

The Northern Plains Laboratory Consortium and Emerging Leaders Program Address Regional Needs

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ABSTRACT

The Public Health Laboratories (PHLs) in Idaho, Montana, North Dakota, South Dakota and Wyoming share demographic characteristics that lead to common challenges. In 2006 the PHLs in these states formed the Northern Plains Consortium (NPC) in order to foster collaboration and coordinate system improvement activities. The NPC has actively worked to identify, prioritize and address areas of need. Most recently the NPC has focused on coordination and training of biosafety outreach officers, and the NPC consistently works to share resources and foster leadership development within member laboratories. Here we highlight key activities of the NPC with an emphasis on shared testing services and succession planning via the regional Emerging Leaders Program (ELP).

BACKGROUND

In 2006, via a 3 year CDC National Laboratory System (NLS) grant initiative to “integrate clinical laboratories into public health testing,” the Public Health Laboratories (PHLs) in Montana, North Dakota, South Dakota and Wyoming formed the Northern Plains Consortium (NPC) in order to foster collaboration and coordinate system improvement activities. In addition to sharing borders, the PHLs in these states share similar demographic characteristics, including large geographic area with low population, high American Indian population, high resident population aged 65 and older, low gross state product, and below average annual pay. These demographics contribute to the common challenges facing our clinical laboratories, such as inadequate staff numbers and high turnover of staff looking for salary increases, isolation of rural laboratory workers, restricted ability to contribute public health data, limited test menus, and limited budgets.

Initially, the primary focus of the Consortium was to increase the abilities of clinical laboratories to conduct appropriate public health related testing and to participate in a state public health laboratory system. Specific projects were undertaken to increase the knowledge base of clinical laboratory professionals while improving their ability to conduct public health related testing and reporting in these frontier states. The NPC has expanded its focus in scope and continues to collaborate and exchange best practices for laboratory system improvement. In 2013 the Idaho PHL joined the NPC.

Most activities are done informally (handshake agreement), but all states have the option to invoice others for services provided, if needed. The NPC continues to work collaboratively on various lab system improvement projects.

ACTIVITIES

Projects were initially funded by the NLS grant and focused on NLS efforts, which included an enhanced communication and collaboration network among public health and clinical laboratories intended to facilitate:

- High quality and timely public health laboratory testing
- Improved assessment of relevant laboratory practices
- Better detection of, response to, and tracking of public health threats
- An effective mechanism for making policy and adopting appropriate guidelines across states and regions
- Development of performance standards
- Provision of communication, coordination and testing capacity required to effectively detect and report outbreaks and exposures that are crucial to the future health and safety of our communities

The expanded NPC works to share training resources, as well as various system improvement activities based on identified gaps. A regional Eagleson Institute biosafety training is currently being planned in SD to assist with development of biosafety expertise within the NPC.

Projects based on Identified Needs/System Improvement

Surveys/ trainings with clinical laboratories: AST Practices, STD Practices, <i>C. difficile</i> , Quality Management Systems	
Regional and State Communication Plans	Transportation Exercises
Workforce Development Plans	LRN PT and Western States PT
TB NAAT Testing and Educational Campaign	Succession Planning
Electronic Test Orders and Results (ETOR)	Biosafety Outreach

A shared testing services spreadsheet was developed and populated by NPC laboratories. The spreadsheet was similar to the PHL System Database and captured each NPC member laboratory’s testing capability and willingness to share services. From there, various shared service arrangements were made between states on an as needed basis.

Tests that have been/are shared between states

HIV Multispot Supplemental Testing	Hepatitis C RNA, Genotyping
16S Ribosomal Bacterial ID	Lyme Disease Western Blot
Hantavirus (SNV) Serology	TB NAAT Testing
Certain vaccine preventable disease IgM tests (e.g., Mumps, Rubella)	

In 2014, succession planning and workforce development became a major focus due to a variety of factors, including long time Laboratory Directors retiring in MT, WY and SD. Activities included:

- Brainstorming and prioritizing the skills and knowledge required to be an effective PHL director or manager in a rural state
- Generating ways to develop and transfer these skills and knowledge sets to emerging leaders
- Addressing ways to capture institutional knowledge
- Implementing the Northern Plains Consortium Emerging Leaders Program (ELP)

The ELP was developed to address these issues and to provide pertinent training to staff in the NPC laboratories. The NPC ELP is modeled after APHL’s national ELP and the ASCLS leadership program.

DISCUSSION

The Consortium states have performed several exercises to demonstrate the effectiveness of a regional public health laboratory system. The exercises were designed to ascertain how well the participating states could cooperate and complement laboratory activities in response to emergency demands.

NPC members have successfully shared low volume testing services, thereby increasing capability and decreasing costs. They have demonstrated the feasibility of using current ground transportation through existing courier systems to transport samples across state lines. A round robin influenza exercise was conducted demonstrating the ability of Consortium laboratories to properly package and ship specimens to neighboring state laboratories, ensuring specimen integrity. A TB NAAT educational campaign was developed in partnership with Consortium states to improve knowledge, understanding, and appropriate use of TB NAAT. MT is currently working on an ETOR project with ND. Resources continue to be effectively shared for the development of biosafety expertise and leadership development. These exercises and sharing of resources demonstrate the successful partnerships that have been enhanced among the Consortium states.

Brainstorming sessions among Consortium members led to the development of the first Regional Emerging Leaders Program. The NPC ELP was a direct result of compiling strategies to address issues surrounding succession planning and workforce development. Eight future leaders were enrolled from staff in each PHL.

Regional Emerging Leaders Program

- March 2015: 8 future Lab/Epi leaders began the year-long program
- Based on succession planning meeting held in April 2014
 - Modeled after APHL Emerging Leaders and ASCLS Leadership Academy
 - Followed a prescribed curriculum
 - Utilized current leaders in the NPC states as faculty
 - Included monthly webinars, face-to-face meetings, and a team project
 - Participated in peer-to-peer visits
 - Revealed positive evaluation feedback

Current PHL leadership served as faculty and included two graduates from the national ELP. NPC ELP members participated in monthly webinars, face to face meetings, and a team project. In addition, APHL staff provided faculty and materials, and CDC supported funding for travel. The first regional ELP cohort graduated in March 2016.



RESULTS

The Northern Plains Consortium has been successful in demonstrating how shared resources among states with common demographics can affect positive change. The partnership is much more than just sharing of tests and services; it has introduced a relation-building dynamic that would not have been possible without the funding provided to develop a sustainable relationship between Consortium laboratory management and PHL partners.

Overall Benefits of NPC

- Draw on the ability and knowledge of a broad group of SMEs through collective brainstorming
- Capitalize on each other’s strengths and successes; adopt other laboratories’ approaches to specific problems
- Maintain capacity for certain low volume tests
- Identify opportunities for sharing protocols, expertise, and trainings
- Identify ways to leverage shared resources
- Develop priorities and improve the public health laboratory system

Challenges Faced

- Each laboratory has limited staff; hard to devote time to NPC activities
- Need to seek funding opportunities to continue face-to-face meetings
- Travel logistics are complicated due to large geographic area
- Costs and coverage prohibit bringing more lab staff / epidemiologists to the meetings
- Some activities (e.g., ETOR) require additional funding

Lessons Learned

- States can work together to increase efficiency and capacity
- Sharing services is much broader than shared testing
- Activities need to have relevance in each state; costs of many activities have been minimal or absorbed into existing budgets.
- Including Communicable Disease/Epidemiologists in activities and discussions has been valuable
- Face-to-face meetings foster the relationships – key to success

CONCLUSIONS

The NPC represents a regional effort to improve PHL systems and increase efficiencies. Activities have included: development of a shared services menu, sharing of resources to meet grant deliverables, and the NPC Emerging Leaders Program. These activities demonstrate a grassroots effort to collaborate based on efficiency and need, and the NPC ELP is the first regional effort to improve management skills in rising PHL staff who might not otherwise have access to leadership training. The NPC serves as a successful model for regional networks to expand access to leadership training, increase efficiency and enhance capability.

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