



LABORATORY SYSTEM IMPROVEMENT PROGRAM

User's Guide



Developed by the Association of Public Health Laboratories
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LABORATORY SYSTEM IMPROVEMENT PROGRAM

The Association of Public Health Laboratories (APHL) is a national non-profit organization dedicated to working with members to strengthen governmental laboratories that perform testing of public health significance. By promoting effective programs and public policy, APHL strives to provide member laboratories with the resources and infrastructure needed to protect the health of US residents and to prevent and control disease globally.

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CHAPTER 1:

Introduction

PURPOSE OF THE LABORATORY SYSTEM IMPROVEMENT PROGRAM (L-SIP)

L-SIP exists to facilitate the improved performance of state and local Public Health Laboratory Systems with a goal of continuous quality improvement. It is a collaborative effort of two national partners, the Association of Public Health Laboratories (APHL) and the Centers for Disease Control and Prevention (CDC), Laboratory Science, Policy and Practice Program Office.

L-SIP targets improvements of the Public Health Laboratory System through the collaborative work of partners to:

- Assess the system's performance
- Plan for system improvements
- Implement improvement strategies
- Evaluate effects of strategies
- Re-assess system performance

L-SIP ASSESSMENT

A large part of L-SIP is the assessment process initially inspired and influenced by the National Public Health Performance Standards Program (NPHPSP), which was established in 2002 by CDC and partners. The NPHPSP identifies and measures the components, activities, competencies and capacities of state and local public health systems, and local public health governance bodies using Model Standards, based on the 10 Essential Public Health Services.

The assessment tool is the cornerstone of the L-SIP assessment and was designed to help partners identify system strengths and gaps. The initial version of the tool was developed by public health laboratory experts and partners, implemented in 2007, and revised in 2011.

Using Model Standards, this assessment tool was developed as an instrument to measure the performance of the entire Public Health Laboratory System, not only the public health laboratory (PHL). The process measures optimal "gold standard" performance, by focusing on the system and requires the participation, support and collaboration of a wide range of partners and stakeholders that have roles in the Public Health Laboratory System.

THE FIVE FRAMING CONCEPTS OF THE L-SIP ASSESSMENT

The assessment:

1. Centers around the 10 Essential Public Health Services (Appendix A and B). Use of the 10 Essential Public Health Services assures that the tool covers public health activities needed at state and local levels.
2. Incorporates all of the 11 Core Functions of State Public Health Laboratories (Appendix C). See Appendix D for a crosswalk of the 10 Essential Public Health Services and the Core Functions of State Public Health Laboratories.
3. Focuses on the overall state or local public health laboratory system, rather than a single organization. This ensures that the contributions of all entities are recognized in assessing performance in the provision of Essential Public Health Services.
4. Measures against an optimal level of performance (i.e. gold standard) rather than considering minimally accepted standards thus enabling continuous quality improvement.
5. Supports the commitment to a process of continuous improvement. System partners utilize the assessment process results as a guide for planning improvement activities throughout the Public Health Laboratory System.

THE STATE AND LOCAL PUBLIC HEALTH LABORATORY SYSTEM

The concept of a “State Public Health Laboratory System” (SPH Laboratory System) is relatively new to most people (Appendix E and F). Although the concepts of a SPH Laboratory System are embodied in the 11 Core Functions of State Public Health Laboratories document, the term was not being used frequently prior to 2007 and virtually no formal Public Health Laboratory Systems had been recognized. At its most basic level, a system must be in place for even a single laboratory to function effectively. The laboratory relies on and works with other organizations to provide clinical, environmental, and emergency response laboratory services; set and enforce standards and regulations; provide training for both the current and potential workforce; and assure that system partners are appropriately informed.

DEFINITION OF A STATE PUBLIC HEALTH LABORATORY SYSTEM

“An alliance of laboratories and other partners within a state that supports the 10 Essential Public Health Services under the aegis of the state public health laboratory. The system members and stakeholders operate in an interconnected and interdependent way to facilitate the exchange of information, optimize laboratory services, and help control and prevent disease and public health threats.”

A Local Public Health Laboratory System (LPH Laboratory System) is part of the larger SPH Laboratory System and has many attributes of a SPH Laboratory System (Appendix G and H). The LPH Laboratory Systems differ but complement SPH Laboratory Systems in several important ways, in that they:

- Provide and prioritize testing at the site of patient care and/or address local environmental issues;
- Support the mission of local public health departments;
- Provide rapid and relevant responses to local community needs through leadership of a local public health laboratory, typically co-located within a local public health agency with a team of investigators, inspectors and community professionals;
- Have strong ties and proximity to the community they serve;
- May serve as surge capacity for State PHLs, particularly for testing in support of emergency response.

EXAMPLES OF SYSTEM PARTNERSHIP ACTIVITIES

At a broader level, while state and local public health laboratories play vitally important roles, they must interact with a range of other players in fulfilling the 10 Essential Public Health Services as they relate to laboratory services. Many other organizations, whether formally recognized as part of a SPH Laboratory System or not, engage in important roles. The following are examples of significant system-wide activities:

Influenza A(H1N1)pdm Pandemic Response: In 2009 a novel influenza strain, Influenza A(H1N1) pdm, was detected and rapidly progressed to a full pandemic across the United States that required the immediate collaboration of state and local public health departments, clinical and public health laboratories, federal agencies, hospitals, physicians, school districts, the media, and many other partners. As the result of previous partnership activities and preparedness efforts of the laboratory system, the effects of the 2009 pandemic were mitigated, and the response was successful.

Newborn Screening Program: When Louisiana was devastated by Hurricane Katrina in 2005, the laboratory system expanded beyond the state boundaries to the University of Iowa Hygienic Laboratory who performed newborn screening testing for babies born in Louisiana for an extended period of time until Louisiana was able to resume their own testing. The laboratory system of partners, such as nurses, metabolic consultants, genetic counselors, affected families, clinical laboratorians, and physicians all play an important part in responding to and implementing life-saving actions in response to positive newborn screening results.

Environmental Response: Water testing is an important Public Health Laboratory System activity. In addition to routine water testing, many partners work together to ensure that the public's water supply is monitored and protected during a natural disaster, such as a flood. Partners such as public safety, state pollution control agencies, local and state water testing facilities, and couriers, all work together to ensure an efficient response.

Emergency Response: When it became apparent in West Palm Beach in 2001 that an unknown health problem was presenting itself, a number of organizations found themselves working together, many for the first time. In fairly short order, Anthrax was identified as the causative agent. Partners in that event included local law enforcement, the FBI, local, state and national public health departments and laboratories, crime laboratories, the media, the U.S. Postal Service, various transport organizations and many others. Each played a role that was important to assure that the needed laboratory diagnostic work was completed appropriately.

Foodborne Disease Response: When evidence that fresh spinach was contaminated, resulting in significant outbreaks of human illness, the state and local public health departments and laboratories in several states worked to identify the causative agent. When *E.coli* was identified, laboratories coordinated with local and state public health epidemiologists, physicians' offices, medical centers, specimen couriers, local agriculture, grocery stores, restaurants, and the media to assure that the overall response was appropriate to stop the outbreak.

The State or Local Public Health Laboratory System can be thought of as consisting of all the participants involved in or supporting human and environmental public health testing, ranging from those who identify the need for laboratory testing to those who ultimately use the test results. The previous examples clearly illustrate that the participants active in the system represent a broad spectrum and vary according to the issues being addressed at any one time.

L-SIP ASSESSMENT OVERVIEW

The L-SIP assessment is a day-long evaluation of how the Public Health Laboratory System supports the 10 Essential Public Health Services at state and local levels. Facilitators guide the participants through discussion using the L-SIP assessment tool. The entire group begins with discussing one Essential Service so that everyone is introduced to the format. After a facilitated discussion, the group gives an assessment score on the performance of the Public Health Laboratory System for that Essential Service. Following the initial evaluation, the large group breaks into three smaller groups, and discusses and scores the remaining assigned Essential Services. Theme takers record the major discussion points, ideas and issues needing more exploration for each Essential Service. After the breakout sessions, all the participants reconvene and the small groups report their findings. At the end of the day-long event, documents will be produced outlining the assessment scores, parking lot issues, and prioritized next steps. This information can be used for planning continuous improvement activities.

BENEFITS OF IMPLEMENTING L-SIP ASSESSMENT FINDINGS

L-SIP is a valuable tool in identifying areas for system improvement, strengthening state and local partnerships, and assuring that a strong system is in place for effective response to day-to-day public health issues as well as public health emergencies. Users of the program at all levels report numerous benefits, such that the L-SIP assessment:

- Provides support for the accreditation of state and local public health departments by the Public Health Accreditation Board (PHAB).
- Provides a benchmark for Public Health Laboratory System practice improvements, by setting a “gold standard” to which public health systems can aspire.
- Improves communication and collaboration by bringing partners (e.g., public health, environmental and other laboratories, first responders and key constituencies) together.
- Educates stakeholders about the Public Health Laboratory System and the interconnected activities that lead to collaborative system solutions.
- Strengthens the diverse network of partners throughout the federal, state and local systems, leading to cohesive partnerships and better coordination of activities and resources.
- Identifies strengths and gaps that can be addressed in laboratory system quality improvement efforts.

The following chapters of the L-SIP User's Guide describe the logistics and process detail for carrying out the assessment. However, the entirety of the Laboratory System Improvement Program goes beyond the actual L-SIP assessment. The assessment will provide and reveal for each system area the desired changes and continuous improvements. A goal of continuous improvement leads to a reassessment of the laboratory system. This User's Guide is designed to help plan a successful L-SIP assessment, but will also facilitate taking those first steps toward implementing assessment and improvement activities.

The Laboratory System Improvement Program Frequently Asked Questions document (Appendix I) can be used as a tool to inform others about the program and the assessment process.

CHAPTER 2:

Preparing for an L-SIP Assessment

This chapter outlines the preparation steps needed to host an L-SIP assessment. Before you begin to prepare for an L-SIP assessment, it is imperative that administration and/or the laboratory leadership provide a strong commitment to support this process.

GETTING STARTED

1. Select a Coordinator

It is important to select a coordinator to manage the planning process and additional key staff that can assist in planning the assessment. This person should have the ability to make decisions, delegate responsibilities, and oversee the planning team for the assessment process.

2. Get connected to APHL

APHL Laboratory Systems and Standards (LSS) department is experienced in assisting public health laboratories with hosting L-SIP assessments. As you begin to prepare for your assessment, it is important to contact this department to utilize all of the available resources listed below.

- L-SIP site on APHL.org: This website includes basic information about the program as well as APHL staff contact information. L-SIP assessment reports are available here as a resource: <http://www.aphl.org/aphlprograms/lss/performance/Pages/Assessment-Reports-from-Past-L-SIP-Participants.aspx>
- L-SIP SharePoint site: This web-based site is accessible with permission provided by the APHL LSS Senior Specialist. The site includes a wide variety of resources, including the User's Guide, Assessment Tool, and Scoring Tool. <https://www.aphlweb.org/cmt/lsscmt/performstand/TAS2008/default.aspx>
- Technical assistance (TA) calls: This is a series of calls that assist public health laboratories preparing for the assessment. All steps in the process are discussed with ample opportunity to ask questions and get advice from public health laboratories that have gone through the assessment.
- L-SIP mentors: These individuals assist public health laboratories with the assessment preparation process. These volunteers have gone through an assessment in their state or local system and are available to answer any questions that you might have as you go through the planning process.
- Mini grants: This grant funding helps defray some of the assessment costs. Contact the APHL LSS Senior Specialist to determine the availability of funding and the application process.

3. L-SIP User's Guide

This invaluable tool will help you plan and conduct the L-SIP assessment, and eventually help you move toward improving your laboratory system. It is recommended to review a copy of the User's Guide at the beginning of your planning process. This document is available on the L-SIP SharePoint site and the APHL L-SIP website.

4. L-SIP Timeline

The timeline (Appendix J) will serve as a guideline and checklist for how to prepare for all of the components of the L-SIP assessment process.

5. Web Communicator

This is a template that can be used for developing a website when web services are not readily available. An L-SIP website can be used as a communication tool to update partners on the status of the L-SIP process and ongoing quality improvement activities. It can also be used by the L-SIP coordinator to gauge the activity and interest of stakeholders accessing various components of the online documents by measuring the number of "hits" to the site. For more information on the Web Communicator, please visit the APHL website at: <http://www.aphl.org/aphlprograms/lss/performance/Pages/L-SIP-Web-Communicator.aspx>

6. Budget

Develop a budget and identify sources of funding to support the assessment meeting costs. Costs might include printing of materials, facility rent, refreshments and meals for participants, and miscellaneous materials and supplies. Most states have reported costs of between \$3,000 and \$5,000, not including costs of staff time. APHL can sometimes offer mini grants to help defray costs.

PLANNING SPECIFICS

1. Selecting a Date for the Assessment

When scheduling a date for the assessment, consider times your senior leaders and management staff can be available to participate. Also consider legislative sessions, professional meetings, the school calendar (i.e. graduations, breaks), and the local weather. The assessment is completed in one day, usually between seven and eight hours, including lunch and breaks.

2. Selecting a Facility for the Assessment

It is suggested you have a room large enough to accommodate all participants for the opening remarks, initial plenary session, and to return to at the end of the day for a summary of the assessment. It has been proven successful to have 20 – 25 people in each of the breakout

groups, so select a facility that will hold your 60 – 75 participants, and have two or three breakout rooms (a portion of the larger room could be used as a breakout room). Ideally, the large room will have a screen, an LCD projector and usually a microphone or two. The layout of the room should be such that participants can observe the screen and have a writing surface (classroom style that facilitates discussion, such as a U-shape, works well). The best layout of the breakout rooms is a square or rectangular arrangement of tables so participants can see each other and engage in discussions.

3. Identifying Stakeholders to Invite to the Assessment

Use the following information to develop a list of potential invitees. Your participant list should include representatives from the entire Public Health Laboratory System and that encompasses a broad range of perspectives and expertise. Build on existing partnerships to bring a cohesive and enthusiastic group together. Give careful consideration to identifying the most appropriate individual(s) to represent each organization. Heads of organizations can provide crosscutting knowledge of a range of activities. Technical subject matter experts may also be appropriate to invite, as they may have more time to contribute and more specific information about day-to-day activities. Strike a balance between a manageable number of participants and a broadly representative group. Each breakout session should include core representatives from the following system partners:

- Laboratory management and technical subject matter experts
- Local public health laboratories, health departments, and health officials
- Representatives from a variety of laboratories – clinical, veterinary, forensic, agricultural, toxicological, environmental and food
- Customers of laboratory services, including epidemiologists, veterinarians, environmental quality partners, toxicologists, public health programs, hospitals and medical centers (administration, clinical laboratory, infection control).

Finally, review the list of key laboratory system stakeholders to be included in the assessment. The right mix of people is critical for best results. When possible, identify secondary choices for specific stakeholders should the primary choices be unavailable.

4. Assigning Stakeholders

It is appropriate to include stakeholders who may be subject matter experts in specific Essential Services, as suggested in the listing that follows. This list is intended to assist in planning the invitation list as well as in organizing the breakout groups for the day of the assessment.

| ESSENTIAL SERVICE | ADDITIONAL STAKEHOLDERS TO INCLUDE BY ESSENTIAL SERVICE |
|-------------------|---|
| 1 | Information technology staff; elected officials; federal partners; chronic disease providers; pharmacists |
| 2 | Emergency management partners including first responders; researchers; federal partners |
| 3 | Emergency management partners including first responders; researchers; elected officials; professional organizations/associations; general public; public information officers; community leaders; academia |
| 4 | Public health officials; emergency management partners, researchers; legislators and elected officials; professional organizations/associations; business and community leaders; public information officers; media |
| 5 | Emergency management partners, schools; elected officials; legal advisor; business community; public information officers; policy makers; medical associations |
| 6 | Business, legal and community leaders; general public; federal partners; laboratory regulators; accreditation/compliance organizations |
| 7 | Elected officials; health insurers |
| 8 | Professional organizations; public information officers; training programs; human resources staff; media; school career counselors; laboratory regulators; academia |
| 9 | Professional organizations; general public; community leaders; professional organizations/associations; emergency management; laboratory regulators; academia; performance improvement staff |
| 10 | Elected officials; professional organizations/ associations; business community; federal partners; manufacturers; laboratory regulators; academia; grant writers |

Once stakeholders are identified, they need to be assigned to Essential Service workgroups. Since Essential Service #2 is discussed with all stakeholders and participants during the introductory session, there are nine Essential Services left to assess.

- Refer to the sample agenda in Chapter 4 for the scheduling and arrangements of workgroups and the Essential Service assigned to each group. This agenda has been used (in real-time) and works efficiently, however, you may alter the assignments that will best accommodate your laboratory system.

- Create three workgroups, named A, B and C, and assign three Essential Services to each workgroup.
 - Workgroup A will work on Essential Services 1, 3, and 7.
 - Workgroup B will work on Essential Services 5, 9, and 10.
 - Workgroup C will work on Essential Services 4, 6, and 8.
- Stakeholders can be assigned to these workgroups based on their subject matter expertise for each Essential Service and/or whether they are multi-disciplined. Also, select alternates should your primary invitee be unavailable.
- To help with assigning your stakeholders refer to a section within the assessment tool after the “Intent” paragraph called “Examples of System Partner Contributions to this Essential Service.” Using these and reviewing the chart above, assign the stakeholders to the most appropriate Essential Service.
- It is suggested these workgroups stay together throughout the day.

5. Inviting Stakeholders

Once participants are identified, think carefully about how best to extend invitations. Determine what types of communication are most effective for your state. Generally, personal letters or emails, from the laboratory director, a state or local health official, or the heads of other partner organizations help emphasize the importance of this activity and generate more willingness to participate.

Adapt the sample letters included in Appendix K to suit your state or local needs. Recommended points to include in the invitation are:

- The intent and benefits of the assessment
- Description and definition of the state laboratory system
- Date, time, location of the assessment
- Contact for RSVPs or more information
- Electronic links, if applicable

Depending on the mode used when sending out invitations, there may be different response times. Hard copy letters may have a 7-10 day turnaround time, while emails may take 1-7 business days to be addressed. Responses typically start coming in as soon as the partners receive them. An email or personal phone call reminder can be made to follow up with those who have yet to respond to ensure that each participant fully understands the importance of the process and their role. Historically, there has never been a cancelled assessment due to poor attendance.

6. Communication to Invitees

Successful participation for an assessment results from clear and concise information communicated to the invitees in a timely manner. Once responses are confirmed and participants have been selected and assigned into an Essential Service group, send them the following information via email prior to the assessment in order to prepare for the day's activities (all of this information may also be posted on your state's L-SIP website):

- A confirmation letter expressing gratitude for their participation with further details on what to expect for the assessment, and which Essential Services they have been assigned to
- Electronic copy of the tool (or the portion they will be involved with) - encourage participants to review the tool prior to the assessment day
- Explanation and definition of the State (or Local) Public Health Laboratory System
- Agenda for the meeting
- Directions/map to the location
- Some participants may find it helpful to read other state's assessment stories. Examples are:
 - o Minnesota, http://www.health.state.mn.us/divs/ph/LSIP/lcip_home.html
 - o Arizona, <http://www.azdhs.gov/lab/lcip/>
 - o City of Milwaukee, <http://city.milwaukee.gov/LSIP>

FACILITATORS AND THEME TAKERS

Facilitators

Securing experienced facilitators is a crucial step in the assessment preparation. Three facilitators are needed for the assessment, and it is recommended that the facilitators be neutral and knowledgeable about system assessments, public health, or the health field. Having facilitators and theme takers work in the same teams throughout the day sets the stage for comfortable and consistent discussion among the stakeholders. Note: Staff from the public health laboratory convening the assessment are not ideal facilitators in this setting, since they may have opinions that bias the discussion.

Facilitators should be skilled in:

- Soliciting different views and perspectives
- Encouraging participation from those not volunteering readily
- Instilling trust in the process and mutual respect between all participants
- Encouraging opposing views to highlight opposite perspective

Theme Takers

Three to six theme takers are needed for the assessment. Having two theme takers in each session that work as a team with an assigned facilitator is helpful in capturing key issues. The theme takers can be employees of the laboratory, but it is not necessary. The theme takers document the scores, make note of issues that would benefit follow up, and record the top one to three next steps that the workgroup recommends for follow-up, at the end of each Essential Service.

Theme takers will be responsible for:

- Taking notes from the discussion in the breakout sessions either by hand-writing or laptop computer
- Utilizing the L-SIP scoring tool to record scores via laptop computer
- Participating in discussion and voting as a member of a breakout session

Printed Materials Available from APHL

Contact the APHL LSS Senior Specialist two weeks before the assessment date to order copies of printed material. APHL provides copies of following materials to the assessment participants. Please provide shipping address information and the number of participants expected at the assessment. The list of available printed material is below:

- 10 Essential Public Health Services
- Definition of a State or Local Public Health Laboratory System
- Public Health in America
- L-SIP assessment tool
- Voting cards

Food and Refreshments

It is encouraged that you arrange for refreshments throughout the day. Providing lunch is important and reduces potential mid-day loss of participation. The lunch can also help cement newly forming relationships among participants. Some system partners (e.g. hospitals, pharmaceutical companies, and manufacturers) may be interested in sponsoring the event, covering the cost of the facility, meals (light breakfast, snacks, lunch, etc), or other costs, such as printed materials.

CHAPTER 3: L-SIP Assessment Tool

The L-SIP Assessment Tool supports the entire assessment process. It provides background for discussion; standards, which are the core of the assessment; examples for clarity; and a process for voting. Becoming familiar with the tool and voting process as you plan your assessment is essential for ensuring a smooth process on the day of your assessment.

L-SIP ASSESSMENT TOOL

There are 10 chapters in the assessment tool, one for each Essential Service. Each section has further divisions that help direct and focus the group's discussion. See the number list on the next page for an explanation of the figures below.

ESSENTIAL SERVICE #5:
DEVELOP POLICIES AND PLANS THAT SUPPORT INDIVIDUAL AND COMMUNITY HEALTH EFFORTS

INTENT:
The State Public Health Laboratory and its system partners provide expertise, at all levels of government, in policy development related to laboratory services. Health policy is based on adequate laboratory data, scientifically sound policy options, and policies that are consistent across jurisdictions. The System disseminates new and revised policy to all appropriate community partners. Policies and plans that affect the SPH Laboratory System are reviewed and updated on a regular basis.

EXAMPLES OF SYSTEM PARTNER CONTRIBUTIONS TO THIS ESSENTIAL SERVICE

| | |
|---|---|
| Collaboration Data analysis and interpretation Needs assessment Policy development | Communication Evaluation Planning |
|---|---|

Model Standard 5.1: Partnerships in Public Health Planning
The SPH Laboratory System assures broad involvement in developing plans and policies addressing priority health issues.

MEASURABLE OBJECTIVES (SAMPLES):

- Agencies work together to address Clinical Laboratory Improvement Amendments (CLIA) requirements.
- Agencies work together to address Safe Drinking Water Information System (SDWIS) reporting requirements.
- Plans and policies are reviewed at least annually by system partners.

KEY IDEA 5.1.1
The SPH Laboratory System obtains input from diverse partners and constituencies to develop new policies and plans and modify existing ones.

Points for Discussion:
Does the SPH Laboratory System:

- Consider input from key partners, organizations, and agencies in policy development and planning?
- Have policies that are consistent with those of other state agencies (e.g., health, environment, agriculture, etc.)?
- Work with state and local officials to prioritize efforts to address pressing health needs of the community?
- Integrate laboratory issues, including emergency response, into program planning?
- Develop policies and plans based proactively on community needs as determined through formal assessment?

EXAMPLES:

- System partners are present during policy proposal discussions.
- Communication between partners garners insight to the needs of each entity.
- System partners collaborate to conduct community assessments to define policy needs.

Evaluation:

| 5.1.1 | None | Minimal | Moderate | Significant | Optimal |
|---|------|---------|----------|-------------|---------|
| How would you rate the performance of the <u>SPH Laboratory System</u> collectively on achieving this Key Idea? | | | | | |

Parking Lot Issues:

1. **Essential Service:** Each section of the tool begins with a statement of the Essential Service.
2. **Intent:** The intent follows the Essential Service statement and is a brief description of the Essential Service as it relates to the Public Health Laboratory System.
3. **Partner Contributions:** This is a list of “examples of system partner contributions” that might be helpful in determining who to invite and to include in the break out session for the specific Essential Service being assessed. It also helps participants relate to the contribution they may be making to the system and that they were invited to discuss their contributions.
4. **Model Standards:** Describes aspects of optimal performance of a laboratory system.
5. **Measurable Objectives:** Examples of Measurable Objectives are included to clarify the application of the standard and can be used as possible future performance improvement indicators.
6. **Key Idea:** Each Model Standard is followed by one or more Key Ideas. The number of Key Ideas varies for each Essential Service. The Key Ideas together define performance that must be in place to meet the corresponding Standard.
7. **Points for Discussion:** For each Key Idea, several Points for Discussion follow and will be used by the facilitator to guide the discussion in the breakout groups. They are used to determine if and how well the Public Health Laboratory System accomplishes the work.
8. **Examples:** Most Key Ideas include “example boxes” describing real-life Public Health Laboratory System activities to help provide clarity about the Key Idea.
9. **Rating Categories:** Participants consider all the information shared about the performance of the system through the dialogue about the Points for Discussion in the Key Idea being reviewed. The table below defines the rating categories used to determine how to score performance. Using these categories, the facilitator will help the group reach consensus on how well the laboratory system performs the standard and the theme taker will record the results.

| | |
|--------------------|--|
| NONE | 0% or absolutely none of the performance described is met within the public health laboratory system. |
| MINIMAL | Greater than zero, but no more than 25%, of the performance described is met within the public health laboratory system. |
| MODERATE | Greater than 25%, but no more than 50%, of the performance described is met within the public health laboratory system. |
| SIGNIFICANT | Greater than 50%, but no more than 75%, of the performance described is met within the public health laboratory system. |
| OPTIMAL | Greater than 75% of the performance described is met within the public health laboratory system. |

10. **Parking Lot Issues:** As the dialogue of the Points for Discussion occurs, issues needing more exploration and/or ideas for how system partners can improve current performance are captured in the parking lot for future consideration. The facilitator works with the theme taker to assure these ideas are captured. For example, the need to investigate breakdowns in two-way communication and the need for a “translator” between scientists and politicians might be identified as parking lot issues.

Next Steps: At the conclusion of each Essential Service, a section is provided to identify between one and three possible next steps to address the priority issue(s) that arose during the assessment. It is recommended that participants identify the level of importance for each item and, if possible, a person(s) willing to convene or participate in a first meeting to begin work. These priorities should be summarized and presented at the closing plenary, and serve as a good starting point for later improvement efforts.

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**ESSENTIAL SERVICE #5
NEXT STEPS –**

List top 2-3 possible next steps and rate as to importance (immediate, high, medium, low) and a contact person for each to address at a first meeting.

| NEXT STEPS | IMPORTANCE | SUGGESTED ACTIVITIES |
|------------|------------|----------------------|
| | | |
| | | |
| | | |

RECORDING THE EVALUATION SCORES

A scoring tool, in the form of an Excel spreadsheet, is provided in the L-SIP toolkit, located on the APHL L-SIP SharePoint site (<https://www.aphlweb.org/cmt/lsscmt/performstand/TAS2008/default.aspx>). The evaluation result is derived from the opinions of those attending the assessment day and can vary from assessment to assessment depending on the stakeholders and their knowledge of the system. The scores can be used as a basis for determining areas for improvement and prioritizing post-assessment activities. This score gives a basis of comparison of each of the Essential Services and a measure of overall performance of the laboratory system.

The scoring tool provides a system for recording the rating of each Key Idea by assigning a numerical value to each rating using a Weight Factor that takes into consideration the number of Key Ideas tied to each Model Standard (Table A). Therefore, the more Key Ideas there are, the less weight each one has. When scores are entered, the spreadsheet will automatically calculate the final result for the Essential Service. The Calculation Factor assigns a value based on the discussion group rating (Table B).

TABLE A

| # OF KEY IDEAS FOR MODEL STANDARD | WEIGHT FACTOR |
|-----------------------------------|---------------|
| 1 | 100 |
| 2 | 50 |
| 3 | 33.33 |

TABLE B

| ACTIVITY RATING | SCORE TO ENTER INTO EXCEL SPREADSHEET | CALCULATION FACTOR |
|-----------------|---------------------------------------|--------------------|
| None | 9* | 0 |
| Minimal | 1 | 0.05 |
| Moderate | 2 | 0.33 |
| Significant | 3 | 0.67 |
| Optimal | 4 | 1.0 |

*9 is used for the activity rating of "None" due to calculations within the Excel spreadsheet

Below you can see how these values result in a score for each Model Standard and finally an aggregate score for each Essential Service. In this example, the discussion group rated the laboratory system for Model Standard 1.1 as having optimal performance for Key Idea 1.1.1, moderate for Key Idea 1.1.2 and none of the performance described in Key Idea 1.1.3. Both Key Ideas for Model Standard 1.2 were rated as significant. Using the calculation factor and the weight factor, an aggregate score of 55.7 is obtained for the Essential Service #1.

| APHL State Public Health Laboratory Assessment | | | | | |
|--|---|---------------------------|-------------------|--------------------|--------------|
| Essential Service #1: Monitor health status to identify health problems | | | | | |
| | | System Performance | | | |
| | | Weight | Evaluation | Calc Factor | SCORE |
| 1.1 Monitoring of Community Health Status | | | | | |
| 1.1.1 | The SPH Laboratory System identifies infectious disease sentinel events, monitors trends, and participates in state and federal surveillance systems | 33.33 | 4 | 1.00 | 33.3 |
| 1.1.2 | The SPH Laboratory System monitors congenital, inherited, and metabolic diseases of newborns and participates in state and federal surveillance systems. | 33.33 | 2 | 0.33 | 11.0 |
| 1.1.3 | The SPH Laboratory System supports the monitoring of chronic disease trends by participating in state and federal surveillance systems. | 33.33 | 9 | 0.00 | 0.0 |
| Total ESPH 1.1 | | 44.3 | | | |
| 1.2 Surveillance Information Systems | | | | | |
| 1.2.1 | The SPH Laboratory System has a secure, accountable and integrated information management system for data storage, analysis, retrieval, reporting and exchange. | 50 | 3 | 0.67 | 33.5 |
| 1.2.2 | The SPH Laboratory System partners collaborate to strengthen electronic surveillance systems | 50 | 3 | 0.67 | 33.5 |
| Total ESPH 1.2 | | 67.0 | | | |
| ESPH #1 Aggregate Score | | 55.7 | | | |

Chapter 4 provides instructions on how to enter scores in the spreadsheet on the day of the assessment. In addition, instructions can be found in the scoring tool under Tab 1: Instructions.

CHAPTER 4:

The Assessment Day

After all of the careful planning you are now ready for a high energy and dynamic day. Information regarding the roles of the facilitators, theme takers and participants is included in this chapter and should be reviewed prior to the assessment day. In addition, facilitator and theme takers need to be prepared and ready for their roles during the day. This section contains all the steps and helpful tips on how to have a successful assessment day.

MEETING LOGISTICS

The following are items recommended to have prepared ahead of time for the meeting:

- Participant name tags and table tents
- Facility signage as necessary
- Sign in sheet
- Assigned greeters to direct participants through security processes
- Assigned person for organizing and directing food vendor
- Assigned person for organizing audio-visual

PARTICIPANT PACKETS

Items recommended for the participant packets:

- Agenda (see sample – next section)
- List of all participants, their contact information, and break-out group assignment
- Scoring definitions and voting cards
- Slide of the graphic that depicts the State (or Local) Public Health Laboratory System
- The definition of a State (or Local) Public Health Laboratory System
- The 10 Essential Services in English
- Full assessment tool document
- Assessment evaluation
- Any additional materials from the laboratory or partners

REGISTRATION

Depending on your facility, you may want to consider greeting your participants as they arrive and handing them their packets and name tags. If you wish for them to sign in with updated contact information, this may be the time to do that. If your facility requires that guests are escorted to the meeting rooms, you should have staff available to lead your guests.

SAMPLE AGENDA

This sample agenda is also available on the L-SIP SharePoint site.

| | |
|--|-------|
| REGISTRATION | 8:00 |
| Welcome and Introductions | 8:15 |
| Overview of the assessment day | 8:30 |
| Plenary: Essential Service (ES) #2 - Diagnose and Investigate Health Problems | 9:30 |
| BREAK | 10:30 |
| Breakouts: <ul style="list-style-type: none"> • Group A- ES #1- Monitor Health • Group B- ES #9- Evaluate Effectiveness, Accessibility, Quality • Group C- ES #8- Assure Competent Workforce | 10:45 |
| LUNCH | 12:00 |
| Breakouts: <ul style="list-style-type: none"> • Group A- ES #7- Link People to Needed Personal Health Services • Group B- ES #10- Research • Group C- ES #4- Mobilize Partnerships | 1:00 |
| BREAK | 2:00 |
| Breakouts: <ul style="list-style-type: none"> • Group A- ES #3- Inform, Educate, and Empower People • Group B- ES #5- Develop Policies and Plans • Group C- ES #6- Enforce Laws & Regulations | 2:15 |
| Summary, Evaluation and Next Steps | 3:30 |
| ADJOURN | 4:30 |

PARTICIPANT ORIENTATION

It is important to welcome and orientate the participants. This may be delivered by any number of individuals involved in the L-SIP process, such as administrative officials, the L-SIP coordinator(s), the facilitator(s), etc. Each site must decide who is most appropriate to do the welcoming and present each element of the orientation. An effective way to deliver the orientation is to prepare a PowerPoint presentation; a template of the PowerPoint presentation can be found on the L-SIP SharePoint site (Document Type: Tools to Use Assessment Day). The participant orientation should contain the following elements:

- Greeting to welcome participants. This should be delivered by one or more officials from your organization.
- Review the day's agenda and materials in the packet. This may be delivered by the L-SIP Coordinator, the main facilitator, or an agency official, whichever provides the most impact for your organization.
- Explanation of:
 - The purpose and benefits of the assessment and its anticipated contribution to on-going quality improvement of the system
 - The System, by explaining the definition of a State (or Local) Public Health Laboratory System, describing the importance of a system approach. It is helpful to provide stories and examples of the system at work in your state or jurisdiction such as foodborne outbreaks, emergency response situations, and others (see examples described in Chapter 1).
 - The Participants: Provide examples of partners that are invited and attending the assessment and what roles they play in the system. You may ask participants to share initial thoughts about their respective organizations' contributions to the state (or local) laboratory system.
 - The 10 Essential Public Health Services
 - The 11 Core Functions of State Public Health Laboratories
 - The L-SIP Performance Measurement Tool
 - Description of the assessment process

PRACTICING ONE ESSENTIAL SERVICE

It is recommended that upon conclusion of the orientation and participant discussion, you begin the assessment process with consideration of Essential Service #2, "Diagnose and Investigate Health Problems and Health Hazards in the Community." The reasons for this suggestion are:

- It is one the briefest of the assessment tool Essential Service chapters.

- It should elicit comments from most of the stakeholders.
- The entire group can learn together how the process works, thus improving standardization in the subsequent breakout group sessions.

CONTINUING THE ASSESSMENT

When the practice of Essential Service #2 with the large group is complete, it is a good time for a break. Afterwards, participants should be told the location of their assigned breakout rooms, where they will work through the remaining Essential Services.

ROLES AND PROCESS FOR FACILITATORS, THEME TAKERS, AND PARTICIPANTS

The following description of roles and process applies to both the opening Essential Service practice session and all of the subsequent breakout groups. It is important to have facilitator and theme-taker teams that stay together for all of their assigned breakout sessions. See Appendix L for more information.

Facilitator

- Establish ground rules for the day's discussion.
- Discuss how the voting process will work and what consensus means. Suggest that participants resist calling for a precise quantification of ratings (this is not research).
- Read aloud the Essential Service, Intent Statement, Examples of Partner Contributions, Model Standard, Measurable Objectives, and the Key Idea.
- Next, read the Points for Discussion consecutively.
- Facilitate discussion using the Points for Discussion as a whole rather than individually; encourage group members with first-hand experience relative to the discussion points to share their perspectives.
- After the group has completed discussion, call for a straw vote to get a sense of which rating the group is leaning toward as the best description of the system performance.
- Call on individual group members with opposing views to explain high and low votes if there is a fairly wide distribution of scores; facilitate that discussion.
- Call for re-votes after discussion to determine if the group is coalescing around a rating, reminding the group that we are measuring against a gold standard.
- Bring group to consensus on a "score" for each Key Idea (not each Point for Discussion).
- Summarize key issues, next steps, parking lot items, and any indication that rating may be skewed by the participants' affiliation (i.e. clinical, environmental, etc.) to be noted by the theme takers, to be sure that the appropriate issues are being captured.

- In some systems, the Clinical participants of the system (for example) may score very differently than the Environmental part of the system or Newborn Screening, etc. To capture this potential variance, the facilitator may ask the participants to rank how the initial vote reflects the Clinical, Environmental, or “Other” performance. The following score box may be used by the theme taker to document how the initial scoring may be skewed by one or more parts of the system. The “Other” category may include such areas as newborn screening, toxicology, etc.

How does this rating reflect system performance for the following?

| | Rating Too High | Rating Too Low | Rating About Right | Rating Not Applicable |
|---------------|-----------------|----------------|--------------------|-----------------------|
| Clinical | | | | |
| Environmental | | | | |
| Other: | | | | |

THEME TAKERS

- Assist facilitators in tracking discussion and voting results
- Take notes of the discussion
- Record rating scores for each Key Idea and make note of potential variance in score due to the strength of different system partners, such as environmental, clinical, etc.
- Capture possible next steps
 - Theme takers should record next steps on a designated form (found in Appendix M) that can easily be collated for the ending plenary session.
 - Next steps may include names of participants that have agreed to take on lead responsibility and the names of recommended stakeholders to be included with each next step.
- Capture “parking lot” issues for subsequent discussion of questions demanding deeper consideration.
 - A sample form for recording parking lot issues can be found in Appendix L.
 - Parking lot issues may include system problems, opportunities for improvement, ideas for improvement, names of participants willing to work on issues, etc.
- Multiple theme takers can be assigned to specifically capture one or more of the above items
- It is recommended theme takers use laptops pre-loaded with all electronic forms to record all necessary items during the assessment.

PARTICIPANTS

- Listen as questions are read to gain an overview of the issues
- Discuss questions, considering the laboratory system as a whole and not singling out one system partner.
- Use discussion to build consensus on a rating for a Key Idea (not each Point for Discussion)
- Share your knowledge of the issue being discussed
- Ask questions of other participants when unsure of the area
- Cast first votes to determine group orientation towards rating
- Individuals explain diverging votes
- Re-vote as necessary to support consensus building

OBTAINING AND RECORDING A SCORE

- The facilitator will assist the group in agreeing upon a rating that reflects how well the system meets the measures of each Key Idea.
- Using the group rating, an assigned theme taker will use the information found in Chapter 3 to determine and record the actual score in the Scoring Tool.
- It is recommended that theme takers consolidate the breakout session scores after each session such that the overall scores are maintained on one computer or on one flash drive for use in the closing plenary session.

HOW TO USE THE EXCEL SCORING TOOL TO RECORD THE VOTING

It is suggested that the theme takers record the scores of each Key Idea next to each of the questions in the printed assessment tool or that the scores be entered directly into the Scoring Tool spreadsheet (located on the APHL L-SIP SharePoint site <https://www.aphlweb.org/cmt/lsscmt/performstand/TAS2008/default.aspx>). If recorded on the tool, it may be easier to collect by one individual that is maintaining the master spreadsheet

Using the Scoring Tool:

1. Go to the Essential Service for which you have scores to enter.
 - a. Each Essential Service has a separate worksheet on this scoring tool, accessible by clicking on the corresponding tab at the bottom of the worksheet.
 - b. For each of the Model Standards (e.g. Model Standard 1.1), there may be one or more “Key Ideas” that are scored (e.g. Key Idea 1.1.1)

2. Once the score for a Key Idea is determined, the corresponding number can be entered in the yellow block next to the Key Idea, under the “Eval” column.
 - a. If the score is rated “Optimal”, enter a 4; if “Significant” enter a 3, if “Moderate” a 2, if “Minimal” a 1, or if “None” enter a 9. For example, if Key Idea 1.1.1 was rated as having Significant Activity, enter a “3” in the yellow block.
 - b. Entering the score will result in a calculation in the adjacent 2 columns.
 - c. Each page is protected, so you can only enter scores in the yellow blocks.
3. Once you have completed entering the scores for all of the Key Ideas, you’ll note that there is an aggregate score for each of the Model Standards, and an overall score for the Essential Service. Continue this process for the remaining Essential Services and complete the entry process.
4. Once you have completed entering all of the “scores,” you can click on the “Graphic Results” tab and see a graphic display of the results. If you wish, you can project this screen for all participants to see at the end of the day.
5. The “Summary Scores” tab provides a convenient summary of the numeric scores for all of the Model Standards and Essential Services.

THE CLOSING SESSION

After the last breakout session is completed, it is recommended that a closing plenary session be convened. This can be presented by the main facilitator, the L-SIP coordinator, or others as decided prior to the assessment day. The following elements should be included:

- **Review the results of the assessment.**
 - The scoring tool should be projected for the full group – either or both the “Graphic Results” and the “Summary Scores” sections are good choices. This allows results to be shared at the end of the day.
 - Participants may want to discuss the findings and if time permits the main facilitator should encourage discussion.
- **Share the 1-3 possible next steps** for improvement from each Essential Service as recorded by the theme takers, their relative importance and the name of a contact person to convene the work if identified.
- **Share beginning thoughts about the next step in the process.** This is usually done by the state laboratory director or other public health official, and may include mention of reconvening meetings in the near future to begin improvement work based on the assessment findings.
- **Do an evaluation of the day.** A sample evaluation form is included in Appendix N. Encourage all participants to provide feedback by filling out the evaluation.

THE L-SIP ASSESSMENT TEAM DEBRIEFING

Immediately after the assessment and when participants have left for the day, it is suggested that the L-SIP assessment team meet for a debriefing or “hot wash” to discuss and record immediate thoughts about the day’s activities. With the assessment fresh in the minds of the team members, this is an excellent opportunity to document impressions of the day, successes, and what could be improved when planning for a re-assessment.

NEXT STEPS

After the assessment has been completed the next step is to continue the momentum by utilizing what was learned to inform the system improvement process. Chapter 5 will discuss strategies for moving forward by applying the information gathered in the assessment.

CHAPTER 5:

Post-Assessment Activities

After the assessment day activities, there is important work to be done to facilitate the next steps of the continuous improvement process for your laboratory system. This final chapter will provide guidance for those next steps. Please refer to the timeline in Appendix J for suggested timing of each step.

SUMMARIZING ASSESSMENT DAY DOCUMENTATION

Soon after the L-SIP assessment, the following activities should be initiated:

- Compile the notes and scores that were collected by theme takers and facilitators.
- Summarize the evaluations completed by participants at the end of the assessment.
- Hold a meeting with the internal L-SIP coordinating team and laboratory management to discuss the assessment, what worked, what did not, the key items brought up from the assessment, and the evaluation scores. Points to consider:
 - Were the key “themes” captured from the parking lot for further follow up?
 - What do the “themes” suggest?
 - What is seen as most pressing and/or the highest priority?
 - What is seen as low-lying fruit and what improvements can be done quickly?
 - How do possible next steps complement and/or inform current strategic plans within the state, as well as the other members of the laboratory system?
 - When can the first post-assessment follow-up meeting be held? (It is recommended that it should be held within 2-3 months following the assessment)

THANK PARTICIPANTS

One week following the assessment it is important to send a thank you note to those that participated in the L-SIP assessment. Along with the thank you note, share the preliminary assessment results and next steps with the participants and indicate when the next meeting will be held to address these items.

ASSESSMENT REPORT

Once the L-SIP assessment is completed, one of the first next steps taken is to write your assessment report. The report is based on the theme taker notes and the key ideas discussed during the assessment. There are various formats to writing the report. These formats are based on what your system believes is important to share.

Some previous state or local assessment reports have been short summaries outlining key concepts gained from the meeting. Others have provided an introduction that reiterated the concept of the L-SIP and the process of the assessment. Many have provided a summary of the results obtained using the L-SIP tool as part of their report. It is recommended that the report be written within one to three months after the assessment date, sent to participants, and posted on your web page, if applicable. Note: If you have a contractor working with you, it would be beneficial to include in the contract, when possible, that the contractor write the report within six weeks of the assessment.

An example table of contents is provided in the table on the right and is only for guidance in starting the process of writing the report. Once the report is written, you should follow your internal review processes before the report is made public.

EXAMPLE REPORTS

Examples of L-SIP assessment reports can be found on the APHL website.

APHL website: <http://www.aphl.org/aphlprograms/lss/performance/Pages/Assessment-Reports-from-Past-L-SIP-Participants.aspx>

There are also example reports from states that have performed the assessment available via these links:

Arizona: <http://www.azdhs.gov/lab/lcip/results.htm>

Minnesota: http://www.health.state.mn.us/divs/phl/LSIP/lcip_results.html

Milwaukee, WI: <http://city.milwaukee.gov/LSIPresults>

Montana: <http://www.dphhs.mt.gov/publichealth/lab/improvement.shtml>

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FOLLOW-UP MEETING AND ACTIVITIES

As stated earlier, the principal reason for conducting the system assessment is to prepare for taking steps to strengthen the Public Health Laboratory System. The next step in the process is perhaps the most important, because it is at this stage that the convening organization and key participants discuss the results, identify challenges and opportunities, establish improvement plans, and move forward with improvement efforts. It is recommended that a meeting be convened within two to three months following the assessment to discuss these issues. When planning the follow up meeting, there are things to consider in developing and maintaining a continuous quality improvement process. Some key points are listed below:

- Do you have a volunteer or staff person available to convene the initial meeting to begin work on the highest priorities?
- Were there individuals that expressed an interest in helping to coordinate a follow-up meeting or working on a particular topic?
- Who was missing at the L-SIP assessment?
 - Consider inviting key participants that were not able to attend the initial assessment.
- What format should the meeting take?
 - Decide who needs to attend this meeting. States have held follow-up meetings with the entire group, an advisory group, or a small workgroup or taskforce.
 - Consider having the meeting via teleconference, via webinar, or a combination of formats.
 - Consider holding the meeting at different locations throughout the state or centrally.
- What do you want to discuss at the meeting?
 - Review the assessment findings as appropriate for your group.
 - Prioritize areas needing improvement that were identified by the assessment. A SWOT analysis (Identifying Strengths, Weaknesses, Opportunities, Threats) is a technique that might assist the group.
 - Establish a process for moving forward.

The following are examples of some post-assessment activities that other public health laboratories have implemented:

- Creating a forum, committee, or advisory group with a core group of partners.
- Partnering with other states and creating a larger forum to leverage resources to move improvement activities forward
- Partnering with the agency Public Health Accreditation Improvement Manager to assist with mutual improvement activities

For more information on these examples, contact the APHL LSS Senior Specialist.

CONTINUOUS IMPROVEMENT

As mentioned earlier, the principal rationale for doing assessments of the state or local laboratory system performance include:

- Introducing (or reinforcing) the concept of a systems approach to the provision of public health laboratory services,
- Strengthening the system, and
- Identifying areas of need for improvement in the system.

When planning an approach to continuous improvement, the following are steps to consider:

1. Organize Participation for Performance Improvement
2. Prioritize Areas for Action
3. Explore “Root Causes” of Performance Issues
4. Develop and Implement Improvement Plans
5. Regularly Monitor and Report Progress

Creating sustainable improvement in laboratory practice requires the participation of all entities contributing to the Public Health Laboratory System in that state. Communicating early plans for an improvement process will help to increase participants’ confidence in the value of the assessment, as well as generate excitement about “what happens next.”

APHL QUALITY IMPROVEMENT RESOURCES

APHL and members have provided resources for states to use in improvement activities both internal to the public health laboratory and external to the system.

Helpful Websites

- The APHL Member Resource Center (MRC) can be found on the APHL website at: <http://www.aphl.org/mrc>. The MRC contains quality improvement information and tools such as the Plan, Do, Check, Act (PDCA) process, etc. For best results, search on (and post documents) using the following key words:
 - o Quality improvement
 - o QI
 - o CQI
 - o Laboratory improvement
 - o Lean
 - o Process improvement
 - o Laboratory System Improvement Group
 - o Laboratory System improvement
 - o LSIG
 - o LSIP
 - o L-SIP
- Public Health Foundation Improvement Website:
<http://www.phf.org/focusareas/pmqi/pages/default.aspx>

LABORATORY SYSTEM IMPROVEMENT GROUP

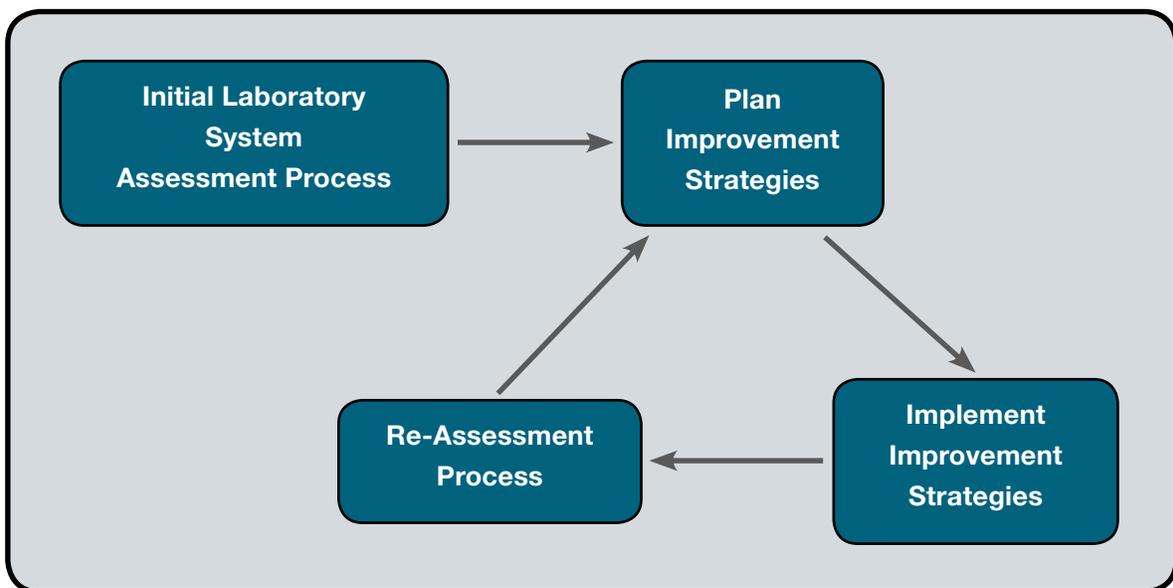
The Laboratory System Improvement Group (LSIG) is made up of individuals in the public health laboratory setting who share continuous system improvement activities and assist each other in the development of performance management projects. This group meets via teleconference on a bimonthly basis. All member laboratories are invited to join. If you are interested in receiving information about upcoming LSIG calls, contact the APHL LSS Senior Specialist for more information.

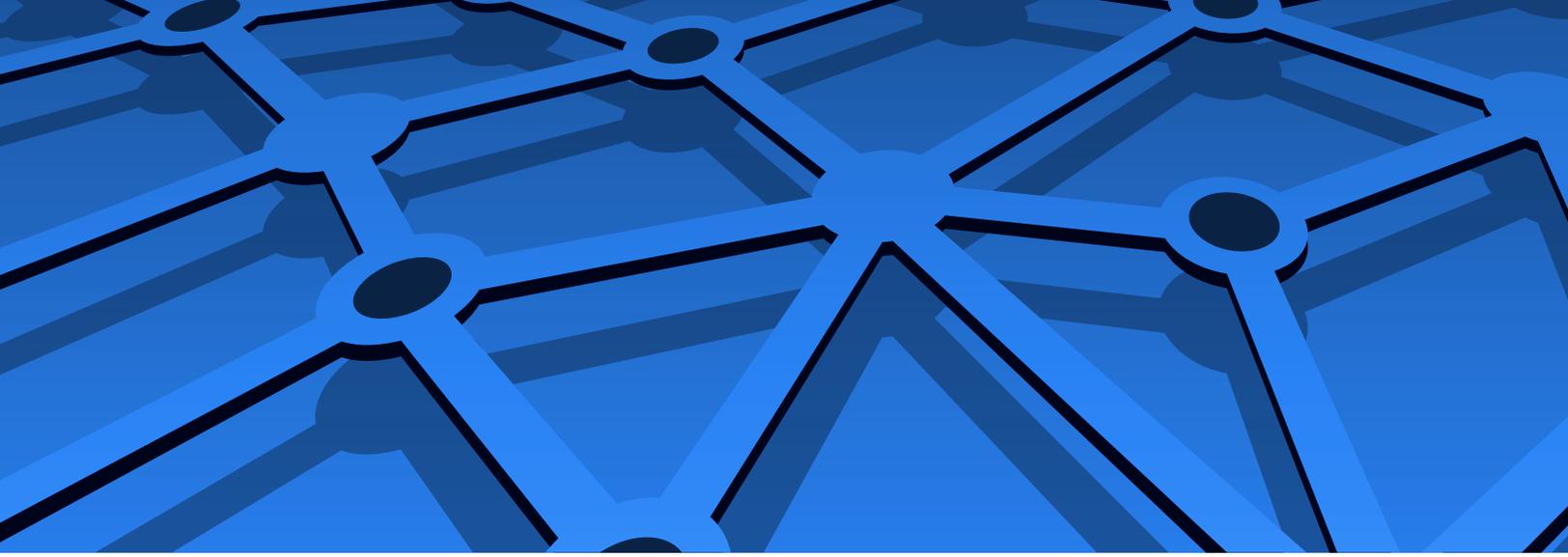
CLOSING STATEMENTS

The L-SIP assessment tool provides a method to support state and local Public Health Laboratory Systems in identifying improvements in the public health infrastructure and performance at the system level. The assessment process should be repeated periodically (every three to four years) to allow for ongoing monitoring and measurement and should take into consideration what worked and did not work at the first assessment. Through repeated use, state laboratory systems and policy makers can track how well the weaknesses or gaps identified in previous years have been addressed, recognize new and emerging issues, and acknowledge the growth and progress toward a truly coordinated Public Health Laboratory System.

The role of partners in this effort is invaluable. Conducting the assessment process with a broad-based group of representatives promotes collaboration, cooperation, and dialogue leading directly to improvements. Ultimately, completing the assessment increases understanding of the importance of the systems approach and organizations' roles in the system, leading to mutual benefits for all involved.

The performance assessment process is the first step in beginning an improvement effort. Through assessment of current capacity, cross-organizational learning, improved coordination between system partners, and continued improvements based upon results and action plans, Public Health Laboratory System leaders will create stronger, high-performing laboratory systems across the nation.





L-SIP

Appendices

APPENDIX A:

Public Health in America

Vision: Healthy People in Healthy Communities

Mission: Promote Physical and Mental Health and Prevent Disease, Injury, and Disability

Public Health

- Prevents epidemics and the spread of disease
- Protects against environmental hazards
- Prevents injuries
- Promotes and encourages healthy behaviors
- Responds to disasters and assists communities in recovery

Essential Public Health Services

- **Monitor** health status to identify community health problems
- **Diagnose** and investigate health problems and health hazards in the community
- **Inform, educate, and empower** people about health issues
- **Mobilize** community partnerships to identify and solve health problems
- **Develop policies and plans** that support individual and community health efforts
- **Enforce** laws and regulations that protect health and ensure safety
- **Link** people to needed personal health services and assure the provision of health care when otherwise unavailable
- **Assure** a competent public health and personal health care workforce
- **Evaluate** effectiveness, accessibility, and quality of personal and population-based health services
- **Research** for new insights and innovative solutions to health problems



Source: <http://www.health.gov/phfunctions/public.htm>

Adopted: Fall 1994, Source: Public Health Functions Steering Committee, Members (July 1995): American Public Health Association•Association of Schools of Public Health•Association of State and Territorial Health Officials•Environmental Council of the States•National Association of County and City Health Officials•National Association of State Alcohol and Drug Abuse Directors•National Association of State Mental Health Program Directors•Public Health Foundation•U.S. Public Health Service --Agency for Health Care Policy and Research•Centers for Disease Control and Prevention•Food and Drug Administration•Health Resources and Services Administration•Indian Health Service•National Institutes of Health•Office of the Assistant Secretary for Health•Substance Abuse and Mental Health Services Administration

APPENDIX B:

The 10 Essential Services in English

| ESSENTIAL SERVICE NUMBER | NON-PUBLIC HEALTH VERSION |
|--------------------------|--|
| 1 | What's going on in my state? How healthy are we? |
| 2 | Are we ready to respond to health problems or threats in my state? How quickly do we find out about problems? How effective is our response? |
| 3 | How well do we keep all segments of our state informed about health issues? |
| 4 | How well do we really get people engaged in health issues? |
| 5 | What policies in both government and the private sector promote health in my state? How effective are we in setting healthy state policies? |
| 6 | When we enforce health regulations, are we technically competent, fair, and effective? |
| 7 | Are people in my state receiving the medical care they need? |
| 8 | Do we have a competent public health staff? How can we be sure that our staff stays current? |
| 9 | Are we doing any good? Are we doing things right? Are we doing the right things? |
| 10 | Are we discovering and using new ways to get the job done? |

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APPENDIX C:

Core Functions of Public Health Laboratories

THE ELEVEN CORE FUNCTIONS OF STATE PUBLIC HEALTH LABORATORIES

- Disease Prevention, Control and Surveillance
- Integrated Data Management
- Reference and Specialized Testing
- Environmental Health and Protection
- Food Safety
- Laboratory Improvement and Regulation
- Policy Development
- Public Health Preparedness and Response
- Public Health Related Research
- Training and Education
- Partnerships and Communication

Source: APHL

http://www.aphl.org/AboutAPHL/publications/Documents/COM_2010_CoreFunctionsPHLs.pdf

APPENDIX D: Crosswalk of Essential Services and Core Functions of Public Health Laboratories

| ESSENTIAL SERVICE | CORE FUNCTION |
|--|--|
| 1. Monitor health status to identify community health problems | 1. Disease prevention, control, and surveillance |
| 2. Diagnose and investigate health problems and health hazards in the community | 2. Integrated data management 3. Reference and specialized testing 4. Environmental health and protection 5. Food safety 8. Emergency response |
| 3. Inform, educate, and empower people about health issues | 10. Training and education 11. Partnerships and communication |
| 4. Mobilize partnerships to identify and solve health problems | 11. Partnerships and communication |
| 5. Develop policies and plans that support individual and community health efforts | 7. Policy development |
| 6. Enforce laws and regulations that protect health and safety | 6. Laboratory improvement and regulation |
| 7. Link people to needed personal health services and assure provision of health care when unavailable | 3. Reference and specialized testing |
| 8. Assure a competent public and personal health care workforce | 10. Training and education |
| 9. Evaluate effectiveness, accessibility, and quality of personnel and population-based services | 3. Reference and specialized testing 6. Laboratory improvement and regulation |
| 10. Research for new insights and innovative solutions to health problems | 9. Public health-related research |

APPENDIX E:

Definition of a State Public Health Laboratory System

Definition of a State Public Health Laboratory System: “An alliance of laboratories and other partners within a state that supports the 10 Essential Public Health Services under the aegis of the state public health laboratory. The system members and stakeholders operate in an interconnected and interdependent way to facilitate the exchange of information, optimize laboratory services, and help control and prevent disease and public health threats.”

The State Public Health Laboratory System (SPH Laboratory System) consists of all the participants in public health testing, including those who initiate testing and those who ultimately use the test results. The SPH Laboratory System is part of the larger state public health system. The System includes individuals, organizations and agencies that are involved in assuring that laboratory data support the 10 Essential Public Health Services. The concepts of an SPH Laboratory System are also embodied in the APHL Core Functions of State Public Health Laboratories. These documents are available on the APHL website at www.aphl.org. Within the SPH Laboratory System are primary stakeholders who are directly involved in creating and using laboratory data. Additional stakeholders include those who are concerned with complementary Essential Services, such as Training and Education and Public Health Related Research. A successful National Laboratory System is dependent on the creation of fully integrated and coordinated networks in every state. The goals of the National Laboratory System are to support voluntary, interdependent partnerships of clinical, environmental, agricultural and veterinary laboratories through public- private collaboration, for assurance of quality laboratory services and public health surveillance.

The SPH Laboratory System should assure that:

1. public health threats are detected and intervention is timely
2. stakeholders are appropriately informed of potential threats
3. reportable conditions are monitored in a comprehensive statewide system
4. specimens and isolates for public health testing are sufficient to provide comprehensive public health surveillance and response
5. public health laboratory data are transmitted to appropriate state and federal agencies responsible for disease surveillance and control.

The state public health laboratory (SPHL) has a leadership role in developing and promoting the SPH Laboratory System through active collaboration with stakeholders, including epidemiologists; first responders; environmental professionals in water, food and air surveillance activities; private clinical and environmental laboratories; and local public health laboratories. The SPHL provides leadership to

APPENDIX E: (Continued)

assure that essential and state-of-the-art laboratory services are provided and that clinical laboratories that perform public health testing on reportable infectious diseases submit results to the public health surveillance system using national testing guidelines. To provide leadership, the SPHL monitors essential components of the SPH Laboratory System, such as completeness of reporting and accuracy of laboratory testing results. The SPHL also assures that accurate results are reported in a manner that is appropriate and sufficiently timely for effective public health response. An effective SPH Laboratory System requires proactive leadership by the SPHL to monitor public health testing processes by clinical and environmental in-state laboratories. To assure that the SPH Laboratory System is effective, the SPHL should at a minimum:

1. maintain an integrated information system that includes all stakeholders that rely on accurate laboratory data
2. employ a full-time Public Health Laboratory System coordinator
3. create a standing public health laboratory advisory committee
4. provide an interactive website or other electronic system to maintain regular communication channels for system partners.

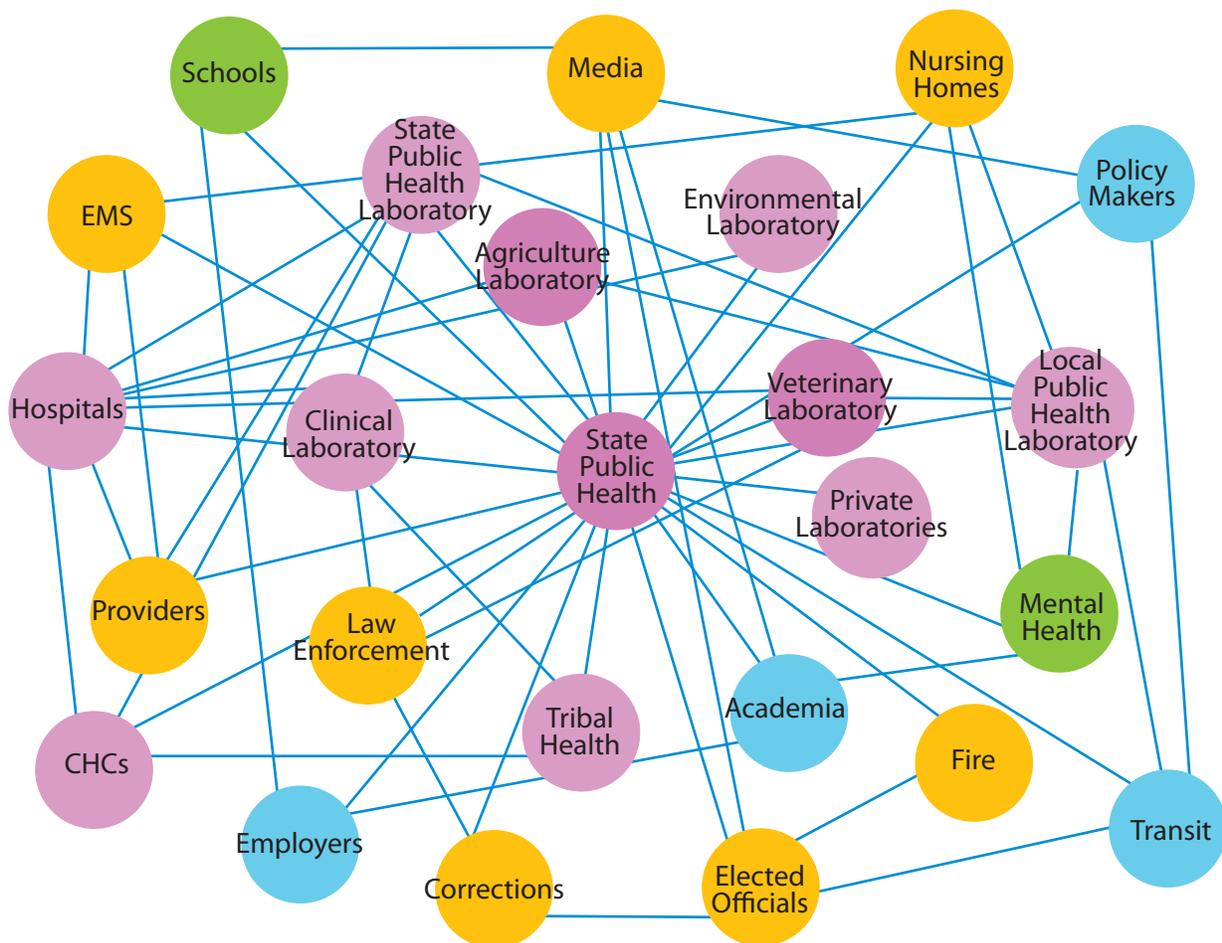
Source: APHL

http://www.aphl.org/aphlprograms/lss/performance/Documents/Definition_of_a_state_public_health_laboratory_system_June2010.pdf

APPENDIX F: State System Partners

States are encouraged to adapt this slide to fit their state system. It is included in the orientation PowerPoint and is also recommended as a handout to participants on the day of the assessment.

State Public Health Laboratory System



APPENDIX G: Definition of a Local Public Health Laboratory System

Definition of a Local Public Health Laboratory System: “A Public Health Laboratory System is an alliance of laboratories and other partners within a state or locality that supports the 10 Essential Public Health Services. System members and stakeholders operate in an interconnected and interdependent way to facilitate the exchange of information, optimize laboratory services, and help control and prevent disease and public health threats.”

The Local PHL monitors essential components of the Local PHL System and assures that accurate results are reported in a manner that assures an effective public health response. A successful Local PHL System requires proactive leadership to monitor public health testing processes by clinical laboratories.

To assure that the Local PHL System is effective, the Local PHL should at a minimum:

1. Maintain an integrated information system that includes all stakeholders that rely on accurate laboratory data;
2. Define a Public Health Laboratory System coordinator
3. Create a standing public health laboratory advisory committee; and
4. Provide an interactive website or other electronic system to maintain regular communication channels for system partners.

Local PHL Systems differ but complement State PHL Systems in several important ways including:

1. Providing and prioritizing testing at the site of patient care and/or addressing local environmental issues;
2. Supporting the mission of local public health departments;
3. Serving as surge capacity for State PHLs, particularly for testing in support of emergency response.
4. Typically being co-located in the local public health agency and working as a team with investigators, inspectors and community and public health professionals to provide rapid and relevant responses to community needs.
5. Strong ties and proximity to the community it serves.

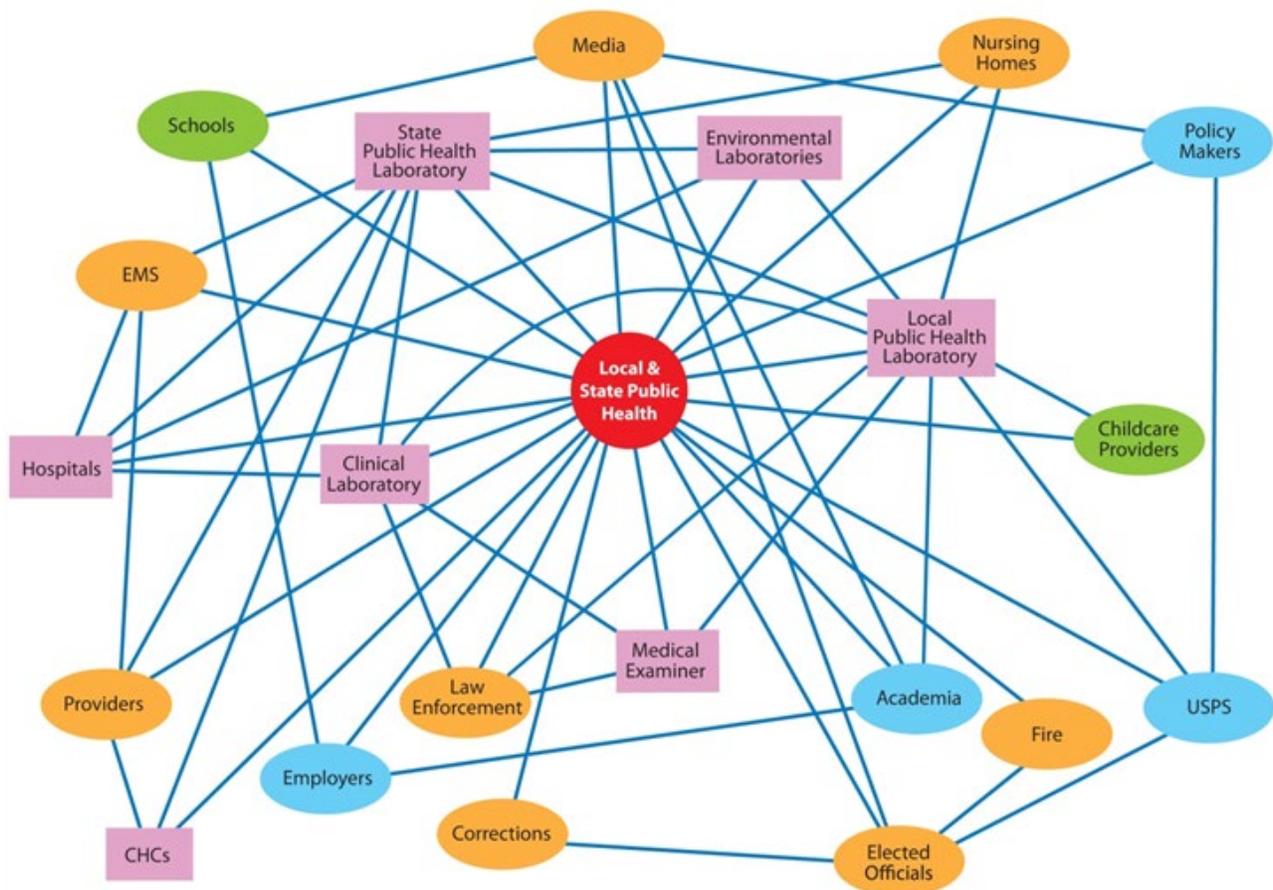
Source: APHL

http://www.aphl.org/MRC/Documents/Definition_of_a_Local_Public_Health_Laboratory_System.pdf

APPENDIX H:

Local System Partners

Local Public Health Laboratory System



APPENDIX I:

Laboratory System Improvement Program Frequently Asked Questions

1. What is the National Public Health Performance Standards Program?

<http://www.cdc.gov/od/ocphp/nphpsp/>

A national partnership initiative that developed public health performance standards for state and local public health systems and for public health governing bodies, using the Ten Essential Public Health Services as the framework. The purpose of the program is to improve the quality of public health practice and the performance of public health systems.

2. Why should we do a State Public Health Laboratory System Assessment?

To strengthen the SPHL system by developing and implementing an improvement plan based on the strengths and weaknesses identified in the assessment.

3. Are all of the 11 Core Functions of Public Health Laboratories encompassed in the 10 Essential Services?

Yes they are. In some cases, more than one core laboratory function is represented in a single essential service.

4. What is a gold standard as applied to a performance standard?

A gold standard identifies what is currently thought to be the very best attainable level of service and system attributes that can be achieved at the Public Health Laboratory System level. This includes:

1. Assuring that accurate results are reported in a manner that is appropriate and sufficiently timely for effective public health response.
2. Providing proactive leadership by the SPHL to monitor public health testing processes by clinical and environmental in-state laboratories.
3. Maintaining an integrated information system that includes all stakeholders that rely on accurate laboratory data
4. Creating a standing public health laboratory advisory committee.
5. Providing an interactive website or other electronic system to maintain regular communication channels for system partners.
6. Employing a full-time public health laboratory system coordinator.

Scoring a performance standard at the highest level implies that system performance is at or near optimal levels although improvement can always take place.

APPENDIX I:

(Continued)

5. What is an Improvement Plan?

The improvement plan is a plan that is designed to address the findings of the state assessment. Incomplete services and/or areas in need of improvement have been identified and prioritized. Steps are defined to move the Public Health Laboratory System toward higher levels of operational efficiency, effectiveness and integration.

6. What terms are defined in the glossary?

All terms underlined in the L-SIP assessment tool have been defined in the L-SIP assessment tool glossary, which can be found on the APHL L-SIP SharePoint site <https://www.aphlweb.org/cmt/lsscmt/performstand/TAS2008/default.aspx>.

7. What is the role of the theme taker?

The theme taker is responsible for: documenting the key concepts from the assessment day discussions and items that require follow up (parking lot); recording the top 1-3 next steps for each essential service; recording the negotiated score for each Key Idea; and submitting the notes to the coordinator following the assessment.

8. How is a theme taker chosen?

The theme taker should be someone who can help identify and record significant issues that will require further discussion and ideally would know many of the participants. They may or may not have a laboratory background.

9. What is the Parking Lot?

A record of items discussed during the assessment which require further exploration and consideration at a later time. Recording these items allows the discussion to be kept brief and for the process to move on with the objective of completing all the Essential Services within the agenda time frame.

10. What is the role of the facilitator?

The facilitator's role is to keep discussions on track, remind participants of the ground rules when necessary, and to help participants come to consensus on rating system performance against the standards.

APPENDIX I: (Continued)

11. How is a facilitator chosen?

It is recommended that facilitators be impartial, able to lead the discussion without personal participation in content, but have skills in clarifying and reflecting information. The ability to create a safe environment that encourages participation is also an important quality.

12. How much time will those of us organizing the assessment need in order to prepare for the assessment day?

The amount of time will vary, but the range most frequently noted by field test states was 71-90 hours of preparation time, within a three month period. Appendix I provides a timeline for preparing for the assessment with identification of specific activities and the recommended time frames.

13. How should attendees be chosen to come to the assessment?

It is strongly encouraged that participants include state and local public health service providers, university/academia, hospitals, private and independent laboratories, FBI and state police, environmental agencies and others as appropriate. Any group of individuals who participate in working with the state or local Public Health Laboratory to achieve a healthy public may be included. Reviewing sections of the User's Guide and Appendices that identify partners for each Essential Service will help you in planning.

APPENDIX J:

Timeline for Assessment Preparation

| TASK | TIMELINE | COMPLETED/INITIAL |
|--|--------------------------------|-------------------|
| Secure senior leader support | Prior to starting this project | |
| Assign a lead manager or coordinator and identify internal L-SIP coordinating team members | 2-3 months prior to assessment | |
| Get connected to APHL; participate in technical calls | 2-3 months prior to assessment | |
| Review User's Guide and appendices | 2-3 months prior to assessment | |
| Identify date for assessment and secure a location | 2-3 months prior to assessment | |
| Secure 3 facilitators and 3-6 theme takers and start review of the tool | 2-3 months prior to assessment | |
| Start developing state-specific L-SIP website as a means of sharing information with partners if desired | 2-3 months prior to assessment | |
| Identify system partners and assign to groups | 8 weeks prior to assessment | |
| Send invitations to system partners | 6-8 weeks prior to assessment | |
| Arrange food/refreshments for the assessment day | 4-6 weeks prior to assessment | |
| Confirm/follow up with participants as able | 3 weeks prior to assessment | |
| Identify assessment day speakers and create orientation PowerPoint slideshow | 3 weeks prior to assessment | |
| Assign facilitator and theme takers for each Essential Service and hold a meeting to plan the assessment day logistics | 3 weeks prior to assessment | |
| Confirm attendance, phone or send second letter to non-respondents | 2 weeks prior to assessment | |

APPENDIX J:

(Continued)

| TASK | TIMELINE | COMPLETED/INITIAL |
|--|-------------------------------|-------------------|
| Finalize agenda and confirm speakers and PowerPoint | 2 weeks prior to assessment | |
| Make audio/visual arrangements | 2 weeks prior to assessment | |
| Send reminder email to partners with details, maps and materials | 2 weeks prior to assessment | |
| Order printed materials and voting cards from APHL by providing them with the number of participants | 1-2 weeks prior to assessment | |
| Prepare assessment day packets for the participants | 1-2 weeks prior to assessment | |
| Send confirmed participants electronic packets (tool, flyers) | 1 week prior to assessment | |
| Develop sign-in list of participants for check in, update information on the day of the assessment | 1 week prior to assessment | |
| Confirm arrangements for food, facility rental, and parking | 1 week prior to assessment | |

APPENDIX K:

Sample Letters

SAMPLE FIRST LETTER

Dear _____:

The _____ State Public Health Laboratory would like to invite you to participate in the upcoming State Public Health Laboratory System Performance Assessment. This assessment has been found to be highly effective in identifying how well the state system functions in addressing laboratory issues. As a stakeholder and system partner, we request your help.

The State Public Health Laboratory System is the focus of this assessment. It is important to recognize that our state “public health laboratory system” includes all of the organizations and partners that contribute to the state’s ability to meet state laboratory needs for assuring health and well-being. The work that you do makes your organization a vital partner in the state public health laboratory system. An expanded description of state public health laboratory systems is included with this mailing.

This system assessment will give us information on where we are successful, highlight areas of progress and identify places where improvements need to be made. The assessment will provide for dialogue including information you share with us. Through a facilitation process, a consensus will be reached and collated into a state-wide response. The results will tell us how we compare to the laboratory system “gold standards.”

The assessment will take one day and will be facilitated by independent professionals skilled in public health and facilitation. Please join us. The assessment will take place:

Date:

Time:

Place:

Refreshments and lunch will be provided. Let us know if you have special dietary or mobility needs. Please reply with your acceptance or regrets to (name & contact info) by close of business (date). If you have any questions, please do not hesitate to call.

We look forward to working with you on this exciting and important endeavor.

Sincerely,

APPENDIX K: (Continued)

SAMPLE SECOND LETTER

Dear (State System Partner):

This letter is to confirm your attendance in the upcoming State Public Health Laboratory System Standards Assessment. The goal of this assessment is an improved Public Health Laboratory System.

The State Public Health Laboratory System is the focus of this assessment. It is important to recognize that our State “Public Health Laboratory System” includes all of the organizations and partners that contribute to the state’s ability to meet state laboratory needs for assuring health and well-being. The work that you do makes your organization a vital partner in the State Public Health Laboratory System. The success of this assessment hinges upon the participation of organizations such as yours to make the assessment most successful and meaningful.

We look forward to seeing you for this single full day process. This is a facilitated process by professionals skilled in public health and with strong facilitation skills. The process and results of the assessment will aid us in identifying:

1. gaps and weaknesses in the state laboratory system,
2. lack of coordination,
3. duplication of services, and
4. the need for new and/or additional services or resources.

The assessment will take place:

Date:

Time:

Place:

Lunch will be provided, map included

Attached is a list of “The 10 Essential Public Health Services”, “The Core Functions of State Public Health Laboratories”, a description of the State Public Health Laboratory System and the Essential Services Assessment tool that we will be reviewing during the meeting. If plans or circumstances have changed and you won’t be able to attend please contact me by (date). If you have any questions, please do not hesitate to call me.

We look forward to working with you on this important endeavor.

Sincerely,

APPENDIX L:

L-SIP Facilitator and Recorder/Theme Taker Training

APHL has put together several resources to help you prepare for the assessment. Most of these can be found on the L-SIP SharePoint site. This SharePoint site is password protected, which can be accessed by contacting the APHL LSS Senior Specialist. Included among the resources are a narrated PowerPoint designed for state coordinators who are planning the assessment day, and a video presentation for facilitators and theme takers. It is recommended that all program coordinators watch both of these sessions, and that facilitators and theme takers watch the training designed for them. After these two resources have been reviewed, it is recommended that the coordinator convene a meeting with facilitators and theme takers to address the following topics:

- A. Determine which of the theme takers and facilitators will constitute a team, which breakout sessions they will support, and identify which participants will be assigned to each team. To assure against bias, it is strongly recommended that the facilitators are not from the SPHL. Theme takers, however, can be from the SPHL.

- B. Description of Assessment Meetings
 1. Purpose
 2. Process to be use
 3. Expected outcomes

- C. Setting Ground Rules
 1. Remind participants that this is not research but rather subjective evaluation of the state system's performance.
 2. Acknowledge that today's assessment is only a starting point for ongoing system improvement work.
 3. Give credit and acknowledgment for what has been done.
 4. Be open to new ideas as well as thoughts that differ from our own.
 5. Encourage and be curious about different points of view
 6. Control your "air time"
 7. Contribute information the group needs in a succinct manner
 8. Contribute to developing consensus, finding ratings everyone can live with
 9. Help keep the discussion on track

APPENDIX L: (Continued)

10. Help assure that important topics requiring additional exploration are captured for future work
 11. Capture key issues to address later rather than engage in lengthy discussion (parking lot or back burner)
- D. Role of Theme Takers: Plenary Session and Break-out Sessions
1. Record the negotiated score for each question
 2. Record parking lot issues, using form provided
 3. Record top 1-3 next steps for each Essential Service
 4. Input scores from each session on scoring spreadsheet after each session in preparation for closing plenary session
 5. Write up notes and share electronically
- E. Role of Facilitator
1. Actively listen
 2. Withhold own opinion
 3. Limit personal comments
 4. Solicit differing views and perspectives
 5. Invite participation from those actively listening but not commenting
 6. Ask for specific examples/opposing points of view
 7. Ask open ended questions
 8. Keep a sense of humor
 9. Use voting to gain consensus and see where more discussion is needed
 10. Request clarification from individuals where voting is at extremes
 11. Summarize/clarify where consensus is
- F. Because some of the Essential Services are longer than others, altering the order of the agenda is not recommended.
- G. Questions, Discussion and Adjourn

APPENDIX M:

Template for Theme Taker Notes

| Theme Taker Name: | | |
|--|------------|----------------|
| ESSENTIAL SERVICE NO. 1: MONITOR HEALTH STATUS | | |
| Indicator 1.1 Surveillance Information Systems: | | |
| SCORE: | | |
| Notes: | | |
| Parking lot issues: | | |
| Resources mentioned: | | |
| Names/Volunteers: | | |
| Priority Next Steps (Rate: High, Medium, Low) | | |
| Indicator 1.2 Monitoring Health Status | | |
| SCORE: | | |
| Notes: | | |
| Parking lot issues: | | |
| Resources mentioned: | | |
| Names/Volunteers: | | |
| Priority Next Steps (Rate: High, Medium, Low) | | |
| Next Steps ES #1 – List top 2-3 possible next steps and rate as to importance (Immediate, high, medium, low) and a contact person for each to address at a first meeting. | | |
| Next Steps | Importance | Contact Person |
| | | |
| | | |
| | | |



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