement of Work	Objective	Outcome	Summary of Activities
	<p>to integrating data with other types of information, involvement of libraries in teaching e-science research methods, and policy issues affecting production, distribution, and access to data and information; and</p> <p>b Monitoring current technological and policy developments and trends to identify those that will improve access to biomedical information.</p>	<p><del>access to biomedical information</del></p> <p><del>The NN/LM MCR information technology and policy awareness program improves access to biomedical information</del></p>	<p>Network members adopt new technologies to increase access to biomedical information</p>	<ul style="list-style-type: none"> <li>- Regularly monitor and disseminate technology policies and trends</li> <li>- Form the Technology Work Group</li> <li>- Offer technology sandbox sessions</li> <li>- Teach at least 12 technology classes</li> <li>- Attend NN/LM technology meetings</li> <li>- Poll members about the usefulness of the technology program</li> </ul>
<b>B5</b>	<p><b>Technology Improvement</b></p> <p>The contractor shall develop and implement an NN/LM technology improvement program, if needed, to encourage high quality health information access and delivery to Network members, health professionals and consumers in the Region. Emphasis should be on the “underconnected,” particularly in inner city and rural health organizations, to upgrade and maintain technology access. If no program is proposed, the contractor shall provide an explanation of why the program is not needed. Site selection requirements are found in (Appendix 5). The contractor shall:</p> <p>a Identify current or potential Network members that do not have onsite access to NLM resources, do not participate in Resource Sharing, and meet the minimum criteria; and</p> <p>b Improve information services delivered to staff and consumers.</p>	<p><del>The NN/LM MCR information technology and policy awareness program improves access to biomedical information</del></p> <p>-</p> <p>-</p>	<p>Network members and other organizations are better able to support access to health information resources</p>	<ul style="list-style-type: none"> <li>- Continue to review and report on the barriers to health information by Network members on an annual basis</li> <li>- Offer updated versions of 13 Things class that reflects new web-based tools</li> <li>- Form a Technology Advisory Group</li> <li>- Poll Network members to determine if they are working with organizations that meet the criteria of being underconnected</li> <li>- Work with NN/LM MCR Network members and other organizations that are interested in participating in an underconnected pilot project</li> <li>- Publish articles or present at professional conferences on the process and results of working with NN/LM MCR Network members and community organizations</li> <li>- Inform NLM on our progress through our quarterly reports</li> </ul>

**Goal # 4**

Understand how the products and services of the NN/LM and NLM contribute to improved access to health information by health professionals, and the public. [Note: added for the NN/LM MCR]

	<b>Statement of Work</b>	<b>Objective</b>	<b>Outcome</b>	<b>Summary of Activities</b>
<b>A9</b>	<p>Monitor and evaluate the Region's programs to assess their effectiveness in meeting NN/LM goals and to identify and resolve problems which impede the effective delivery of health information services. The contractor shall:</p> <ul style="list-style-type: none"> <li>a Evaluate and/or assess selected regional programs in consultation with the NN/LM Outreach Evaluation Resource Center and the Regional Advisory Committee;</li> <li>b Provide NLM with regular feedback about NLM and NN/LM products and services from individuals and constituent groups; and</li> <li>c Participate in a formal contract site visit and review of the regional program, to be conducted at least once during the contract, by selected representatives from NLM, the RAC and/or Network members, and at least one other RML</li> </ul>	<p><del>NN/LM MCR is effective in assisting Network members in the delivery of health information services</del></p>	<p>Evaluation data demonstrates the effectiveness of the Region's programs</p>	<ul style="list-style-type: none"> <li>- Analyze the outcomes and indicators achieved in the 2006-2011 contract and identify effective practices</li> <li>- Review Activity Report System reports and make adjustments to planned activities</li> <li>- Investigate and implement additional methods for obtaining information about NN/LM MCR member needs</li> <li>- Develop questions for and administer Network Member Questionnaire and focus groups</li> <li>- Prepare reports for NLM site visit</li> </ul>
<b>A10</b>	<p>Participate in tests, usability studies, and user needs assessments of NLM and NN/LM products and services</p>	<p><del>Develop a mechanism to provide NLM with regular feedback about NLM and NN/LM products and services from individuals and constituent groups</del></p>	<p>NLM and NN/LM products and services better reflect the needs of users</p>	<ul style="list-style-type: none"> <li>- Provide NLM and NN/LM with data from usability studies and user needs assessments</li> <li>- Develop questions for and administer Network Member Questionnaire and focus groups</li> <li>- Participate and provide feedback on tests requested by NLM</li> </ul>