



**Illinois Department of Public Health
State Public Health Laboratory System
Performance Assessment
May 11, 2017**

Illinois Assessment Report

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LABORATORY SYSTEM IMPROVEMENT PROGRAM 2017 ILLINOIS ASSESSMENT REPORT

1. SUMMARY

This report details the findings of the 2017 Laboratory System Improvement Program (L-SIP) assessment led by the Illinois Department of Public Health (IDPH), Division of Laboratories (DOL). The DOL consists of three laboratory sites: Chicago, Springfield and Carbondale. This assessment evaluates the interaction between the laboratory and its partners and its stakeholders. L-SIP is a national effort to strengthen and improve the laboratory system by collaborative efforts of many laboratory partners, with the goal being: “To promote and support high performance levels of state and local public health systems through continuous quality improvement”. The 2017 assessment was conducted using the Association of Public Health Laboratories “Laboratory System Improvement Program Performance Measurement Tool” based on the Ten Essential Public Health Services and the Eleven Core Functions and Capabilities of State Public Health Laboratories (Appendix A). The Illinois Public Health Laboratory System achieved Optimal Activity in one domain, Significant Activity in five domains, Moderate Activity in four domains and Minimal or No Activity in zero domains. The following is a description of the 2017 assessment including assessment results and plans for system improvement.

2. INTRODUCTION

In 2002, the Centers for Disease Control and Prevention (CDC) established the National Public Health Performance Standards Program (NPHPSP) to identify and measure components of the public health system. Those efforts inspired the Association of Public Health Laboratories (APHL) and the CDC Division of Laboratory Systems to develop the Laboratory System Improvement Program (L-SIP) to build a stronger foundation for public health, promote continuous quality improvement and to strengthen the scientific basis of public health practice improvements.

A critical component of the L-SIP is the assessment process that: (1) is based on the 10 Essential Public Health Services and the 11 Core Functions and Capabilities of State Public Health Laboratories (Appendix A), (2) focuses on the overall state public health (SPH) laboratory system rather than a single organization, (3) measures SPH laboratory system performance against Model Standards and (4) supports continuous improvement of the SPH laboratory system which includes all public, private and voluntary entities that define the system.

The Illinois SPH laboratory system includes all of the partners and stakeholders that contribute to the ability to meet the public health testing needs of the State of Illinois and its residents. The IDPH DOL leads this system and seeks participation from public and private laboratory professionals and epidemiologists, health care providers, state’s attorneys and

law enforcement officers, water quality professionals and state and federal agencies, among others.

3. 2017 L-SIP ASSESSMENT OBJECTIVES

- Define “State Public Health Laboratory System” and establish the importance of the assessment process for system partners in Illinois.
- Provide familiarity with the IDPH DOL, the public health system and its many partners and stakeholders.
- Provide familiarity with the “Laboratory System Improvement Program Performance Measurement Tool” and other materials to be used throughout the day.
- Provide SPH laboratory system partners and stakeholders the opportunity to play an active role in advancing our state laboratory system through discussion-intensive breakout sessions.
- Assess the SPH laboratory system against Model Standards and define opportunities for improvement including a partner or stakeholder that will lead each effort.

4. 2017 L-SIP ASSESSMENT PROCESS

The 2017 Illinois SPH laboratory system assessment was a day-long evaluation that gave partners and stakeholders the opportunity to assess the system’s support of the 10 Essential Public Health Services at the state-level. Participants were provided with informational material including the L-SIP process, the 10 Essential Health Services, the 11 Core Functions and Capabilities of Public Health Laboratories and the IDPH contact list and DOL Manual of Services. Each participant received the APHL “Laboratory System Improvement Program Performance Measurement Tool”, color coded flash cards, agenda for the day and a name badge.

The day began with an overview of the IDPH DOL and the statewide SPH laboratory system. Goals of the assessment were reviewed and examples were presented illustrating how the Illinois SPH laboratory system had been leveraged in recent years to provide critical public health services. These examples included responses to emerging diseases (i.e. recent Shiga toxin-producing *E. coli* and Seoul virus outbreaks).

Following the overview, discussion of Essential Service #2 (Diagnose and Investigate Health Problems and Health Hazards in the Community) was facilitated by Karen Breckenridge (Director, Quality Systems, APHL). Ms. Breckenridge’s session included all participants and provided a model for facilitation and discussion using the “Laboratory System Improvement Program Performance Measurement Tool.” During this session, participants gained familiarity with Model Standards, Key Ideas, Points for Discussion, as well as the use of color coded cards for performance measurement. The group was also introduced to the concept of Parking Lot Issues (items to be addressed at a later time) and use of the Next Steps matrix.

Small-group discussions of the remaining nine Essential Services were facilitated during two breakout sessions. Each of the three break-out groups discussed and measured three Essential Services as listed in Appendix B. Each break-out group included representatives

from IDPH serving as theme-takers as well as representatives from IDPH that could help answer questions during the assessment.

By the end of each break-out session, evaluation scores were tabulated, Parking Lot Issues were summarized and each Next Steps matrix was completed. Following the afternoon break-out session, all results of the assessment were presented to participants. The following is a summary of results for the 2017 Illinois SPH laboratory system assessment.

5. RESULTS

Essential Service 1:
Monitor health status to identify community health problems
(Overall Score: 52.8)

Key Idea 1.1.1. The SPH Laboratory System identifies infectious disease and environmental sentinel events, monitors trends and participates in state and federal surveillance systems.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include participation in electronic reporting systems including Illinois National Electronic Disease Surveillance System (INEDSS) for disease reporting, enhanced HIV/AIDS Reporting System (EHARS) for HIV, Arbonet and Mosquitonet, PulseNet, Influenza sentinel surveillance system, Beaches/Water surveillance and Blood Lead system.
- Opportunities identified are reduced capacity for Environmental health reporting and need for an environmental epidemiologist, need for seeing data from other jurisdictions and maintaining staff training and proficiency in use of electronic systems. Need for improved turnaround time for interpreted data and reports.

Key Idea 1.1.2. The SPH Laboratory System monitors congenital, inherited and metabolic diseases of newborns and participates in state and federal surveillance systems.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include provision of blood screening cards and rules that require an expanded NBS panel, networking and outreach.
- Opportunities identified are a need for improved education to parents, a need for a matching data base with vital records system and some communication problems between hospital laboratories and providers.

Key Idea 1.1.3. The SPH Laboratory System supports the monitoring of chronic disease trends by participating in state and federal surveillance systems.

Rated: Minimal Activity

Notes/Parking Lot Issues:

- Strengths include use of BRFSS to monitor behaviors (self-reporting), nutrition program (BMI) reports and an established chronic disease program at Chicago Department of Public Health (CDPH).
- Opportunities identified are no system or education for laboratories for chronic disease, likely due to a lack of funding.

Key Idea 1.2.1. The SPH Laboratory System has a secure, accountable and integrated information management system for data storage, analysis, reporting and exchange.

Rated: Minimal Activity

Notes/Parking Lot Issues:

- Strengths include the existence of data standards, the collection and sharing of data (although not always electronically).
- Opportunities identified are a lack of a centralized laboratory data system (especially for reporting back to submitting laboratories), lack of system for environmental reporting and lack of funding.

Key Idea 1.2.2. The SPH Laboratory System partners collaborate to strengthen electronic surveillance systems.

Rated: Moderate Activity

Notes/Parking Lot Issues:

- Strengths include good collaboration with clinical laboratories, federal agencies and local health departments (LHD) regarding ideas and grants.
- Opportunities identified are a lack of resources for electronic systems and less capacity for environmental issues.

Essential Service #1 Possible Next Steps	Importance	Suggested Activities
• Purchase and implement an updated Laboratory Information Management System (LIMS) electronic system	High	Increase funding and Information Technology (IT) support to get new/updated system
• Improve 2-way communication from laboratory to partners	Medium	Implement communication system or procedures

Essential Service #2: Diagnose and investigate health problems and health hazards in the community (Overall Score: 67.0)

Key Idea 2.1.1. The SPH Laboratory System assures the effective provision of services at the highest level of quality to assist in the detection, diagnosis and investigation of all significant health problems and hazards.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include the high quality evidenced by several certifications (Clinical Laboratory Improvement Amendments (CLIA), College of American Pathologists (CAP), Food and Drug Administration (FDA), International Organization for Standardization (ISO), Health Alert Network (HAN)), use of quality assurance plans, use of communication systems (Health Alert Network, SIREN), communication with CDC, IDPH DOL has a Continuity of Operations Plan (COOP) and cross-trained staff and three laboratory sites coordinate well to problem-solve and develop new testing methods as needed.
- Opportunities identified are a lack of funding for new technology, difficult state purchasing procedures, challenges with specimen tracking and transport, need for better communication with customers regarding status of samples and testing (through integrated LIMS).

Key Idea 2.1.2. The SPH Laboratory System has the necessary system capacity, authority and preparations in place to rapidly respond to emergencies that affect the public's health.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include the use of BioWatch program, environmental testing, capabilities to increase testing in case of outbreaks, use of Lab preparedness surveys and exercises and working to identify backup labs for newborn screening tests.
- Opportunities identified are a need for an integrated LIMS to track specimens and testing status unknown agents, a need to share COOP planning templates and exercises with clinical laboratories and an updated listing of laboratory contacts.

Essential Services #2 Possible Next Steps	Importance	Suggested Activities
Improve LIMS and Electronic Reporting	High	New contract or LIMS system
Improve Chain of Custody tracking	Medium	Chain of Custody procedures implemented for private labs & LHDs
Update list of IDPH contacts	Low	Create list of IDPH lab contacts for LHDs and other labs to access

Essential Service #3:
Inform, educate, and empower people about health issues
 (Overall Score: 67.0)

Key Idea 3.1.1. The SPH Laboratory System creates and delivers consistent information to community partners about relevant health issues associated with laboratory services.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include the existence of communication linkages with system partners including hospitals and providers, CAP, APHL and American Academy of Pediatrics (AAP) and SIREN list is well-used.
- Opportunities identified are a need for increased communication with laboratory and other professional societies.

Key Idea 3.1.2. The SPH Laboratory System creates and provides education opportunities to health and non-health community partners.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include the existence of women's health initiatives and program areas that target cultural specific areas, good provider education around outbreaks using webinars, social media, website and social apps.
- Opportunities identified are a need for more education (including workshops and webinars) to the public and state leaders about the visibility of public health laboratory work and specific topics. Travel cost is a barrier.

Key Idea 3.2.1. Relationship-building opportunities are employed to empower community partners.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include the existence of training provided to system partners, as mentioned in previous key idea.
- Opportunities identified are a need for knowing which labs do specific testing, more education of system partners and providers on specific testing needed and parameters of collection and providing targeted education to the public.

Essential Services #3 Possible Next Steps	Importance	Suggested Activities
• Increase promotion of laboratory systems and services	High	Conferences, Meetings, Legislative meetings
• Increase training for non-laboratory system partners and provide laboratory training opportunities for private and hospital laboratories	Medium	In-person trainings Webinars/tutorials

Essential Service #4:
Mobilize community partnerships to identify and solve health problems
 (Overall Score: 4 4 . 3)

Key Idea 4.1.1. Partners in the SPH Laboratory System develop and maintain relationships to formalize and sustain an effective system.

Rated: Moderate Activity

Notes/Parking Lot Issues:

- Strengths include the existence of verbal agreements in lieu of written contracts, experience of system partners in identifying key relationships and use of partnerships in drills and Bio-terrorism exercises.
- Opportunities identified are a need for more formal regular meetings with laboratory system stakeholders, a need for an updated contact list or communication guide and a shared mission and vision statement for the system.

Key Idea 4.2.1. SPH Laboratory System members communicate effectively in regular, timely and effective ways to support collaboration.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include the effectiveness of SIREN, new website development and customer service surveys in communication with partners.
- Opportunities identified are a need for improved non-emergency communication, an integrated LIMS for all sample types, update of contact list on SharePoint site, use of more varied communication for public information and develop more redundant communication.

Key Idea 4.3.1. The SPH Laboratory works together to share existing resources and to identify new resources to assist in identifying and solving health issues.

Rated: Moderate Activity

Notes/Parking Lot Issues:

- Strengths include conducting an L-SIP assessment to enhance future communication and many other relationships can be built upon.
- Opportunities identified are allocating time and resources to system communications and ways to share resources and formalize evaluations to better communicate need to state and federal partners.

Essential Services #4 Possible Next Steps	Importance
• Conduct stakeholder meetings that allow for more routine communication	High
• Update SharePoint with current contact information	High
• Implement an updated universal or cohesive LIMS system	High
• Explore opportunities to share resources between agencies	Medium
• Identify gaps in lab workflow (especially in emergency and high volume situations) through actual specimen analysis during drills	Medium

Essential Service #5:
Develop policies and plans that support individual and community health efforts
 (Overall Score: 44.3)

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.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include previous partner collaborations regarding HIV testing, metabolic and genetic testing, lead testing, rules updates, food safety and environmental health policies; also collaboration regarding outbreak control, mock exercises and community testing events.
- Opportunities identified are a need for looking at other state agencies policies and rules and sharing of COOP templates with clinical partners.

Key Idea 5.2.1. The SPH Laboratory System and partners contribute their expertise and resources using science and data to inform and influence policy.

Rated: Moderate Activity

Notes/Parking Lot Issues:

- Strengths include the sharing of genomic sequencing, coordinating with CDC on new policies, collaboration on changes to the Food Code and some involvement of laboratory system partners when needed for pending legislation or prioritization of testing that may affect public health.
- Opportunities identified are a need for more communication regarding pending legislation and use of more data to support public health policies.

Key Idea 5.3.1. The plans and policies that affect the SPH Laboratory System are routinely evaluated, updated and disseminated.

Rated: Moderate Activity

Notes/Parking Lot Issues:

- Strengths include the existence of quality assurance plans, communication of plans and rule changes through SIREN and HAN.
- Opportunities identified are a need for more communication regarding the laboratory data and epidemiological interpretation and more communication with private and local clinical laboratories.

Essential Services #5 Possible Next Steps	Importance	Suggested Activities
• Increase two-way communication	High	Involve partners on policy changes and get their feedback

Essential Service #6:
Enforce laws and regulations that protect health and ensure safety
 (Overall Score: 91.8)

Key Idea 6.1.1. The SPH Laboratory System is actively involved in the review and revision of laws and regulations pertaining to laboratory practice.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include the sharing of rule changes through the SIREN system and local advisory groups although many regulations are federally-mandated.
- Opportunities identified are a need for more communication regarding pending legislation and use of more data to support public health policies.

Key Idea 6.1.2. The SPH Laboratory System encourages and promotes compliance by all laboratories in the system with all laws and regulations pertaining to laboratory practice.

Rated: Optimal Activity

Notes/Parking Lot Issues:

- Strengths include the existence of staff for regular monitoring and communication of internal and external compliance.
- Opportunities identified are a need for more training in water and dairy regulations, analytical testing, select agents and IT and a communication protocol to outline who should be contacted and when during an outbreak.

Key Idea 6.2.1. The SPH Laboratory System has the appropriate resources to provide or support enforcement functions for laws and regulations.

Rated: Optimal Activity

Notes/Parking Lot Issues:

- Strengths include a clearly defined enforcement authority and responsibilities, certified staff exist to ensure compliance and good collaboration with federal agencies.
- Opportunities identified are a need for more communication regarding collaboration with other state agencies and training to ensure understanding of the regulations.

Essential Services #6 Possible Next Steps	Importance
• Provide trainings to ensure better compliance and understanding of requirements • Improve communication and collaboration with system partners and stakeholders	High
	High

Essential Service #7:
Link people to needed personal health services and assure the provision of healthcare when otherwise unavailable
(Overall Score: 67.0)

Key Idea 7.1.1. The SPH Laboratory System identifies laboratory service needs and collaborates to fill gaps.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include the availability of laboratory staff for after-hours services as needed, the communication regarding specimen collection and handling and the improvements that will be made for delivery of newborn screening specimens on Saturdays.

- Opportunities identified are a need for more communication regarding handling specimens on weekends and holidays.

Key Idea 7.1.2. The SPH Laboratory System provides timely and easily accessed quality services across jurisdictions.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include broad expertise available within system to answer questions and collaborate on needed testing services to provide testing throughout the state.
- Opportunities identified are a need for better communication that could be provided by an integrated bi-directional LIMS, a need to review services provided especially in rural areas and a need to expand the State of Illinois Rapid Electronic Notification System (SIREN) to include other system partners.

Essential Services #7 Possible Next Steps	Importance
• Conduct an inventory of laboratory services offered throughout the state, especially in rural communities • Expand the SIREN list to include sanitarians instead of just administrators at the LHD's	High
	Medium

Essential Service #8:

Assure a competent public health and personal health care workforce
(Overall Score: 61.3)

Key Idea 8.1.1. All laboratories within the SPH Laboratory System identify position requirements and qualifications; assess competencies; and evaluate performance for all laboratory workforce categories across the entire scope of testing.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include the existence of position descriptions and cross-training to allow for greater coverage, student interns are a good pipeline for employment and intra-laboratory promotions help employee retention.
- Opportunities identified are a need for updated rules to overcome the challenges posed by the state personnel office (Central Management Services), a need for pre-analytical training and exercises to test competencies.

Key Idea 8.2.1. The SPH Laboratory System maintains an environment to attract and retain highly qualified staff.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include the support of laboratory training programs, the competitive salary (including benefits) of state jobs and alternative work schedules.
- Opportunities identified are challenges with the state hiring process and a need for funding for positions and training.

Key Idea 8.3.1. The SPH Laboratory System works to assure a competent workforce by encouraging and supporting staff development through training, education and mentoring.

Rated: Significant Activity

Notes/Parking Lot Issues:

- Strengths include the use of PT programs for staff competency, the exploration of state licensure for professional laboratorians and the collaborations with academic partners for staff internships and training.
- Opportunities identified are a need for further development of training despite budget shortfalls.

Key Idea 8.3.2. The SPH Laboratory System identifies and addresses current and future workforce shortage issues.

Rated: Moderate Activity

Notes/Parking Lot Issues:

- Strengths include the collection of job and workforce data through private and federal resources, training rotations with local undergraduate Clinical Laboratory Scientist programs and partnerships with schools and colleges to promote science education.
- Opportunities identified are challenges with succession planning due to state policies and funding shortages that delay or not permit hiring.

Essential Services #8 Possible Next Steps	Importance
• Create New Train the Trainer events to address challenges faced by partners in Pre-analytical steps (Collection and Forms) • Guiding interns and students through the CMS hiring process • Outreach to school-age children with an emphasis on Science Technology Engineering and Mathematics (STEM) • Create more Flex schedules to retain current workforce attract new workforce and address the need for expansion of current lab hours	Moderate Low Moderate High

Essential Service #9:
Evaluate effectiveness, accessibility and quality of personal and population-based services
(Overall Score: 33.0)

Key Idea 9.1.1. The SPH Laboratory System range of services, as defined by its mission and purpose, is evaluated on a regular basis.

Rated: Moderate Activity

Notes/Parking Lot Issues:

- Strengths include meeting the needs of stakeholders on a regular basis and having alternate laboratories to perform certain tests.
- Opportunities identified are a need for regular meetings of system partners and development of a SPH Laboratory system's mission statement and input from stakeholders on test menu changes.

Key Idea 9.2.1. The effectiveness of the personal and population-based laboratory services provided throughout the state is regularly evaluated.

Rated: Moderate Activity

Notes/Parking Lot Issues:

- Strengths include the work of the Laboratory Improvement System to assure compliance with federal regulations and quality improvement for all laboratory processes.
- Opportunities identified are a need for an integrated bi-directional LIMS to improve test ordering and reporting and enhanced data collection and to review test turnaround times and reporting.

Key Idea 9.2.2. The availability of personal and population-based laboratory services throughout the state is regularly evaluated.

Rated: Moderate Activity

Notes/Parking Lot Issues:

- Strengths include the existence of some organizational meetings already occurring that could include some evaluation components for the laboratory system and evaluation of laboratory emergency responses by participation in drills and exercises.
- Opportunities identified are evaluating availability of tests in all areas of state, improving communication when test menu changes are implemented.

Key Idea 9.2.3. The quality of personal and population-based laboratory services provided throughout the state is regularly evaluated.

Rated: Moderate Activity

Notes/Parking Lot Issues:

- Strengths include laboratories already being highly regulated to ensure quality through a variety of certifications and inspections.
- Opportunities identified are a need for more communication and collaboration with state and local health professionals regarding testing needs and changes and challenges are associated with the lack of an integrated LIMS (transcription errors, test status tracking and turnaround time).

Essential Services #9 Possible Next Steps	Importance
● Improve LIMS throughout the state. A bi-directional system with electronic test-ordering and reporting is needed ● Update turnaround times in the manual of services to be more accurate ● Implement system for better specimen tracking ● Increase distribution of customer satisfaction surveys throughout the state ● Bring shareholders into discussions about discontinuing or adding tests	High Medium High Medium High

<u>Essential Service #10:</u> Research for insights and innovative solutions to health problems Overall Score: 33.0
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Key Idea 10.1.1. The SPH Laboratory System has adequate capacity to plan research and innovation activities.

Rated: Moderate Activity

Notes/Parking Lot Issues:

- Strengths include collaboration with Illinois National Guard, 5th Civil Support Team, Carbapenem-resistant Enterobacteriaceae (CRE) Program, Whole Genome Sequencing Partners and the hiring of a laboratory scientist to manage research projects and experience in cutting-edge science.
- Opportunities identified are a need for more communication and collaboration with academia and other system partners on research projects and data sharing and a need to collaborate with other state public health systems regarding research endeavors.

Key Idea 10.2.1. The SPH Laboratory System promotes research and innovative solutions.

Rated: Moderate Activity

Notes/Parking Lot Issues:

- Strengths include the existence of an informal network of system partners to discuss ideas and incorporate new technologies.
- Opportunities identified are a need for more communication and collaboration with system partners (possibly using a more formal structure).

Essential Services #10 Possible Next Steps	Rating
- Encourage collaboration for research with academia in the laboratory - Improve access to data and streamline process to request data sharing	High Moderate

6. PERFORMANCE SUMMARY GRID

Essential Public Health Services										
	1	2	3	4	5	6	7	8	9	10
Optimal Activity						91.8				
Significant Activity	52.8	67.0	67.0				67.0	61.3		
Moderate Activity				44.3	44.3				33.0	33.0
Minimal Activity										
No Activity										

Essential Service #1: Monitor Health Status

1.1 Monitoring Community Health Status 55.7

1.2 Surveillance Information Systems 50.0

Significant Activity Overall Score – 52.8

Essential Service #2: Diagnose and Investigate

.1 Appropriate & Effective Testing 67.0

Significant Activity Overall Score – 67.0

Essential Service #3: Inform, Educate and Empower

3.1 Outreach to Partners 67.0

3.2 Empower Partners 67.0

Significant Activity Overall Score – 67.0

Essential Service #4: Mobilize Partnership s

4.1 Partnership Development 33.0

4.2 Communication 67.0

4.3 Resources 33.0

Moderate Activity Overall Score – 44.3

Essential Service #5: Develop Policies and Plans

5.1 Partnerships in Public Health Planning	67.0
5.2 Role in Laboratory Policy Making	33.0
5.3 Dissemination and Evaluation	33.0

Moderate Activity	Overall Score – 44.3
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Essential Service #6: Enforce Laws and Regulations

6.1 Laws and Regulations	83.5
6.2 Enforcement of Law & Regulations	100.0

Optimal Activity	Overall Score – 91.8
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Essential Service #7: Link People to Services

7.1 Provision of Lab Services	67.0
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Significant Activity	Overall Score – 67.0
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Essential Service #8: Competent Workforce

8.1 Defined Scope of Work & Practice	67.0
8.2 Recruitment & Retention of Staff	67.0
8.3 Assuring a Competent Workforce	50.0

Significant Activity	Overall Score – 61.3
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Essential Service #9: Evaluation of Effectiveness

9.1 System Mission and Purpose	33.0
9.2 System Effectiveness & Accessibility	33.0

Moderate Activity	Overall Score – 33.0
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Essential Service #10: Research

10.1 Planning & Financing Research	33.0
10.2 Implementation & Evaluation	33.0

Moderate Activity	Overall Score – 33.0
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7. RECOMMENDATIONS

Participants in the Illinois 2017 L-SIP reassessment identified numerous opportunities for SPH laboratory system improvement. The highest priority opportunities, as determined at the assessment, include: improve communication within the PHL System to build and strengthen partnerships and improve services and response, implement or improve electronic laboratory systems at the IDPH DOL and increase training for laboratory partners. The following are specific recommendations that correspond to these high priority opportunities:

- Improve 2-way communication from laboratory to stakeholders; may involve development of stakeholder groups. Allow stakeholders to contribute to decisions around test menu offerings and decision making process.
- Increase training for other laboratory partners; Hold trainings and/or tutorials for other laboratory partners (ex: hospital laboratories)
- Need for an updated universal or cohesive LIMS system

1. Improve communication within the laboratory system

- Promote more frequent communication among members of the PHL System; update listings of system partner contacts and services.
- Involve system partners in decisions regarding test changes, implementation of new tests and implementation of electronic laboratory systems.
- Develop stakeholder groups to meet periodically around specific subject areas, including emergency response, workforce development, environmental testing and response and others as needed.

2. Implement or improve electronic laboratory systems

- Build capacity for two-way flow of electronic information with the IDPH DOL to allow for an integrated system with electronic test ordering and result reporting. This will ensure maximum efficiency and reduce mistakes that can occur with manual data entry.
- Work with system partners to achieve funding needed to implement an integrated LIMS.

3. Increase training for laboratory partners

- Evaluate and clearly define the training needs of the laboratory system workforce, including public and private laboratory and non-laboratory system partners.
- Develop and present training content as workshops, webinars and on-line training. Evaluate effectiveness of each training event.
- Ensure that the statewide laboratory system promotes the needs of the system and of the IDPH DOL.

8. NEXT STEPS

The Next Steps suggested during the 2017 L-SIP reassessment are currently being refined to improve laboratory system communication, electronic systems and training. The following is a brief outline of Next Steps that are currently under review:

1. Communication

- The IDPH DOL will update contact lists for key laboratory partners and stakeholders. The contact list for SIREN notifications will be expanded to include front-line partners.
- IDPH will meet with stakeholders on a regular basis to include stakeholders and key partners discussing decisions that affect the PHL system in Illinois. Members of the stakeholder groups will be participants in future L-SIP assessments and others who are identified as key partners. These groups will work to continue to strengthen partnerships to support the PHL System and will facilitate communication among PHL System partners and stakeholders.
- IDPH will seek opportunities to more effectively communicate and collaborate with academia and other system partners on research projects and data sharing and investigate collaborations with other state public health systems regarding research endeavors.

2. Electronic Systems

- The IDPH DOL will continue use the current LIMS until a new or updated system can be purchased.
- The IDPH DOL will issue a request for proposal for a new LIMS with an implementation goal of 2019. Electronic test ordering will likely be a web-based system that allows all clients of the IDPH DOL to initiate test ordering without a paper requisition. Electronic ordering will also prepopulate the IDPH DOL LIMS with patient and test information which will improve laboratory efficiency and reduce mistakes.

3. Training

- The IDPH DOL will investigate and identify more educational workshops and webinars for stakeholders and partners in the public health laboratory system. Topics under consideration are a need for more training in sentinel laboratory procedures, packaging and shipping of clinical specimens, water and dairy regulations and analytical testing.
- Presentation of training will begin following the planning and development stages, with the goal of starting by January 2018.

Appendix A

Essential Public Health Services and Core Functions and Capabilities of State Public Health Laboratories

Ten Essential Public Health Services

1. Monitor Health Status to Identify Community Health Problems
2. Diagnose and Investigate Health Problems and Health Hazards in the Community
3. Inform, Educate and Empower People About Health Issues
4. Mobilize Community Partnerships to Identify and Solve Health Problems
5. Develop Policies and Plans that Support Individual and Community Health Efforts
6. Enforce Laws and Regulations that Protect Health and Ensure Safety
7. Link People to Needed Personal Health Services and Assure the Provision of Healthcare When Otherwise Unavailable
8. Assure a Competent Public Health and Personal Health Care Workforce
9. Evaluate Effectiveness, Accessibility and Quality of Personal and Population-Based Services
10. Research for Insights and Innovative Solutions to Health Problems

Core Functions and Capabilities of State Public Health Laboratories

1. Disease Prevention, Control and Surveillance
2. Integrated Data Management
3. Reference and Specialized Testing
4. Environmental Health and Protection
5. Food Safety
6. Laboratory Improvement and Regulation
7. Policy Development
8. Emergency Response
9. Public Health Related Research
10. Training and Education
11. Partnerships and Communication

Appendix B

List of Participants

Yellow Group – Essential Services 1, 3 and 5

(Facilitator: Lori Saathoff-Huber; Theme Takers: Dawn Nims and Heather Reid)

Melaney Arnold	Public Information Officer, Illinois Department of Public Health
Jean Becker	Women's Health – School-based Health, Illinois Department of Public Health
Danny Brikshavana	Infectious Disease/STD Section, Illinois Department of Public Health
Jamie Gates	HIV/AIDS Section, Counseling and Testing, Illinois Department of Public Health
Shannon Harrison	Health Protection, Newborn Screening, Illinois Department of Public Health
Wil Hayes	Environmental Health, Peoria City/County Health Department
Sarah Kemble	Communicable Disease, Chicago Department of Public Health
Julie Kerestes	LaSalle County Health Department
Jessica McAnelly	Food, Drugs and Dairies, Illinois Department of Public Health
Ken McCann	Environmental Health, Illinois Department of Public Health
Abdul Muhanna	Stroger Hospital/Cook County Health Department
Mohammad Nasir	Lab Manager, Chicago Lab, Illinois Department of Public Health
Arlene Obias	Laboratory, Northwestern Memorial Hospital
Massimo Pacilli	Communicable Disease, Chicago Department of Public Health
Phillip Prado	Howard Brown Health
Sharon Sillitti	Disease Prevention, Kane County Health Department
Awais Vaid	Champaign/Urbana Public Health Department

Blue Group – Essential Services 4, 6 and 8

(Facilitator: Anne Weber; Theme Takers: Steve Hopkins and Jenna Woker)

Tom Anderson	Environmental Health, McLean County Health Department
Erin Boester	Madison County Health Department
Matt Charles	Chief, Division of Labs, Illinois Department of Public Health
Peggy Daudell	Reference Lab, University of Illinois at Chicago
Kevin Dixon	Environmental Health, DuPage County Health Department
Irene Dusich	Microbiology Lab, Evanston Hospital
Kevin Engelton	Civil Support Team, Illinois National Guard
Anu Meka	Preparedness and Response, Illinois Department of Public Health
Joe Mitchell	Environmental Health, Champaign Region, Illinois Department of Public Health
Cristian Moreno	Federal Bureau of Investigation, Chicago Office
Claudia Nash	Health Protection, Newborn Screening, Illinois Department of Public Health
Christina Nulty	Illinois State University
Harold Osborn	Illinois Emergency Management Agency
Carey Panier	Environmental Health, Peoria City/County Health Department
Chad Parker	Laboratory, Illinois Department of Natural Resources
Shari Rowe	Inspector, United States Postal Service
Lance Wilson	Illinois Emergency Management Agency

Green Group – Essential Services 7, 9 and 10

(Facilitator: Karen Breckenridge; Theme Takers: Nick DeSuno and Heather Witmer)

Richard Box	Federal Bureau of Investigation Springfield/Carbondale Office
April Caulk	Food, Drugs and Dairies, Illinois Department of Public Health
Leslie Chapman	Lab Manager, Carbondale Lab, Illinois Department of Public Health
Jill Davis	McKinley Health Center, University of Illinois at Champaign/Urbana
Judy Kauerauf	Infectious Disease, Health Protection, Illinois Department of Public Health
Barb Kobernat	Administrator, Winnebago County Health Department
Molly Lamb	Deputy Director, Office of Health Protection, Illinois Department of Public Health
Conny Moody	Health Protection, Newborn Screening, Illinois Department of Public Health
Tamera Nelson	Communicable Disease, Knox County Health Department
Uche Onwuta	Kane County Health Department
Amanda Pruitt	Madison County Health Department
Violeta Rekasius	Loyola University Medical Center
Rachella Thompson-Brown	Champaign/Urbana Public Health Department
Donald Torry	Southern Illinois University, School of Medicine
Tanya Triplitt	QA Coordinator, Quest Diagnostics
Ray Weidenburner	Lab Manager, Springfield Lab, Illinois Department of Public Health
Tom Weiss	Lab Director, Illinois Environmental Protection Agency
Christopher Young	Civil Support Team, Illinois National Guard

Other Attendees

Sophia AlQuraishi	Supervisor, Laboratory Improvement Section, IDPH Chicago Lab
Robert Cox	Supervisor, Laboratory Improvement Section, IDPH Springfield Lab
Richard Zimmerman	Lab Director, Division of Laboratories, Illinois Department of Public Health

Appendix C

ACRONYM KEY

AAP: American Academy of Pediatrics
APHL: Association of Public Health Laboratories
BMI: Body Mass Index
BRFSS: Behavioral Risk Factor Surveillance System
CAP: College of American Pathologists
CDC: Centers for Disease Control
CLIA: Clinical Laboratory Improvement Amendments (a federal regulating entity for clinical laboratories currently under CMS: Centers for Medicare and Medicaid Services)
CMS: Central Management Service of Illinois.
COC: Chain of Command
COOP: Continuity Of Operations
CRE: Carbapenem-resistant Enterobacteriaceae or Cyclic AMP Response Element (**genetics**)
CST: Civil Support Team
DOL: Division of Laboratories
eHARS: Enhanced HIV/AIDS Reporting System
FDA: Food and Drug Administration
HAN: CDCs Health Alert Network
HIV/AIDS: Human immunodeficiency virus; Acquired immunodeficiency syndrome
IDPH: Illinois Department of Public Health
IDPHL: Illinois Department of Public Health Laboratories
IGA: Inter Agency Agreement
INEDSS: Illinois National Electronic Disease Surveillance System
ISO: International Organization for Standardization
LHD: Local Health Departments
LIMS: Laboratory Information Management System
L-SIP: Laboratory System Improvement Program
NBS: Newborn Screening
NPHPSP: National Public Health Performance Standards
SPH: State Public Health
SIREN: State of Illinois Rapid Electronic Notification