

Montana Department
of Public Health and Human Services
Public Health Laboratory

Innovations in Quality Public Health Laboratory Practice
Final Report

Innovations in Quality Public Health Laboratory Practice

In 2006, the Frontier states of Montana, North Dakota, South Dakota, and Wyoming formed the Northern Plains Consortium, a collaboration of Public Health Laboratories committed to addressing issues of public health significance within the participating states. The question that surfaces within this group is the same question that is often asked within the APHL Laboratory System Improvement Group, “What do we do next?” We, who have completed the L-SIP assessments, are discovering that the identification of gaps may have been the simplest step in the improvement process. Laboratories are searching for clearly defined and specific improvement strategies with observable outcomes. While keeping the Laboratory System in focus, actual improvement activities need to be broken into understandable and clearly relevant chunks.

The laboratory needs to meet the needs of its customers as well as fulfill requirements of regulatory and accreditation agencies; and it must do so making maximum use of often limited resources. To meet this demand, the laboratory’s quality system must be efficient and effective. Consensus-derived standards and guidelines published by the Clinical and Laboratory Standards Institute (CLSI) support a quality management model that meets this demand. To facilitate understanding of how to integrate these guidelines into a functional quality system, Montana Public Health Laboratory proposed the presentation of a quality management workshop for our Montana and Consortium partners, with the following defined objectives:

Measurable Objectives

1. Arrange for laboratory quality expert speaker

The Northern Plains Consortium (NoPCo) states of Montana, North Dakota, South Dakota, and Wyoming unanimously selected Lucia Berte, MA, MT (ASCP) SBB, DLM as the subject matter expert and premier presenter in the area of laboratory quality management. Ms Berte co-leads the work group that writes the ISO 15189 international medical laboratory standard and chairs the CLSI Subcommittee on Quality Management Systems. She has extensive experience in laboratory medicine, with certifications as a medical technologist, specialist in blood banking,

and diplomate in laboratory management. Ms. Berte has served, for many years, as a laboratory inspector and transfusion service assessor. Her approach to quality management has been adopted by medical laboratories, respiratory care, medical imaging, pharmacy, and rehabilitation departments, as well as by health care support services such as human resources, accounting, materials management, and medical records. She is the author of numerous articles, chapters, and books on quality management and is a frequent workshop presenter and teleconference speaker. Because the coordinator of the workshop, Jan Stetzer MT (ASCP), works in the Montana Public Health Laboratory in Helena, Montana, Helena was chosen as the workshop site. Ms. Berte's availability was the primary factor in the selection of the June 23, 2011 workshop date. The Red Lion Colonial Hotel in Helena provided excellent facilities and a convenient conference location.

2. Coordinate attendance and presentation of workshop

Beginning in April 2011, the workshop was publicized using several venues, including:

- i) A workshop description, registration form, and contact information were posted on the Montana Laboratory Services Website
- ii) An article, registration form, contact information, and link to the MLS website were published in the May 13, 2011 issue of the Montana Laboratory Sentinel newsletter
- iii) A workshop description, registration form, and contact information were emailed to Montana clinical laboratories and to Consortium Public Health Laboratories.
- iv) Posters (copy attached) advertising the workshop were displayed at the Montana ASCLS annual conference
- v) Posters were emailed to Montana clinical laboratories and to Consortium Public Health Laboratories.

A buffet lunch and morning and afternoon refreshments were provided to workshop participants. Although thirty five individuals had originally registered for the workshop, the occurrence of massive flooding and emergency situations throughout much of Eastern Montana caused several projected participants to cancel their plans to attend. Because of the March

2011 Consortium meeting to finalize our primary Innovations project, partners from the other NoPCo state were unable to receive travel approval for the workshop. Consequently, travel reimbursements were not provided. The speaker fees were slightly more than anticipated and the reimbursement funds were redirected toward those fees.

3. Conduct analysis of workshop information and determine how it may be applied to laboratory system improvement

PROJECT DESCRIPTION

The Montana Public Health Laboratory (MPHL) invited Ms Lucia Berte, MA, MT (ASCP) SBB, DLM to present "*Laboratory Quality Management: How CLSI Guidelines Provide Value*", a full day workshop for our staff and clinical partners. Ms. Berte presented a model for laboratory quality management, based on CLSI guidelines, intended to assist laboratories in meeting the diverse needs of customers, management, regulators, and accreditors, while maximizing time and resources.

The objectives of the workshop were to be able to:

- Describe the structure for quality management in laboratories
- Discuss how CLSI supports the quality management system model with guidelines
- Identify how CLSI guidelines can be used to streamline and improve laboratory practices

After morning presentations that included The CLSI Quality Management Model, The Quality System Essentials, and The Work Process Model, attendees participated in several activities designed to familiarize them with the development and implementation of work process flowcharts and procedures.

CLSI documents were provided to each facility that sent representatives to the workshop. The approved guidelines recommended by Ms Berte were:

- GP26 Quality Management System: A Model for Laboratory Services

- GP02 Laboratory Documents: Development and Control
- GP21 Training and Competence Assessments

The workshop was approved for six contact hours by PACE. Evaluations included comments such as “Excellent”, “Great”, and “Out of the Ballpark”. The overall speaker rating was 3.95 out of a possible 4.0. The program content rating was 3.9 out of 4.0 and the degree to which objectives were met was rated at 3.98 out of 4.0.

The next step in the implementation of the Quality Management System (QMS) guidelines will be:

- the formation of a workgroup that will meet semi-annually to maintain positive momentum, provide encouragement, and share acquired skills and information throughout the public health laboratory system.
- an introductory QMS session for all MPHL bureau staff, to be followed by the assignment of specific projects. The bureau staff who attended the Berte workshop will serve as mentors as new staff engage in the activities
- development of a shortened version of the workshop for presentation to Consortium partners
- presentation to Montana clinical partners at the 2012 Montana ASCLS Annual Meeting.

PROJECT DISCUSSION

The overarching challenge to gaining information and integrating it into laboratory systems in Montana is inaccessibility of resources. As one of a few Frontier states, Montana has a low population density, large land area, low staff salaries, inadequate laboratory staffing, high turnover rates, resulting of loss of institutional knowledge, isolation of rural staff, resulting in limited opportunities for education and networking, and limited budgets. These demographics make it difficult to offer quality training opportunities within the state or to meet regularly with partners. The majority of Montana laboratories service rural communities and facilities with less than 50 beds. With limited staff, it becomes almost impossible for laboratorians to be

available for off-site training. These same individuals are managing multiple priorities and responsibilities. Improvement activities often do not receive the support and approval of administrators. In addition, most laboratories are currently facing travel restrictions due to budget constraints.

The ongoing dilemma is determining a way to reach and support our partners, given the particular demographics and challenges discussed above. It is clear that an innovative approach is needed. This spring, the Montana Public Health Laboratory successfully provided a training opportunity to more than 100 participants in a four-state region via WebEx. Expanded use of this and similar technologies could help to overcome some of the challenges. The infusion of knowledge and support from quality management professionals is critical to maintaining the momentum of individual improvement initiatives in Montana laboratories.

ADDITIONAL INFORMATION (Response to specific questions)

a. What had prevented this project from taking place earlier?

Funding of 'non-value-added' projects and activities is always a challenge. Also challenging is the determination of what projects will be most beneficial to the public health laboratory system. Though participation of Public Health Laboratory managers on national laboratory improvement committees, it became clear that the first step toward a Quality Culture would be to provide a foundation in Quality Management to system partners.

b. What examples or discussions during the assessment or follow-up identified the gap?

In response to the LSIP survey, the Montana Laboratory Forum, a workgroup of Montana laboratory system partners, was developed to prioritize and focus on various areas of concern in the Montana Public Health Laboratory System. During conference calls and annual meetings, the Forum has attempted to define and clarify gaps. It was obvious from these discussions, that the first goal should be the achievement of a foundation in Laboratory Quality Management, an understanding of Quality System Essentials, and skill in the development and use of process flow diagrams.

c. *What is the impact that completing this project has or will have on your laboratory system?*

The information and tools provided in this workshop will facilitate standardization of processes involving public health issues. The sharing of these tools with our system partners is an important step toward the development of a Quality Culture in our public health laboratory system that we anticipate will become contagious to others in the system.

d. *Please identify other gaps that have not yet been addressed. What are the barriers to carrying out improvement projects that would address or correct the issue?*

As a Frontier State, Montana has a low population density, large land area, isolation of rural staff, and limited budgets. The majority of Montana laboratories service rural communities and facilities with less than 50 beds. Laboratory staff in these facilities manage multiple priorities and responsibilities. Under these conditions, laboratory staff are often stretched to meet daily analytical and regulatory demands. Improvement activities and trainings often do not receive the support and approval of hospital administrators. The inclusion of upper-level managers and healthcare administrators in quality improvement discussions might help to secure time and funding for necessary initiatives. The infusion of knowledge and support from quality management professionals is critical to addressing the needs of the Montana Public Health Laboratory System.

EXPENSE SUMMARY

Lucia Berte- speaker and travel fees	\$3,952.00
Red Lion Colonial – conference room and lunch on day of workshop	1,184.73
CLSI guidelines – 18 copies of 3 documents	4,059.00
Workshop materials – notebooks, easel pads, etc.	305.97
Postage – mailing of materials following the workshop	77.00
Copying – workshop advertising and handouts	421.20
TOTAL	10,000.00