

Kentucky Department
for Public Health

2025 Kentucky Laboratory System Improvement Program (L-SIP) Assessment Report

Our mission is to improve the health
and safety of people in Kentucky through
prevention, promotion and protection.



Kentucky Public Health
Prevent. Promote. Protect.

Revised:

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DLS Division Director, Matthew Johnson, giving closing remarks.

Executive Summary

This report captures the culminating execution, planning, results, and next steps of the first Laboratory System Improvement Program (L-SIP) Assessment hosted by the Kentucky Department for Public Health (KDPH) Division of Laboratory Services (DLS). The L-SIP assessment took place on Thursday, March 6, 2025, at Kentucky State University's Harold R. Benson Research and Demonstration Farm in Frankfort, Kentucky. There were 55 public health partners in attendance, alongside 11 laboratory staff, 3 external state public health laboratory facilitators, and 1 Association of Public Health Laboratories (APHL) representative.

Partner organizations including, but not limited to, the following were extended an invitation: local health departments, law enforcement, local public health laboratories, medical examiners, newborn screening professionals, transportation, academia, healthcare, fire and EMS, media and communications, veterinary, clinical laboratories, hospitals, environmental laboratories, corrections, couriers, and policy makers.

Through the use of an L-SIP Toolkit designed by APHL, facilitated and focused discussions were conducted to gather feedback from state public health laboratory system partners in attendance. Although the L-SIP Assessment was conducted and orchestrated by DLS, the state public health laboratory and its staff represent only a fraction of the broader state public health laboratory system. A central focus of the L-SIP process is the evaluation and enhancement of the entire statewide laboratory system, rather than just the state public health laboratory. It emphasizes the importance of thinking beyond organizational silos to promote a comprehensive, system-wide perspective.

The Kentucky (KY) L-SIP Assessment was conducted to identify gaps in the KY laboratory system, improve coordination efforts, identify any duplication of services, and discuss the need for new and/or additional services. Using a scoring model created by APHL, the following areas and themes were identified: 1) KY Public Health Laboratory System Effectiveness, 2) Academic Partnership Improvements, 3) Sustainable Funding, 4) Communication, and 5) DLS Specific Improvements. A reassessment L-SIP process will take place in approximately 5-7 years.

“The mission of the KDPH is to improve the health and safety of people in Kentucky through prevention, promotion, and protection.”

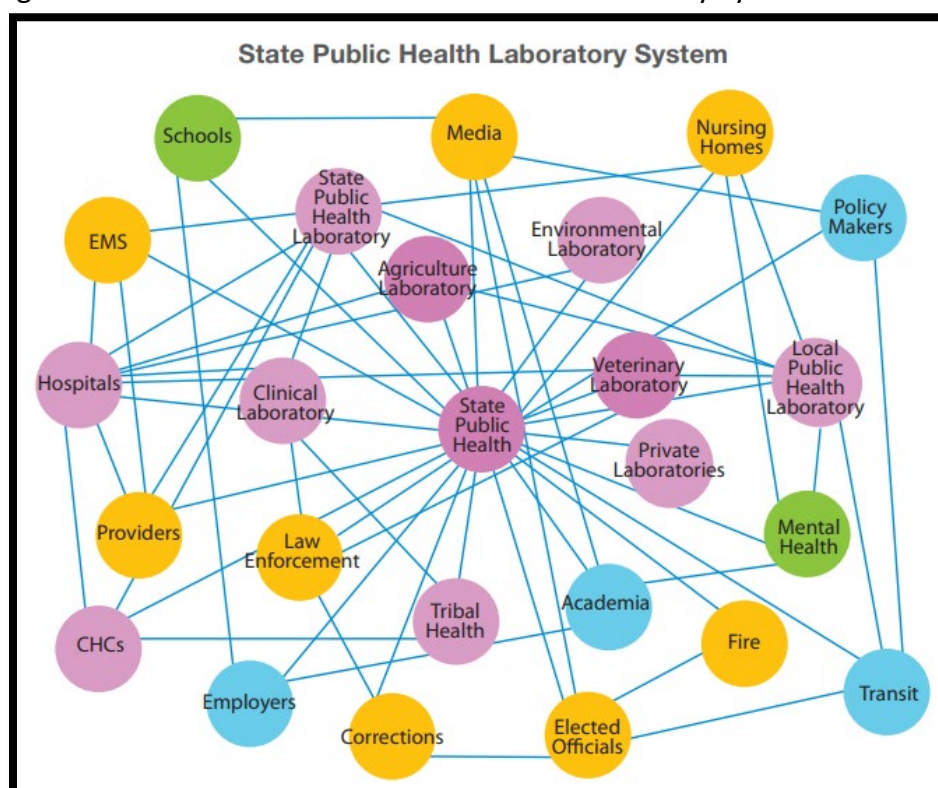
KDPH Vision: Healthier people, healthier communities

Introduction

The L-SIP process draws from key components and is inspired by the Centers for Disease Control and Prevention (CDC) and colleague's National Public Health Performance Standards Program (NPHPSP).¹ The NPHPSP was created with the vision to identify, measure, and improve organizational capacities of local and state public health institutions. The L-SIP, as well as the NPHPSP, is guided by the 10 Essential Services of Public Health.¹ First implemented in 2007 and recently revised in 2022; the L-SIP quality improvement initiative created by APHL works to advance public health laboratory systems in continuing to work towards "gold standard" laboratory practices.

According to APHL, there are five framing concepts of an L-SIP Assessment: an assessment centering around the 10 Essential Services of Public Health, incorporation of the 11 Core Functions of a Public Health Laboratory, focus on overall state or local public health laboratory systems, measurement of optimal performance levels rather than minimally accepted quality improvement standards, and a commitment to ongoing improvement based on the results from the assessment.¹ A state public health laboratory system is defined by and includes not only the laboratory itself, but the intertwined internal, and external, organizations that benefit from and contribute to the services provided by the state public health laboratory to excel the health and well-being of the population.³

Figure 1. Organizational Chart of a State Public Health Laboratory System¹



The 10 Essential Services of Public Health ²

1. Assess and monitor population health status, factors that influence health, and community needs and assets.
2. Investigate, diagnose and address health problems and hazards affecting the population.
3. Communicate effectively to inform and educate people about health, factors that influence it, and how to improve it.
4. Strengthen, support and mobilize communities and partnerships to improve health.
5. Create, champion and implement policies, plans, laws that impact health.
6. Utilize legal and regulatory actions designed to improve and protect the public's health.
7. Assure an effective system that enables equitable access to the individual services and care needed to be healthy.
8. Build and support a skilled public health workforce.
9. Improve and innovate public health functions through ongoing evaluation, research and continuous quality improvement.
10. Build and maintain a strong organizational infrastructure for public health.

The 11 Core Functions of a Public Health Laboratory ²

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. Public Health Preparedness and Response
9. Public Health Related Research
10. Training and Education
11. Partnership and Communication

Pre-Assessment Planning

To assist in the undertaking and workload of the L-SIP Assessment, the DLS director's office elected to hire a public health laboratory fellow from the joint fellowship collaboration initiative between APHL and the CDC. This fellow served as the L-SIP Coordinator and was supervised and mentored by the DLS Compliance Administrator within the Quality, Compliance, and Safety (QCS) Branch.

The L-SIP Coordinator and DLS planning team began the KY L-SIP planning process by meeting with the APHL Quality Systems Manager, Tina Su. In addition to these initial planning meetings alongside APHL, members of the Glen F. Baker (formerly Arkansas) Public Health Laboratory shared their knowledge and experiences from their L-SIP, held in April of 2024. The fellow and the DLS Compliance Administrator also participated in facilitation and observation of the September 2024 L-SIP conducted by the Arizona State Public Health Laboratory. Afterwards, the L-SIP Coordinator and DLS planning team developed a plan and stepwise process for Kentucky's L-SIP assessment based upon the collective information, guidance, and experience they gleaned from these meetings and in-person L-SIP experience.

The organizational steps for the KY L-SIP closely followed and were consistent with the recommended outline within the L-SIP User's Guide.¹ The first recommended items to complete were selection of a date for the assessment and a host site. Due to the scheduling of other public health events and the chance of adverse weather early in the year, Thursday, March 6, 2025, was selected as the best option. A local meeting venue, the Kentucky State University's Harold R. Benson Research and Demonstration Farm, was chosen as the host site and available to DLS free of charge as of July 2024 when the arrangements were proposed. Due to staffing changes and contract negotiations, this site now requires payment for use, however, DLS was able to maintain the original contract agreement in terms of no site fee for the L-SIP event.

One of the next priorities was determining an attendee list of members of the KY public health laboratory system. The L-SIP planning team and DLS leadership began with collaborative conversations on determination of key partners and who could offer valuable insight and experiences for positive change. The L-SIP Coordinator requested the DLS leadership team to submit names of contacts with whom they worked most closely, and often outside of DLS. From there, the list of approximately 145 names was narrowed by the L-SIP planning team and the DLS Directors to 120 individuals who would receive an invitation. The remainder of potential attendees were placed on a list for alternative follow-up options. Initial invitations were sent out between December 4 and December 5, 2024. Respondents were asked to confirm their attendance via an online RSVP form, and, if they wished to decline, they were asked to offer the name of a colleague to attend in their place to represent their organization. Follow-up via emails and phone calls took place from approximately December 16, 2024, to January 15, 2025, with the RSVP request date concluding on February 7, 2025. Confirmed attendees were grouped into categories of roles and responsibilities within their differing organizations and

pre-assigned into select breakout groups, consistent with adding the most valuable contribution based upon their roles, services, and responsibilities in the system. The confirmed attendees were sent a calendar invitation with extensive details on the event, as well as a thirty-day and one-week reminder with preparation materials attached, such as the toolkit, agenda, state public health laboratory system fact sheet, and L-SIP fact sheet.

The funding provided by APHL for the KY L-SIP endeavors consisted of \$5,000. Due to the change in federal administration in early 2025, alternative payment mechanisms were considered in response to inconsistencies in the receipt of federal funding sponsorship from APHL. However, these alternatives were ultimately not implemented, as the L-SIP was completed successfully and in accordance with its original timeline. Once attendee numbers were nearing our minimum goal of 15 people per group, the L-SIP Coordinator began contacting potential partnership vendors to purchase supplies for the L-SIP assessment. Through a state contract partnership, DLS used Ad-Venture promotions based in Lexington, KY to design and purchase items for participants, including tote bags, colored folders corresponding to the pre-assigned groups, fidget spinners, travel mugs, notebooks and pens, and lanyards. Items were combined and given to each attendee as a KY Public Health Swag Bag to personally thank each participant for their dedicated time and valuable feedback.

Boxed lunch meals within state per diem rates were purchased and provided by a Frankfort, KY local business and catering company, 3 Peas in a Pod Catering. “Boxed” lunches were selected for ease of distribution, disposal, and marking to accommodate those with dietary restrictions and precautionary allergies. Other purchases included stationery from Staples, paper materials and signage from KY Design and Printing, and numerous items from Sam’s Club including but not limited to breakfast items, pre-packaged snacks, beverages, and cutlery and tableware. APHL provided toolkits for the assessment and voting cards.

To reduce bias in the assessment discussions, three out-of-state facilitators were selected to lead the multiple breakout sessions. These facilitators were from the Tennessee (TN) Division of Laboratory Services, Arizona (AZ) State Public Health Laboratory, and Glen F. Baker (formerly Arkansas) Public Health Laboratory. Six cross-sectional internal Theme Takers from DLS leadership were selected, including the Assistant Director, QCS Branch Manager, Environmental Microbiology Supervisor, Preparedness Supervisor, Newborn Screening Molecular Chemistry Supervisor, and Microbiology Branch Manager. In addition to the Theme Takers, other support DLS staff in attendance included the Compliance Administrator (L-SIP mentor), IT Project Manager, Division Director, and Medical Director. DLS Theme Takers were included in voting during discussions to not only represent DLS within the system, but also as members of the system themselves.

In the final three weeks leading up to the assessment, Theme Takers and facilitators attended a training provided by APHL on the assessment process, which was offered on three alternative dates. On the day prior to the assessment, the L-SIP Coordinator and Compliance Administrator purchased items from Sam's Club and met afterwards with other DLS staff at the KSU Farm to prepare and set up the site. The furniture and modular units were meticulously placed and arranged, and efficient flow designs for various movements was implemented. DLS leadership voluntarily assisted with transportation to and from airports, hotels, and other sites for some of the participants, including the facilitators. This allowed opportunities for socialization, networking, and strengthening of partnerships.



DLS L-SIP Planning Team, DLS Theme Takers, APHL Representative, and L-SIP Facilitators.

Assessment Day Process

On Thursday, March 6, 2025, the KY L-SIP assessment was conducted and hosted at Kentucky State University's Harold R. Benson Research and Demonstration Farm in Frankfort, Kentucky. Seventy (70) attendees and staff arrived approximately 30-45 minutes before the program started and were able to network and enjoy breakfast and refreshments. At sign in, attendees were gifted a KY Public Health Swag Bag that also included the APHL Toolkit, their unique name tag, and the APHL Voting Cards that were needed during the assessment.

Opening remarks were shared by the APHL fellow and DLS medical director, as well as a generous message of encouragement and thanks from Dr. Steven Stack, the KDPH Commissioner. Tina Su of APHL led an overview and introduction of the L-SIP process and goals, followed by a large group discussion of Essential Service 2.



L-SIP Welcome Sign.



Welcome Remarks from Dr. Steven Stack.

Using guidance from the APHL L-SIP User's Guide, public health partners were considerably assigned into breakout groups reflecting areas they could best speak and relate to in providing feedback. Facilitators were able to pick what group to lead on a first come, first served basis. DLS Theme Takers were pre-assigned to the groups they would assist, based on their knowledge and areas of expertise at the laboratory.

Figure 2 shows the breakdown of Essential Services breakout groups. The Plenary Session to discuss Essential Service 2 and its Key Ideas allowed participants to understand the discussion and voting process before entering the breakout group discussions. There were approximately fifteen (15) to twenty (20) partners in each breakout group.

Figure 2. Essential Service Breakout Group Assignments

Red Group	• Essential Service 1: Assess and monitor population health status, factors that influence health, and community needs and assets. • Essential Service 3: Communicate effectively to inform and educate people about health, factors that influence it, and how to improve it. • Essential Service 7: Assure an effective system that enables equitable access to the individual services and care needed to be healthy.
Blue Group	• Essential Service 5: Create, champion and implement policies, plans, laws that impact health. • Essential Service 9: Improve and innovate public health functions through ongoing evaluation, research and continuous quality improvement. • Essential Service 10: Build and maintain a strong organizational infrastructure for public health.
Green Group	• Essential Service 4: Strengthen, support and mobilize communities and partnerships to improve health. • Essential Service 6: Utilize legal and regulatory actions designed to improve and protect the public's health. • Essential Service 8: Build and support a skilled public health workforce.

Following the Plenary Session, breakout groups took place from 10:30-11:30am, 12:00-1:00pm, and 1:15-2:15pm with breaks and lunch provided in between. An hour was allotted to discuss each of the three assigned Essential Services per group. The agenda can be found in **Appendix A**. To conclude the facilitated discussion of each Essential Service, voting was conducted for each Essential Services' Key Ideas using the scoring system in **Figure 3**. Results from participant voting can be found in **Figure 4**.

Figure 3. APHL L-SIP Scoring Rubric ²

Score	Components
Optimal	Greater than 75% 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.
Moderate	Greater than 25%, but no more than 50%, 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.
None	0% or absolutely none of the performance described is met within the public health laboratory system.

At the conclusion of the breakout sessions, a general summary and evaluation took place. DLS Theme Takers presented summaries of each Key Idea, approximately two minutes each, to share perspective with all in attendance. Participants were then invited to evaluate, via survey, the L-SIP process, and invited to sign up for L-SIP focus groups to implement the identified changes. Twenty-one of the fifty-five group participants signed up to get further information on focus group work in the future. The main takeaways, next steps, evaluation results, and identified action items of the discussions can be found in the remainder of this report.



Voting During Plenary Session.



Blue Group Discussion Session.

Results

Figure 4. Results by Essential Service and Key Idea

Essential Services		Optimal	Significant	Moderate	Minimal	None
1	Key Idea 1.1.1	✓	✓			
	Key Idea 1.1.2	✓				
	Key Idea 1.1.3	✓				
2	Key Idea 2.1.1	✓				
	Key Idea 2.1.2		✓			
3	Key Idea 3.1.1	✓				
	Key Idea 3.1.2	✓				
4	Key Idea 4.1.1		✓			
	Key Idea 4.2.1		✓			
	Key Idea 4.3.1			✓		
5	Key Idea 5.1.1		✓			
6	Key Idea 6.1.1		✓			
	Key Idea 6.1.2		✓			
7	Key Idea 7.1.1	✓				
	Key Idea 7.1.2	✓				
8	Key Idea 8.1.1			✓		
	Key Idea 8.2.1			✓		
	Key Idea 8.2.2			✓		
9	Key Idea 9.1.1	✓	✓			
	Key Idea 9.2.1		✓			
	Key Idea 9.2.2		✓			
10	Key Idea 10.1.1	✓				
	Key Idea 10.1.2	✓				
	Key Idea 10.1.3		✓			

Essential Service 1: Monitor Health

Assess and monitor population health status, factors that influence health, and community needs and assets.

Key Idea 1.1.1

The system identifies infectious disease and environmental sentinel events, monitors trends, and participates in state and federal surveillance systems.

Score: Significant

Main Takeaways

- There is strength in communication shared from DLS, especially in providing clear results, but communication gaps throughout the system still remain, such as the use of the “backdoor” system to bypass the approved system of communication. Although bypassing can assist in expediting processes, it can lead to inefficiencies. Federal communication and partnerships aid in communication on a larger scale.
- There is positive system collaboration between partners regarding tasks such as food outbreak coordination, informatics for infectious disease, TB communication, and proper sample collection. This includes successful collaboration between clinicians and other system partners, especially in scenarios surrounding infectious diseases.
- Broader testing is needed to capture a wider range of conditions, such as unidentified novel organisms or Norovirus outbreaks. Additionally, free testing options should be considered for more diseases, utilizing a similar approach that was taken for Norovirus.
- Laboratory testing via DLS is highly reliable, particularly for infectious diseases, and there is interoperability within the system with other partner agencies. The challenges that lie beyond the testing performed at DLS include improving outreach and consistency in resulting.
- The lack of funding is a significant challenge that impacts resource availability for testing, diagnosis of outbreaks, and outreach practices.

Key Idea 1.1.2

The system monitors congenital, inherited and metabolic diseases of newborns and participates in state and federal surveillance systems.

Score: Optimal

Main Takeaways

- The state newborn screening courier system, which serves more than 58 facilities throughout Kentucky, has significantly improved sample collection and transport efficiency. Partners who are not affiliated with the newborn screening program are encouraged and able to use the courier system for specimen transport if their county does not have a designated courier site. Communication and accessibility surrounding the courier system

that is paid for by agency funds will increase knowledge and usage of accessibility throughout the system. Courier optimization improvements in scenarios such as adverse weather events and birthing hospitals with a larger patient population need logistical improvements and coordination.

- Turnaround time improvements and improved coordination have increased newborn screening efficiency in result reporting, benefiting the approximately 52,000 newborns receiving screening. The 59 disorders tested for ensure comprehensive screening and is in accordance with the recommended uniform screening panel (RUSP).
- Workforce vacancies, especially specialized newborn screening clinical staff, such as genetic specialists, are difficult to hire, potentially impacting patient care. Due to these workforce shortages and vacancies, more partners, such as pediatricians, may need to become educated and involved in surveillance and screening.
- The newborn screening advisory committee of key partners ensures ongoing program coordination throughout the system. The newborn screening team is generally enthusiastic and passionate about their work. An amended work schedule allows screening 6 days a week, further improving result reporting and benefits to newborns.

Key Idea 1.1.3

The system has a secure, accountable and integrated information management system for data storage, analysis retrieval, reporting and exchange. Partners collaborate to strengthen electronic surveillance systems.

Score: Optimal

Main Takeaways

- Technology, data systems, and management improvements have been beneficial to the system. Portals exist for different sub-groups in the system, such as newborn screening, which increases data availability and results throughout the system. Information is readily available and up to date, lab reports are readily available, and DLS has made significant progress with adding LOINC and SNOMED codes to test results for standardization and improved accuracy of reporting to partner systems.
- Outreach and coordination efforts are improving, but still do not meet the system's needs. Some reports (newborn screening) are still mailed, and updates may be necessary to facilitate real-time reporting. Funding limitations impact these aspects within the system, and although there is a clear understanding of what can be improved, the lack of monetary resources remains an ongoing issue.
- Data integration and exchange issues remain, as some information is siloed, preventing beneficial data communication. Inefficiencies still exist, as bidirectional data exchanges are not fully implemented. A portal for additional data access availability may be beneficial.



Essential Service 2: Investigate, Diagnose, and Address Health Problems and Hazards (Plenary Session)

Investigate, diagnose, and address health problems and health hazards affecting the population.

Key Idea 2.1.1

The 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.

Score: Optimal

Main Takeaways

- Testing and laboratory capabilities within the system are exemplary. Although not all testing is done in-house at DLS, strong partnerships exist between reference laboratories, such as the New York State Public Health Laboratory Wadsworth Center, Mayo Clinic, the CDC, and others that allow for test needs to be met and completed with efficiency. DLS staff are highly qualified, versatile, and go above and beyond to assist system partners when able. New systems are put in place to meet emerging health needs. Participation with larger organizations such as APHL and the SEC Consortium aids in partnership collaboration outside of the KY system.
- Although strong communication, coordination, and responsiveness exist, there is room for improvement. The Lab-Epi Connector position and the Food Safety Coordinator have significantly improved communication and coordination. DLS works well with clinical partners and is responsive even after hours in emergencies. Inclusion of DLS and necessary leadership earlier in investigations, outbreaks, and emergency responses will aid in planning and the timeliness of addressing said events.
- Strong relationships exist with emergency partners, such as the FBI and law enforcement. DLS and the University of Kentucky Medical Center have Biological Safety Level 3 (BSL-3) facilities for high containment and select agent testing. DLS maintains strict adherence to regulatory bodies and has compliance mechanisms in place. The system has increased its preparation for emerging and future disease outbreaks, especially with diversified testing platforms within DLS, and the new DLS laboratory building will aid in preparedness.
- Regular training opportunities are available, such as packaging and shipping, but additional training on optimal specimen collection, handling, and transport is always desired. There is a need for broader outreach to improve engagement with DLS between system partners, as well as collaboration clarity between external labs and DLS. Creation of more structured and engaging trainings and webinars for partners will aid in communication and close existing knowledge gaps (including Outreach utilization).
- Advocating for continued funding will aid in maintaining services created with the COVID-19 supplemental funding program. Addressing funding inequities on a larger scale will lead to



improved and secure services offered, as well as expanded capacity in providing health services.

Key Idea 2.1.2

The system has the capacity and authority in place to rapidly respond to public health events.

Score: Significant

Main Takeaways

- DLS plays an integral role in rapid responses necessary to address emergencies impacting public health. Informatics systems for the laboratory have vastly improved, and DLS consistently meets COOP and preparedness measures. Strong relationships exist with system partners involved in emergency response, such as food safety, environmental response, and the 41st Civil Support Team, which allows for the Rapid Response Team to operate as optimally as possible.
- There are high levels of performance in the handling of high containment cases, such as *Francisella tularensis* and *Brucella*, and DLS is always part of critical planning, such as in Ebola and COOP efforts. Gaps exist in emergency communications between partners, especially during initial notification. There are discrepancies in emergency notifications and the initiation and direction of emergency communications during these types of responses. Coordination across system agencies needs enhancements to improve response efficiency system-wide.
- Pop-up and temporary laboratories revealed system inefficiencies, such as handwritten requisition forms and a lack of standardized laboratory procedures. Surge capacity and related partnerships need to be enhanced and maintained to ensure continuous readiness for emergency responses and that all appropriate protocols are understood by all involved partners.
- Logistical and communication channels need to be more inclusive of partners that extend beyond the department level, such as local health departments and regional epidemiologists. KDPH leadership needs to better align goals and outcomes across all departments where partnerships exist, taking collaborations into account.

Essential Service 3: Inform and Educate People

Communicate effectively to inform and educate people about health, factors that influence it, and how to improve it.

Key Idea 3.1.1

The system develops and disseminates accurate and consistent information to community partners about relevant health issues associated with laboratory services.

Score: Optimal

Main Takeaways

- DLS has extensive and strong communication practices with system partners, such as local health departments and epidemiologists, and is extremely responsive to needs and inquiries from system partners.
- Related educational and outreach efforts have evidence of success, but expanding is necessary. Some current measures in place include newborn screening info in plain language, language translation services for non-English speakers for written documents available to assist within 48 hours, environmental training for epidemiologists and environmentalists, DEAL (Discover Explore Apply Learn) Days with university partners, and “Public Health in the Commonwealth” education and outreach efforts.
- There is limited public awareness of DLS’s services and role as Kentucky’s state public health laboratory. A more dedicated platform may be needed to highlight DLS and emphasize its importance to partners and the community. Additionally, there is a continuous lack of awareness from communities on the role and general understanding of the public health field.
- There are arguments surrounding the efforts to share public health information via social media platforms. Messaging is intentional, but there is debate on how much information promotion is necessary from the system when it is available on a website. When it comes to DLS, this debate is ongoing; compared to other organizations in the system, DLS is seen to serve during needed initiatives rather than being a public-facing entity.

Key Idea 3.1.2

The system creates and provides educational opportunities to community partners.

Score: Optimal

Main Takeaways

- The established and active internship program through KDPH allows for paid student engagement and learning experiences between local university students and partners within the system. There is an argument for strong academic partnerships that continue to improve, but a lack of research performance and involvement remains, which may be limiting contributions to the field.



- Institutional contracts exist, such as the one between the University of Kentucky and DLS for the medical director role or rabies testing collaboration between DLS and Murray State University's Breathitt Veterinary Laboratory or University of Kentucky Veterinary Diagnostic Laboratory, that allow for heightened operational workflow and partnerships. Additionally, yearly tours with entities such as university students and local health departments at DLS strengthen not only relationships but laboratory knowledge for system partners.
- Public awareness efforts and media relations coordinate on the dissemination and approval of public-facing information. Approval processes are in place to ensure that accurate and timely public health information is shared. Although the approval process has been expedited in recent years, some divisions within KDPH feel delays remain.
- Policy and legislative limitations exist, such as DLS not directly communicating with legislators and communication being routed through cabinet leadership. Unlike other sections, such as the KY HIV Program, DLS does not have specific reporting requirements. However, DLS data is reported to system partners per state regulations and incorporated into other departmental reports throughout the system.

Parking Lot Issues/Issues to Address in the Future: Push notifications in Outreach web portal for patient results.

Essential Service 4: Strengthen, Support, and Mobilize Communities and Partnerships

Strengthen, support, and mobilize communities and partnerships to improve health.

Key Idea 4.1.1

Partners in the system develop and maintain relationships to formalize and sustain an effective system.

Score: Significant

Main Takeaways

- KDPH has clear, defined public health mission, vision, and value statements to support system-wide alignment. Beyond KDPH, each group appears to be successfully meeting its mission, values, and goals when they are able to concentrate primarily on its own priorities.
- DLS builds and maintains effective system partnerships, such as with various health coalitions and groups (Rural KY, hospitals, healthcare providers, Emergency Responders, long-term care facilities). There is a willingness to meet and opportunities to collaborate with these different groups, but it seems that the further away from Frankfort (where KDPH and DLS are located), the more difficulties arise in coordinating these efforts and collaborations.
- There is a commitment to ongoing and improving communication, education, and training within the system. There is isolation of some groups, such as fire and emergency management and local health departments in rural areas, that need to be addressed.
- Minor progress has been made regarding the lack of adequate standard operating procedures (SOPs) within the system to define roles and responsibilities, identify key constituents, build partnerships, and address needs. DLS is willing to step in as subject matter experts regarding the creation and authorship of SOPs and offer assistance virtually.

Key Idea 4.2.1

System members communicate in regular, timely, and effective ways to support collaboration.

Score: Significant

Main Takeaways

- KDPH has, and maintains, a Continuity of Operations Plan (COOP), and conducts workshops and exercises promoting preparedness and collaboration.
- Communication, for the most part, seems to be effective and working well internally, but improvements can be made regarding external communication practices.
- It is important to create satisfaction and feedback surveys to gather information on items such as timing and quality, but organizers will need to be mindful of over-surveying and



survey burdens. DLS does not have the option for a customer satisfaction survey that is easily available year-round, but it does offer annual customer satisfaction surveys.

- Approvals for information sharing and dissemination are too slow-moving, often causing frustration in the system. This can lead to misinformation and decrease credibility in the public's eye when it comes to sharing public health information and updates.
- The department is good at taking initiative to address areas of need, but falls behind when it comes to the maintenance and upkeep of said initiatives.

Key Idea 4.3.1

The public health laboratory system works together to share existing resources and identify new resources to address health issues.

Score: Moderate

Main Takeaways

- Funding remains an ongoing challenge. Despite funding barriers, staff work hard to ensure work is being completed and share resources when able. Specific grants and external funding measures can be effective in assisting in the provision of resources, but there is still a shortage of funds to meet some needs and services.
- Grant siloing places limits on the system. Resources are easily shared within the department, but this does not always trickle into the system to reach other partners, such as local health departments and healthcare clinics.
- There are some memorandums of agreements (MOA) and understanding (MOU) among partners for shared services and resources. Despite existing MOU and MOA efforts, there are still limitations on partnerships and siloed efforts within the system. There is an ongoing need to increase collaborative efforts and cohesion within the system. Creating or updating more MOUs and MOAs, as existing documents can become dated and irrelevant, will allow for better long-term planning for the system.

Essential Service 5: Policies, Plans and Laws that Impact Health

Create, champion, and implement policies, plans, and laws that impact health.

Key Idea 5.1.1

The system obtains input from diverse partners to develop new policies, plans, and laws and modify existing ones, using scientific evidence to inform and influence policy.

Score: Significant

Main Takeaways

- The system recognizes its strong legal and regulatory framework and its impacts, such as laws that are visible via the General Assembly and local health assessments for varying measures of community improvement.
- State statutes are more challenging when it comes to advocating for their changes and updates, but there is a robust process to amend that involves collaboration from several different key groups of partners within the system. Within the system, there is an issue of influence regarding engagement and advocacy with lawmakers, which hinders public health priorities.
- The state health improvement plan is seen as an incredible initiative, as are various community and health assessments, which require strong collaboration and have been successful.
- Over the last several years, KDPH has had strong and stable public health leadership, allowing for improved collaboration, partnership formation, and health goals. However, there is still a need to strengthen relationships and communication throughout the system, with all partners, at all levels. This includes advocacy groups that can speak with legislators directly, as state government employees cannot do so.
- There is a need for better inclusion of vulnerable and subgroup populations to assist in tailoring public health actions and advocacy for their needs, such as Amish communities, refugee populations, and those located within low-income housing areas. These populations can be difficult to reach and present with evidence-based approaches.
- Using scientific evidence to influence policy is becoming more difficult, and we need to build trust in public health. It can be challenging to communicate data to the needed populations through press releases rather than more commonly used social media platforms.
- Limited access to real-time laboratory data can be difficult at the local health department level, requiring them to rely on state-level recommendations rather than the ease of tailoring their outreach and positive impact to their communities.

Parking Lot Issues/Issues to Address in the Future: Advocacy groups, improved data accessibility.



Essential Service 6: Utilize Legal and Regulatory Actions

Utilize legal and regulatory actions designed to improve and protect the public's health.

Key Idea 6.1.1

The system is actively engaged in the review and revision of laws and regulations pertaining to laboratory practice.

Score: Significant

Main Takeaways

- Regulatory awareness and engagement are strong within the system. System partners are informed and up to date about laws, regulations, and local policies. DLS has particularly high engagement and high levels of adherence to laws and regulations, which are necessary in laboratory work environments. Compliance across laboratories as they collaborate within the system is successful.
- Primary system partners are collaborating well, but there is a need to extend this throughout the entire system. This will continue to lead to effective workflow and ensure compliance throughout the system.
- DLS plays a large role in ensuring communication regarding national compliance and regulatory measures are shared, as they act as a point of contact for changes and updates. Laboratories, including DLS and other facilities within the system, must stay current on regulations to maintain compliance, which promotes their proactive nature.
- Statutes can be challenging to understand, such as Kentucky Administrative Regulations (KAR) and Kentucky Revised Statutes (KRS), emphasizing the need for layman terms, clear interpretation, and education on the regulations, laws, and policies.

Key Idea 6.1.2

The system promotes compliance by all with regard to applicable laws and regulations.

Score: Significant

Main Takeaways

- DLS and system laboratory partners have instated effective compliance, quality practices, and quality management systems. However, there is a need to disseminate the information better within the system, especially to local health departments.
- DLS and the Office of Inspector General (OIG) help the public health labs in the system to be proficient and competent. DLS provides technical guidance on testing processes, and the OIG provides regulatory oversight and guidance for CLIA certification.
- Information sharing improvements have been made, especially in the last 5 years, partly due to electronic database streamlining and updates due to pandemic adaptations. Some system partners who operate on a smaller scale and with fewer staff may struggle to adapt to these changes and learn new software and regulations.



Essential Service 7: Effective and Equitable System Access

Assure an effective system that enables equitable access to the individual services and care needed to be healthy.

Key Idea 7.1.1

The system identifies laboratory service needs and collaborates to fill gaps.

Score: Optimal

Main Takeaways

- DLS works hard to have a clear, effective communication and coordination system for providing laboratory services. The on-call availability and emergency response from DLS were applauded. DLS teams and initiatives such as the 24/7 after-hours response system, emergent rabies testing, and the adaptability for specimen drop-off times after-hours, especially for environmental microbiology staff, to maintain the chain of custody, are excellent. DLS staff also do a great job of educating submitters on food sampling procedures and providing other general clarification for partners.
- Courier and logistical efforts to assist with specimen transport are successful, with additional courier route locations added as needed. DLS uses multiple shipping carriers, which ensures and promotes flexibility for specimen transport from various urban and rural communities throughout KY. Should issues with the courier exist, DLS staff can collaborate with courier staff to make appropriate changes and improvements.
- Newborn screening leadership within DLS works to foster a collaborative relationship between birthing centers and their staff with DLS. Weekly calls are conducted by DLS to address unsatisfactory samples and other issues, as well as outreach with each birthing facility at least once a year.
- There is miscommunication and misunderstanding about what specimen types DLS will accept for testing. As testing methods have changed and evolved to more frequent use of molecular testing and less manual processes, communication surrounding expectations of specimen surveillance submissions to DLS may be confusing for some submitters, such as smaller hospital laboratories, leading to submission errors and unsatisfactory specimens.

Key Idea 7.1.2

The system provides timely and accessible quality services.

Score: Optimal

Main Takeaways

- The DLS website needs to be amended and updated, with other general improvements. The reference list of tests is difficult to navigate, and one-pager documents on clarifying services offered by DLS compared to other entities, such as emergency response, are wanted. Other website inclusions suggested include new test announcements, courier information, a

contact list for specific tests, CLIA assistance, and more referral and collection guidance. The website should operate as a living document and be updated consistently.

- Improvements in support services for midwives and underserved populations who benefit from laboratory services have been extremely beneficial to these populations. Midwives receive all newborn screening materials, as well as a discounted rate for home births.
- DLS is highly effective in coordinating and communicating emergency response situations. Consultation with the CDC has led to clear improvements in this regard. However, the FBI has reporting issues with local police departments, and preparedness training is needed for emergency response team members to improve this, such as the handling of white powder incidents.
- Accessibility gaps remain between urban and rural areas of Kentucky. The courier service has improved specimen transport, but questions remain about who can utilize the courier and the expansion of the route. Rabies specimen transport can be challenging in rural areas of the state, and some local health department partners feel there is a lack of uniform information on the role of DLS and how they can benefit from their services and use.
- Surveillance submissions and the coordination and communication efforts between DLS and other sentinel laboratories have improved, leading to greater successes in testing and response efforts. Current initiatives from DLS to inform and include these sites are the Sentinel Laboratory webinars and upcoming trainings in the summer of 2025. It was suggested that a meeting to gather sentinel laboratories on collaborations and celebrations would be appreciated.



Essential Service 8: Public Health Workforce

Build and support a skilled public health workforce.

Key Idea 8.1.1

The system maintains an environment to attract and retain highly qualified staff.

Score: Moderate

Main Takeaways

- The creation and use of various workforce development and satisfaction surveys have been received well. Continuous improvement to these surveys needs to allow for better insight into retention strategies. In general, public health seems to be behind in recruitment and retention.
- Programs such as tuition assistance, merit system, professional development opportunities, and paid internships allow for upward mobility. Promotion of and increase in opportunities for employees is desirable.
- The state's recruitment and hiring process can be difficult to navigate, as well as the pay comparison to the private sector, which may be impacting attraction to potential applicants. Salary changes and mid-point initiatives may lead to dissatisfaction among experienced versus new employees.
- Post-pandemic initiatives for staff (examples: telecommuting, pay raise) have been successful in retaining employees, but there remain difficulties in return-to-work initiatives following the pandemic. There is a lack of support and resources for those returning to full-time onsite work, and expectations at the Cabinet level may not trickle down. Work in this area will need to continue as the state works to navigate the impact of the pandemic, especially those in public health careers and those looking to become public health employees.
- Education outreach opportunities to a variety of students and communities help promote public health as a career and attract potential employees. Outreach, creativity, and meaningful messaging are important to continue reaching target audiences.

Parking Lot Issues/Issues to Address in the Future: Public health stress following the pandemic on employees and public health workers, training opportunities, evaluation and/or feedback surveys.

Key Idea 8.2.1

The system works to assure a competent workforce by encouraging and supporting staff through training, education, coaching and mentoring.

Score: Moderate

Main Takeaways

- Programs such as MyPurpose, Coursera, Kentucky Public Health Emerging Leadership Institute (KY-PHELI) program, and CHFS Leadership Academy (IMPACT) contribute to internal professional and leadership development. There are also training programs available from federal organizations. Despite these resources, there is a general lack of awareness and accessibility, and a gap in knowledge of these programs, especially at the local health department level.
- A structured mentoring and coaching program is needed. Federal programs are available, but there is a lack of structure and consistency at the state level to allow employees to feel supported and transfer knowledge.
- Communication and isolation seem to be common factors in collaboration among different groups within the department. Strengthening communication, accessibility, knowledge sharing, and collaboration department-wide will increase morale, resource sharing, and workflow.
- Due to high turnover, there is a lack of knowledge and expertise in some areas. Encouraging employees to be “fit” for their roles will increase efficiency within the system.

Parking Lot Issues/Issues to Address in the Future: Structured program for coaching and mentoring, increase partnerships with academic institutions, increase communication system wide.

Key Idea 8.2.2

The system identifies and addresses current and future workforce shortage issues.

Score: Moderate

Main Takeaways

- There is a significant gap in available STEM and laboratory-related learning opportunities that will aid in attracting related job fields. Increasing engagement with middle and high school students, especially with hands-on learning opportunities, for example, at career days/fairs, will help reach the target audience.
- Improvement in succession planning initiatives will help address potential workforce shortages and high turnover. Internal leadership opportunities and training need to be made available for all staff, including individuals from all levels of the system. There is a general lack of priority in understanding retirement changes, vacancies, and staffing shortages within the system.
- Expanding laboratory support throughout the system will increase system-wide collaborations, such as between veterinary laboratories and the public health sector. Guidelines and regulations may not allow for direct cross-over, but other opportunities, such as training and indirect support, may be available.

Parking Lot Issues/Issues to Address in the Future: Expansion of laboratory support, career and STEM outreach, address workforce barriers.

Essential Service 9: Evaluation, Research, and Quality Improvement

Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement.

Key Idea 9.1.1

The effectiveness, accessibility and quality of the individual – and population-based laboratory services provided throughout the state is regularly evaluated.

Score: Optimal

Main Takeaways

- Great strides have been taken to improve system infrastructure and accreditation efforts, such as reporting improvements, and successful LIMS development and coordination. The system and DLS hold several accreditations and certifications to perform work, such as CLIA, ISO, and CAP. DLS follows an overall lab quality management plan, including monthly quality assurance (QA) meetings and generation of monthly section QA reports.
- Program development and preparedness response success story examples in recent years include newborn screening tiered fee structure for midwives, Owensboro Health Quality Systems, as well as COOP and ESF8 for long-term planning efforts. DLS collects regular customer satisfaction data, but an expanded method of feedback that includes a system-wide evaluation is desired, as currently no mechanism exists to evaluate the system as a whole.
- DLS and other system partners participate in emergency and health preparedness efforts, such as outbreak and strategy planning for Ebola, influenza, and Hepatitis A. DLS receives funding through the CDC Public Health Emergency Preparedness (PHEP) cooperative agreement, which includes reporting and feedback on lab activities.
- As part of the Epidemiology Laboratory Capacity (ELC) cooperative agreement Budget Period 1 (BP1) activities, DLS completed a gap analysis for a cross-cutting lab process to identify inefficiencies. The BP1 ELC application also required a DLS submission of project progress, current capacity, and an evaluation and performance measurement plan to assess future activity progress and outcomes achieved.
- As part of public health response and preparedness, DLS regularly assesses resource availability during test request spikes. In addition, DLS participates in the State Health Operations Center (SHOC) team for response events, including the ongoing Highly Pathogenic Avian Influenza (HPAI) SHOC efforts.
- DLS and other system labs struggle to track long-term health outcomes over time as they have limited access to patient case details beyond testing results. Even state epidemiology partners have difficulty tracking outcomes as patients are often lost to follow-up.



Key Idea 9.2.1

The system has adequate expertise and capacity to plan research and innovation activities.

Score: Significant

Main Takeaways

- Due to the particular funding DLS receives, research is restricted. However, there may be opportunities to conduct research beyond traditional funding resources or expand allowed research methods. Within the department, some partners have access to different data, which opens up opportunities for data-sharing, such as with Medicaid data. An Internal Review Board (IRB) member is housed within KDPH epidemiology.
- The Kentucky Wastewater Surveillance System (KYWSS) is built into the qualifications for certain grants received by DLS and has sparked collaboration and partnerships between groups such as DLS, Epidemiology, Public Health Protection and Safety (PHPS), and local laboratories throughout the state. This is an example of system initiatives that have had significant workflow improvements, scaling up of testing, and collaboration improvements.
- KDPH is recognized as an academic health department, with several university partnerships and MOU agreements, but stronger relationship building is warranted. Partnering university students may use lab-generated data for a research project, but there is a need for formal documentation to track the data students utilize.
- The enhancement of KDPH quality improvement initiatives continues. DLS and KDPH actively engage in continuous quality improvement projects, with each division completing at least one quality improvement project or activity annually. DLS continuously addresses more testing efficiency improvements, but other improvement areas to explore include turnaround times and exploration of new assays.

Parking Lot Issues/Issues to Address in the Future:

- A Health Economist would be useful to review and see where dollars are being invested in public health and public health programs.
- Data-sharing between different siloed work groups.
- Student research tracking of various data sources and how they are presented or misrepresented.

Key Idea 9.2.2

The system promotes research and innovative solutions.

Score: Significant

Main Takeaways

- DLS excels in innovative thinking and mobilization when it comes to emerging public health threats. Partnerships with organizations such as the CDC and other laboratories allow DLS to contribute to the development of new protocols and assays, such as sequencing enteric pathogens directly from clinical stool samples.
- Joint exercises between DLS, law enforcement, and emergency response partners for emergency scenarios, such as potential bioterrorism sample transport, allow for test performance accuracy in emergency situations while allowing the different areas to learn from each other's areas of expertise.
- DLS is limited by the laboratory's functionality and current setup. A new state public health laboratory building design is in progress. Construction is expected to begin in the summer of 2026 and, pending legislative approvals, be completed in late 2028. The improved and updated building will allow for testing and functionality expansions, as well as increasing staffing numbers.
- Promoting the services and successes conducted by DLS and other KDPH entities can be improved. System partners are often moving from one event to the next without time to promote our successes, thus the system is at a disadvantage because our hard work is not being shared and not increasing knowledge of the innovation that is happening.
- Innovation can sometimes be hindered by purchasing and other government-related restrictions.

Essential Service 10: Infrastructure

Build and maintain a strong organizational infrastructure for public health.

Key Idea 10.1.1

The system is composed of different entities that work together effectively on public health activities and are transparent and accountable to the community it serves.

Score: Optimal

Main Takeaways

- We currently have key partners in the existing KY system, and these are often connected through data (e.g., community health centers, EMS, and schools).
- KDPH holds quarterly meetings for workforce development activities and monthly meetings with academic institutions with MOU agreements. KDPH as a whole has improved work on strategic planning, as well as maintaining university partnerships. Improving transparency and addressing the concerns that exist will allow for better preparation and addressing of issues that arise.
- DLS is involved with emergency response activities and has partners, such as the 41st Civil Support Team, that can provide testing with their mobile lab. After-action reports (AAR) are completed after joint exercises and events between partners. The partners who should be invited to these collaborations, even if they play a smaller role in the scenario, are discussed, as this may benefit team collaboration and overall knowledge. DLS has a defined role in the incident command structure and is a part of ongoing SHOC meetings.
- MOUs that exist throughout the system aid in furthering partnerships. These exist, for example, between the local public health laboratory and neighboring academic institution as well as local partners (FQHCs) and between KDPH and local academic institutions such as the University of Kentucky and the University of Louisville. MOUs with these varying partner entities should be expanded to further testing efforts, maintain correct contact information and communication, and aid COOP and public awareness efforts.
- There is an emphasis that public health awareness, especially involving DLS, is lacking until there is a crisis, and quick attention and action are needed. Infrastructure exists and is in place, but transparency and communication measures need to be assessed and further developed.

Parking Lot Issues/Issues to Address in the Future: Communication gaps sometimes exist between state public health and academia from clinical side.

Key Idea 10.1.2

The system's leadership acts ethically and strategically and communicates proactively to the public through different mechanisms.

Score: Optimal**Main Takeaways**

- KDPH has improved its public presence and outreach practices in recent years with an increased social media presence and public-facing dashboards. Also, KDPH holds monthly calls with local health departments (LHDs) and statewide webinars every six weeks for clinicians and other partners to provide updates on state activities and current public health situations. DLS provides guidance documents for the collection and packaging/shipping of specimens and is able to disseminate them through different groups and lists.
- Press releases from KDPH, alongside a governor who willingly communicates openly and often with the public, are highly beneficial. LHD directors find they are asked to engage with local media outlets for comments on their local perspective or to disseminate local public health topics. It can, however, be difficult to determine how to reach certain target populations with specific health information that needs to be addressed.
- KDPH is able to build capacity quickly in a time of need, such as daily local health department reports for SARS-CoV-2 during the height of the pandemic, and scales these emergency measures back as necessary.
- KDPH upholds REACH values to ensure ethical practices. The DLS medical director and the IRB co-chair, who is housed in epidemiology, collaborate to ensure ethical guidelines are met and input is shared. Additionally, the Health Management and Preparedness Advisory Committee (HMPAC) meetings are held quarterly, with DLS representation, to incorporate and receive strategic planning measures.

Key Idea 10.1.3

The system has the necessary resources (e.g. financial, technological, physical (facilities), human) to perform and sustain public health activities.

Score: Significant**Main Takeaways**

- COVID supplemental funding provided opportunities to make enhancements system-wide, such as workforce sustainability and equipment. Questions remain due to the temporary nature of the funding source on the potential downfalls that may come when the funding ultimately comes to an end. Regarding laboratory funding, DLS benefits greatly from NBS agency funds, state general funds, and federal funding. KDPH has been highly supportive of DLS in addressing financial constraints and the funding of a new state laboratory. However, funding uncertainties always remain, driven by congressional and state legislators, which could lead to cuts resulting in reduced services and impact.
- Historically, the system has devalued laboratory services, and it has been difficult for laboratories in the system to gain support for new infrastructure and services compared to more forward-facing system entities.



- The presence of a grant writer within KDPH allows for assistance across the department in finding resources and developing creative solutions.
- Recent workforce improvements, such as the re-evaluation of pay structure, which led to increased laboratory staff pay, allowed for increased workforce sustainability and higher levels of successful recruitment.

Summary

At the conclusion of the L-SIP Assessment, the L-SIP Coordinator and planning team began to compile the main takeaways and themes for system improvement moving forward. Attendee feedback on the system during discussions was exemplary while advocating for meaningful changes and celebrating successes system-wide. Key themes and areas where improvement is needed are illustrated below. As the suggested improvements are system-wide and require involvement from various members within the system, suggestions and feedback will be submitted and shared with the KDPH Quality Improvement Committee. The Committee will not only carry forward the process to begin discussing and implementing these proposed improvements, but several committee members were individuals who signed up for post-assessment focus group involvement. Proposed changes and improvements to the KY public health laboratory system will take both buy-in and time from various sections and partner groups throughout the system. As change does not happen overnight, the proposed L-SIP Reassessment date will be conducted in approximately 5-7 years, and preferably no later than 2035.

Theme 1: The Kentucky Public Health Laboratory System is Effective

From the L-SIP findings and the votes cast, the Kentucky public health laboratory system is effective in providing services to the Commonwealth. Successes that were discussed and identified by partners at the L-SIP include:

- Current continuity of public health leadership within KDPH, as well as a defined mission and vision to serve
- Robust system-wide emergency preparedness and response efforts
- Effective compliance, quality practices, and quality management systems exist throughout the system
- Strong system collaboration and strengthening of communication efforts
- Testing and laboratory capabilities within the system are exemplary
- Significant advancement in data modernization and integration of data systems

Theme 2: Further Growth of Academic Partnerships

Nurturing relationships with students and academic institutions has improved over the last two years, but there is room for further improvement, outreach, and maintenance to continue nourishing future public health leaders and partners.

- Public Health continues to face challenges in competitive recruitment and retention, and recognizes that turnover will be an ongoing issue
- Gaps remain in available STEM and laboratory-related learning opportunities
- Increasing student engagement system-wide to highlight a variety of laboratory and public health careers and other partners within the system
- Lack of research performance and academic involvement may be limiting contributions to the field of public health



Theme 3: Sustainable Funding

Public Health and the system are chronically underfunded. Although the system has received an influx of federal funding in the last few years since the onset of the recent pandemic, there is a lack of sustainable funding for these newer programs and initiatives.

- Grant silos remain
- There are procurement challenges and delays system-wide, for the necessary materials and supplies for crucial workflows
- Lack of funding impacts resource availability for testing, rapid diagnosis of outbreaks, and outreach practices
- The wage comparison from government entities to the private sector impacts the attraction of potential applicants
- There are difficulties for system laboratories to gain support for new infrastructure and services compared to more forward-facing system entities
- Funding uncertainties always remain and are often politically driven and appropriated by congressional and state legislators; these uncertainties could lead to future funding cuts, resulting in reduced services and position reductions

Theme 4: Communication

Communication barriers continue to exist within the system, which impact the functionality and the services the system provides for the citizens of the Commonwealth.

- Logistical and communication channels need to have more involvement and investment from appropriate partners that extend beyond the department level for more impactful communication
- Early involvement of laboratory system partners during response efforts is warranted
- Discrepancies in emergency communication efforts exist, especially during initial notifications
- Assess the use of system-wide customer satisfaction surveys for continuous quality improvement
- Improve policy and legislative communication efforts
- Approvals for information sharing and dissemination are too slow-moving
- Need to strengthen relationships and communication channels throughout the system, with all partners, at all levels

Theme 5: KDPH DLS Specific Improvements

As a premier state public health laboratory, we aim to provide exemplary laboratory services to the community. In doing so, we acknowledge our own areas of improvement that we can address at DLS.

- Advocacy for continuing the new laboratory build to improve services and functionality, and stay at the cutting-edge of laboratory services
- Enhance engagement and collaboration between DLS and system partners, including external laboratories



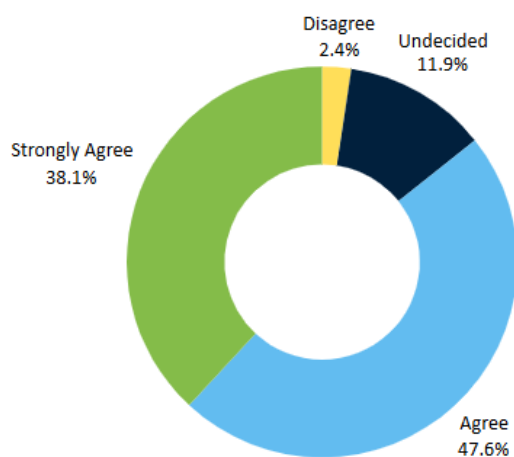
- Platform and outreach to highlight DLS and its importance to the public and the system
- Improve courier service availability
- Strengthen information sharing regarding appropriate specimen types DLS will accept for testing and surveillance
- The DLS website needs to be amended and updated, and operate as a living document
- Seek new opportunities for academic and student involvement
- Continue data modernization efforts



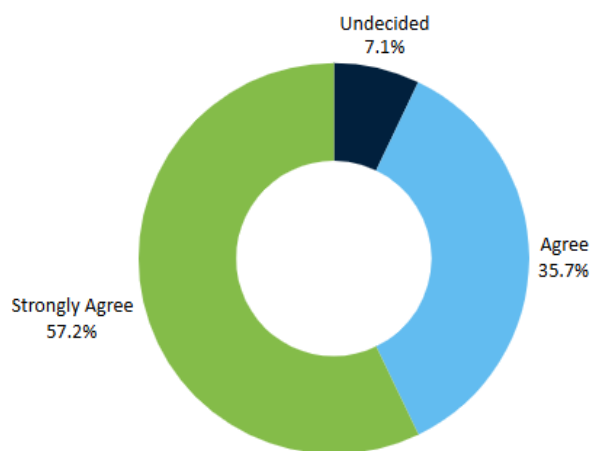
Participant Feedback & Evaluation

Following the conclusion of the L-SIP assessment, attendees were invited to fill out an evaluation survey and share their feedback on the L-SIP assessment process. The evaluation survey can be found in Appendix I, and notable results from participants can be found below. Overall, the feedback was overwhelmingly positive and encouraging of the L-SIP experience and assessment process. Figures below summarize impactful feedback and data.

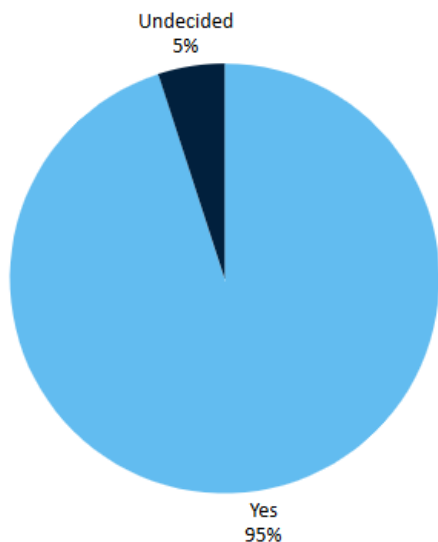
Next steps following the L-SIP are clear.



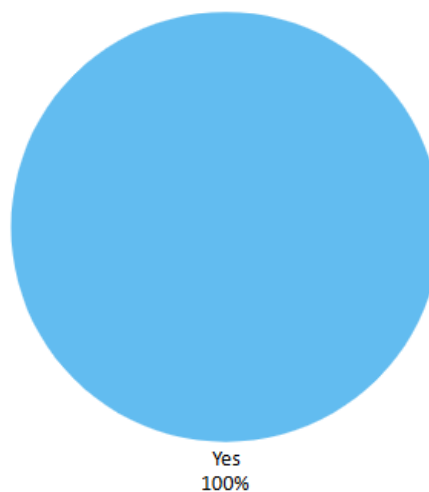
The "right" people were in attendance.



Would you participate in another L-SIP Assessment?



Did you see the L-SIP as a helpful tool and process to better the delivery of public health laboratory services in KY?



Participants were invited to share open ended responses regarding the successes, areas for improvements, and general thoughts surrounding the L-SIP assessment, which can be found in Tables 1-3. As seen throughout these responses, and voiced throughout the L-SIP assessment day, partners had reservations regarding the scale of the voting mechanisms pre-determined by APHL. As can be seen in the open-ended short answer responses, some partners recommend changing the percentage intervals that make up each scoring area. This is due to the prevalent expectation from KDPH that generally would consider optimal as a higher standard (meeting ~90% of expected work), therefore the provided scoring range for optimal services starting at 75% of performance met was difficult for our attendees to accept. The attendees saw an opportunity to split the optimal category into two separate categories, such as 75% to 90% ("Optimal"), and 90% and higher ("Exceptional") to better capture performance and scope for improvement.

As the final step to conclude the L-SIP, participants were asked to describe their experience in one word, with the results illustrated in a word cloud below. In total, forty-two (42) participants responded to the evaluation survey.

KYDLS L-SIP Participant Descriptors



Table 1. What aspects of this L-SIP meeting contributed most to its success?

A great variety of backgrounds and opinions
Participants feedback
Well organized
Breakout sessions with facilitation
Variety of people
The collaboration and variety of partners invited
The groups were well varied. The meeting was well organized.
The diversity of people invited to attend
So many people contributing to the conversation.
Small group discussion
It had a road cross section of lab, public health, and community partners involved in discussions.
Hearing from people that use every aspect of the program
Good mix of people from the “system”.
Group interaction
Collaboration with a variety of stakeholders
Having broad range of people
The group discussion and the diversity of attendee experience.
It was useful to learn more about the different applications of lab from various people in attendance.
The fellow, communication
Well thought out and practiced process.
Good dialogue
Group discussions
The variety of partners was very valuable! The facilitates discussion and staying on time was well done and appreciated!
The participants and the structure
Organization
Lots of participation by attendees.
Eliciting answers from all participants or at least involving them.
Facilitation by knowledgeable people with experience in the subject area.
Great facilitators!
Wide variety of experts who could speak to the questions, good orientation.
So many partners were included and it was incredible to learn from them. The people made this successful.
Communication
Variety of perspectives and roles in the system.
The variety of attendees. There were a number of attendees from different backgrounds and having such diversity added to the conversation.

Table 2. What areas of this L-SIP meeting do you think could be enhanced and improved?

Time limits on how long we worked on each section
More front line people next time.
Timing and length
More clinical end users in attendance (from hospital labs, lhds)
Agenda beforehand.
Voting parameters listed were not always used and the percentages may need to be adjusted
I think the grading system can be tweaked. move optimal to 90%+ and have the blue grade be 75%-89%. Another issue is people were getting hung up on 'optimal'. Few processes are ever optimal, so modifying the language might be helpful.
None. It was all beneficial
There was a disconnect in the voting with the percentages on the cards with the rating. Most folks felt "optimal" should have been higher than 75%. So either another level or modification of the percentages would help. Could also remove the percentages because people got hung up on them vs thinking and voting on the system as a whole.
More time for each discussion.
Scoring- 75% as optimal contradicts our typical thinking
I would like to see a bit more movement added to the meeting. Sitting and talking for an hour was hard.
It seemed due to certain external climates, it impacted a lot of discussions which made it challenging for the facilitator to get away from. Maybe a reminder to ensure personal opinions were left at the door.
OBetter definitions of when we were evaluating the statewide lab system and when we were evaluating the state lab.
More community partners at the table I.e. EMS, law enforcement, schools, nursing homes, etc. Great participation from KDPH but could skew data.
More people from other disciplines and arenas
Building was a little cold. Sometimes you could not hear other people's comments.
Clarity on system vs lab, better direction around grading
The rating scale - "Optimal" should be $\geq 90\%$ for lab-type operations. Maybe add another level. Some of the bullet points had areas that weren't clearly defined so brought up some confusion in participants' understanding.
Couldn't hear all speakers in breakout... more time to explain the process we are evaluating for those who are unaware...ie what is newborn screen
The rating structure (none, minimal, moderate, etc) was a point of contention throughout. Folks felt that significant indicated room for improvement and optimal was no work needed rather than focusing on metrics (greater than 75%). Could possibly create misleading data for analysis due to personal bias.
More attendees.
Few more attendees from outside KDPH.

Table 3. Please provide any other comments you would like to share regarding the L-SIP.

Excellent sessions, very informative
Well organized and great networking opportunity
Adjusting the percentages associated with the score cards
The room was freezing but otherwise it was a great meeting.
Well organized and facilitated
The event was well run and then collaborative nature of the event is always welcome.
Only issue with the meeting space was that it was hard to hear people. Needed microphones or room with better sound.
Allow people to volunteer, do not call on them to read, some people do not respond well to being called upon.
Difficult to hear in breakout sessions and cold. Food was good!
Got to get rid of the word 'optimal' - implies that it's the best possible
It was well organized and everyone knew their role
The scale should be modified to say 90% instead of 76% for a top metric.
Great experience. Very useful
KDLS is a fantastic partner and so responsive!
Overall a wonderful meeting and kuddos to the lab for all the great work they do! Thanks to those who worked hard to make this meeting happen!
Should community leaders almost directly involved in public health
I think the most valuable part was learning about how other people/departments interact with the lab. I was only aware of my small segment.
Great job by the lab team! Very much appreciate the organization of the meeting and the care given to participants!
From my perspective I wasn't aware of a lot of the processes or activities
This was one of the more productive workshops like this that I have ever attended, if the information is used. Great job!!! 😊
Too chilly in the room. Also everyone struggled with optimal being the 75% or above. Generally, it was thought that there should have been another level that was 90% or above and some votes would have been between 75-90%.

References

1. Association of Public Health Laboratories. (2023). *Laboratory System Improvement Program (L-SIP) User Guide*.
2. Association of Public Health Laboratories. (2022). *Laboratory System Improvement Program (L-SIP) Performance Measurement Tool*.
3. Association of Public Health Laboratories. (2010). *Definition of a state public health laboratory system*.



Authors

Ryli Hockensmith, MPH, *APHL-CDC Public Health Laboratory Fellow, L-SIP Coordinator*

Katelyn Cox, *Public Health Laboratory Scientist Administrator-Compliance*

Rachel Zinner, MS, *DLS Assistant Director*

Matthew Johnson, *DLS Division Director*

Vaneet Arora, MPH, MD, *DLS Medical Director*



Appendix A: KDPH DLS L-SIP Agenda

Kentucky Laboratory System Improvement Program (L-SIP) Agenda

Kentucky State University Research Farm | March 6, 2025

L-SIP Agenda – Thursday, March 6, 2025		
Event	Time	Location
Registration/Check-in, Refreshments & Breakfast Available	7:45am – 8:15am	Lobby
Welcome and introductions	8:15am	Meeting Rooms A, B, C
Overview of the assessment day	8:30am	Meeting Rooms A, B, C
Plenary: Essential Service (ES) #2- Investigate, diagnose, and address health problems and hazards	9:15am	Meeting Rooms A, B, C
Break	10:15- 10:30am	
Breakouts		
Red Group- ES #1- Monitor health	10:30am	Meeting Room A
Blue Group- ES #9- Evaluation, research, and continuous quality improvement		Meeting Room B
Green Group- ES #8- Workforce		Meeting Room C
Lunch Break (Boxed Lunch Provided)	11:30- 12:00pm	
Breakouts		
Red Group- ES #7- Assure an effective system that enables access	12:00pm	Meeting Room A
Blue Group- ES #10- Infrastructure		Meeting Room B
Green Group- ES #4- Strengthen, support, and mobilize communities and partnerships		Meeting Room C
Break	1:00- 1:15pm	
Breakouts		
Red Group- ES #3- Inform and educate people about health	1:15pm	Meeting Room A
Blue Group- ES #5- Create, champion, and implement policies, plans, and laws that impact health		Meeting Room B
Green Group- ES #6- Utilize legal and regulatory actions		Meeting Room C
Break	2:15- 2:30pm	
Summary, Evaluation and Next Steps	2:30pm	Meeting Rooms A, B, C
Final Remarks & Evaluation	3:30- 4:00pm	Meeting Rooms A, B, C
Adjourn	4:00pm	Meeting Rooms A, B, C



Appendix B: KDPH DLS Email #1, Invitation Example

Subject Line: You're Invited! KDPH DLS Laboratory System Improvement Program (L-SIP) Assessment

Dear (Enter Name),

I hope this email finds you well. My name is (Enter L-SIP Coordinator Name), and I am the (Enter L-SIP Coordinator Role) for the Kentucky Division of Laboratory Services (DLS). As a valued public health colleague, I would like to formally invite you to the **first Laboratory System Improvement Program (L-SIP)** conducted by DLS! I received your contact information from (Enter DLS Staff Name), our (Enter DLS Staff Role) here at DLS. This one-day assessment will take place on Thursday, March 6, 2025, in Frankfort, KY at the Kentucky State University Research Farm from 8:00a-4:30p EST. Breakfast and lunch will be provided, as well as free on-site parking; there is no cost to attend this event.

An L-SIP is an Association of Public Health Laboratories (APHL) initiative to evaluate the successes and areas for improvement of a public health laboratory system. Using the 10 Essential Services of Public Health as outlined by the CDC, and APHL's 11 Core Functions of Public Health Labs; an L-SIP assessment allows for a guided evaluation of the performance, progress, and identification of areas for improvement within our KY public health laboratory system via facilitated group discussions lead by independent public health laboratory professionals. Specifically, the L-SIP assesses how well we and our public health partners are **operating as a whole system**, not solely the state public health laboratory on its own. By conducting the first L-SIP for the Commonwealth, our goal is to continue to work together toward "gold standard" laboratory practices alongside our laboratory system partners.

As a public health laboratory system colleague and key partner for the Commonwealth, your input and attendance are valued and appreciated to assist in the assessment of how the KY laboratory system is serving the health and well-being of Kentuckians. I hope you will accept my invitation and join us; however, I understand how busy schedules can be. If you cannot attend, please reply, and share a colleague's contact to attend in your place. We highly encourage all invited entities to make every effort to participate in this assessment, as it will help determine the laboratory system's priorities for the next several years!

Please RSVP by (Enter Date) using this link (hyperlink RSVP form). Please do not hesitate to reach out with any questions or comments you may have by emailing me at (Enter L-SIP Coordinator Email Address) or calling (Enter L-SIP Coordinator Phone Number).

Thank you for your continued dedication to public health,

(Enter Signature for L-SIP Coordinator)

Appendix C: KDPH DLS Email #2, Follow Up to Non-Response Example

Subject Line: You're Invited! KDPH DLS Laboratory System Improvement Program (L-SIP) Assessment

Hello (Enter Name),

I would like to follow up on the recent invitation shared with you to join myself and the other Kentucky public health laboratory system stakeholders and partners for our first Laboratory System Improvement Program (L-SIP) conducted by the Division of Laboratory Services. This one-day assessment will take place on Thursday, March 6, 2025, in Frankfort, KY at the Kentucky State University Research Farm from 8:00a-4:30p EST. Breakfast and lunch will be provided, as well as free on-site parking; there is no cost to attend this event.

As a key member of the public health laboratory system in the Commonwealth, your input and attendance are valued and appreciated to assist in the assessment of how the KY laboratory system is serving the health and well-being of Kentuckians. We hope you will accept our invitation and join us.

Please RSVP by (Enter Date) using this link (hyperlink RSVP form). If you cannot attend, please share a colleague's contact to attend in your place. We highly encourage all invited entities to make every effort to participate in this assessment, as it will help determine the laboratory system's priorities for the next several years!

Please do not hesitate to reach out with any questions or you may have by emailing me at (Enter L-SIP Coordinator Email Address) or calling (Enter L-SIP Coordinator Phone Number).

Kind regards,

(Enter Signature for L-SIP Coordinator)

Appendix D: Partners in Attendance

KENTUCKY DEPARTMENT FOR PUBLIC HEALTH DIVISIONS AND PROGRAMS:

Epidemiology and Health Planning	Office of the Commissioner
HIV/AIDS Section	Reportable Disease
Influenza Surveillance	Epidemiology Informatics
STD Prevention and Control	Infectious Disease
Public Health Veterinarian	Prevention and Quality Improvement
Mpox Prevention	Area Health Liaison Program
Public Health Nursing	Regional Epidemiology Program
Public Health Protection and Safety	Emergency Preparedness and Response
Food Safety and Manufacturing	Medical Countermeasures Program
Newborn Screening	Administration and Financial Management
Hospital Acquired Infections and Antimicrobial	Maternal and Child Health
Resistance Prevention Program	
Center for Foundational Health	

KENTUCKY CABINET FOR HEALTH AND FAMILY SERVICE PROGRAMS:

Office of Application Technology Services	Department for Juvenile Justice
Kentucky Health Information Exchange (KHIE)	Office of the Inspector General

OTHER SYSTEM PARTNER PROGRAMS:

Centers for Disease Control and Prevention	University of Louisville
University of Kentucky Healthcare	Norton Children's Hospital Genetics Center
41 st Civil Support Team (CST), KY National Guard	Occupational Health and Safety Administration
Federal Bureau of Investigation (FBI)	Lexington-Fayette County Health Department
Owensboro Health Regional Hospital	Frankfort Fire Department and EMS
Medical Center Health Laboratory Services	Lincoln Trail District Health Department
Bee Line Courier Service	Lake Cumberland District Health Department
Louisville Metro Public Health and Wellness	Norton Healthcare
Laboratory	
Woodford County Health Department	
Environmental Health	

Appendix E: RSVP Form

KY DLS Laboratory
System Improvement
Program (L-SIP) RSVP

Please use this survey to confirm or decline your invitation to the KY L-SIP Assessment on March 6, 2025 from 8:00a-4:30p EST in Frankfort, KY.

* Required



1. First & Last Name *

2. Preferred Name

3. Organization you are affiliated with *

4. Job Title *

5. E-mail *

6. Work Phone Number *

7. Will you be attending the KY L-SIP on Thursday
March 6th from 8:00a-4:30p EST? *

☐ Yes

☐ No

8. If you answered "No" that you will not be able
to attend, is there someone else from your
organization you would like to suggest? Please
include their name, job title, and contact
information below so that the L-SIP Coordinator
may reach out.

Enter your answer

9. Breakfast and lunch will be provided on the day
of the assessment. Do you have any food
allergies? If none, please respond "N/A" *

10. Do any of the following dietary preferences
apply to you? Please select all that apply. *

☐ Vegan

☐ Gluten Free

☐ Vegetarian

☐ I do not have any dietary preferences or restrictions.

☐ Other

11. I grant the KY Division of Laboratory Services
permission to use my likeness in photograph
and/or video materials, as well as other digital
media in any and all publications after attending
the L-SIP. *

☐ Yes

☐ No

12. Which group ^{***}best describes the organization you are affiliated with? *

- ☐ Hospital, Medical, Healthcare Facility
- ☐ Law Enforcement, EMS, Fire
- ☐ Community Health Center
- ☐ Tribal Health
- ☐ Academia, University, Schools
- ☐ Mental Health
- ☐ Veterinary Lab, Animal Science
- ☐ Policy, Government
- ☐ Human Resources
- ☐ Media
- ☐ Nursing Home
- ☐ Environmental
- ☐ Department for Public Health
- ☐ Local Health Department
- ☐ State Public Health Laboratory
- ☐ Local Public Health Laboratory
- ☐ Private Laboratory
- ☐ Correctional Facility
- ☐ Transportation
- ☐ Other

13. Approximately how many miles will you be traveling one-way to attend the KY L-SIP in Frankfort, KY? *

- ☐ Less than 120 miles
- ☐ Greater than 120 miles
- ☐ Other

14. You responded that you will be traveling more than 120 miles one way (approximately 2 or more hours) to reach Frankfort, KY. Would you like the fellow to reach out to you regarding potential travel accommodations? *

☐ Yes

☐ No

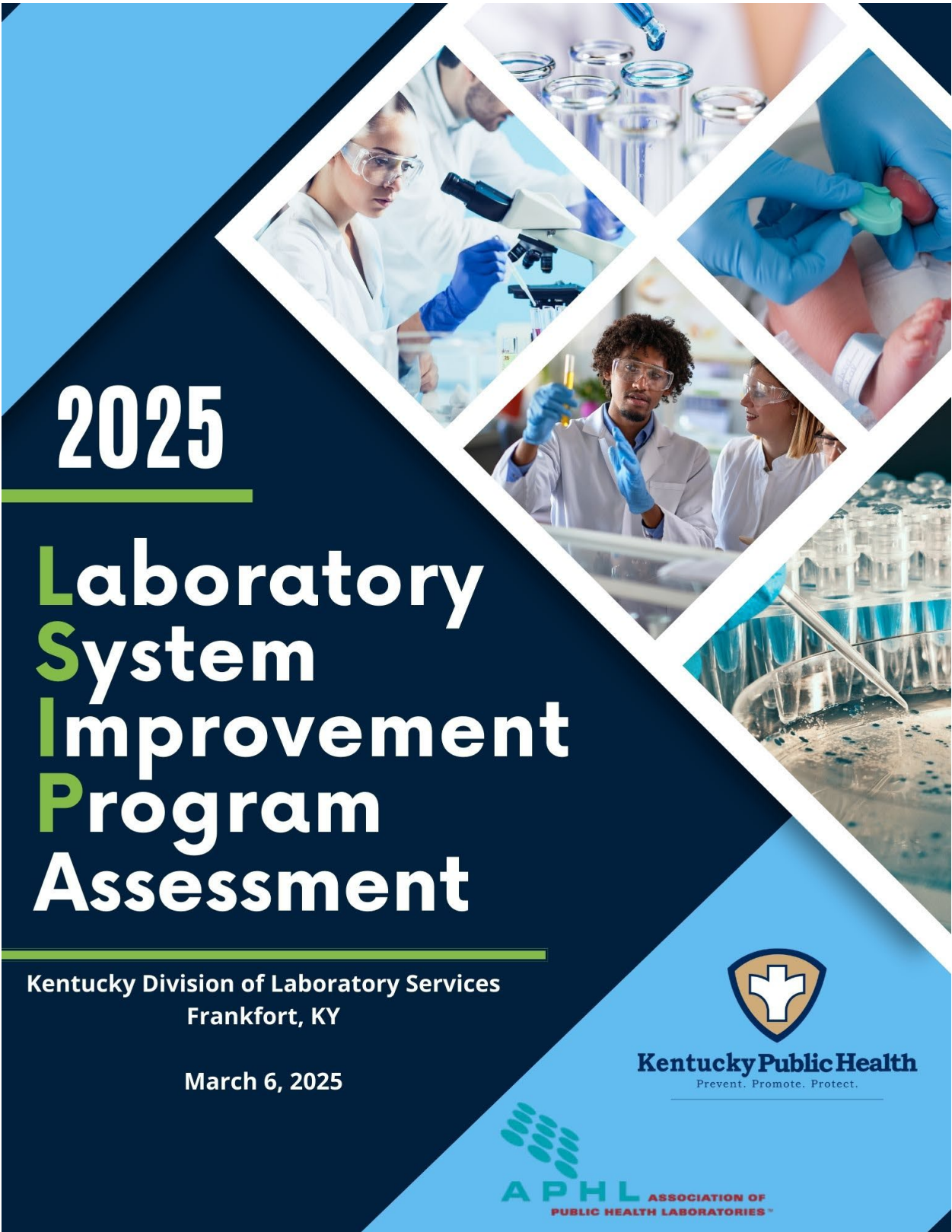
15. Thank you for confirming your attendance for the KY L-SIP! Day of details and reminders will be sent to your email closer to the Assessment date.

Please include any questions or comments you have at this time in the text box below or by reaching out via email to the Fellow and Coordinator.

This content is neither created nor endorsed by Microsoft. The data you submit will be sent to the form owner.

 Microsoft Forms

Appendix F: KDPH DLS L-SIP Program



2025

**Laboratory
System
Improvement
Program
Assessment**

Kentucky Division of Laboratory Services
Frankfort, KY

March 6, 2025



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APHL ASSOCIATION OF
PUBLIC HEALTH LABORATORIES™

FRANKFORT, KY

MARCH 6, 2025

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3	Welcome & Introduction From Our Directors
4	About the L-SIP
5	Facilitator Information
6	KY Lab System Fact Sheet
7	10 Essential Services of Public Health
8	11 Core Functions of a Public Health Lab
9	Commonly Used Acronym List
10	DLS Leadership Contact List

FRANKFORT, KY

MARCH 6, 2025



2025 KY DIVISION OF LABORATORY SERVICES LABORATORY SYSTEM IMPROVEMENT PROGRAM (L-SIP)

WELCOME & INTRODUCTION

In the spirit of collaboration and our pursuit of continuous improvement, as Directors of the Division of Laboratory Services (DLS) at the Kentucky Department for Public Health, on behalf of all members of the laboratory, we are pleased and honored to host you at Kentucky's first-ever Laboratory System Improvement Program (L-SIP) under the aegis of Association of Public Health Laboratories (APHL). We value this partnership with APHL as it allows us to bring our partners from across the state and experts from across the country to share our strengths and successes, as well as weaknesses and failures. We will be able to learn and improve from the experiences of others and the feedback that we receive.

The goal of the DLS is to promote and protect the public's well-being by providing high-quality and efficient laboratory services and education. DLS, commonly known as Kentucky State Public Health Laboratory, performs over 3 million tests each year and collaborates with federal, state and local entities as well as Universities and other divisions in the Department. We are a high-complexity laboratory with the most stringent technical and quality requirements. DLS is regulated, accredited and inspected by multiple agencies. With a focus on safety, quality, compliance and support from business operations, the spectrum of testing on the human side ranges from infectious diseases and microbiology to newborn screening. In contrast, the environmental side ranges from microbiological and chemical testing on milk, food, air and water to wastewater testing and select agent testing as part of preparedness. We are proud that this sophisticated and complex lab has a team of highly skilled, talented, motivated scientists and support staff. They are the biggest asset that makes DLS critical, integral and at the forefront of public health work in the Commonwealth of Kentucky.

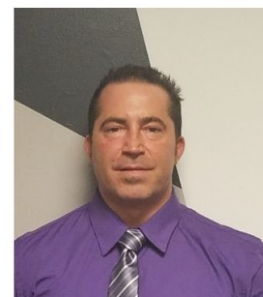
We are looking forward to some engaging discussions throughout these sessions. Thank you for taking the time to participate in our efforts to continue improving public health.

In good health,

Dr. Vaneet Arora & Matthew Johnson
DLS Medical Director & Division Director



Dr. Vaneet Arora

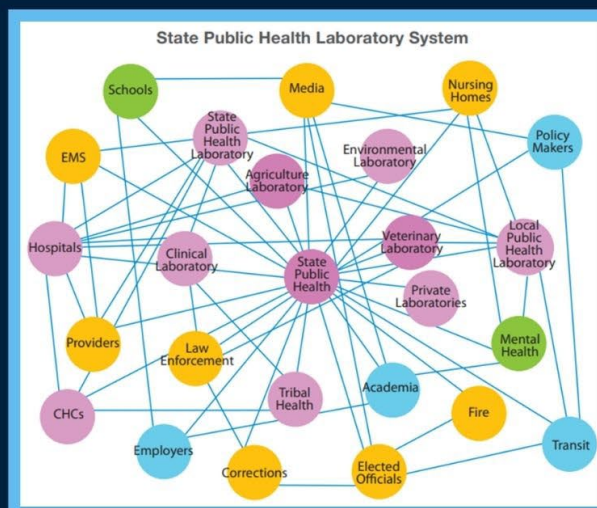


Matthew Johnson

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ABOUT THE L-SIP ASSESSMENT



WHAT IS AN L-SIP?

- An L-SIP is an APHL Quality Improvement Initiative with the goal of an improved public health laboratory system.
- Through a guided process and facilitated discussion, laboratories can take part in this performance evaluation and document system improvement suggestions from system partners.
- An L-SIP can assist in improving partner and laboratory communication and collaboration while working towards “gold standard” laboratory practices and services.

WHAT IS THE STATE PUBLIC HEALTH LABORATORY SYSTEM?

“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” (APHL, 2010).

HOW DO YOU PLAY A ROLE?

- As a valued public health partner within our Kentucky laboratory system, we encourage you to share your insights, experiences and feedback to continue improving our system. With this information, we can keep working towards a healthier Commonwealth.

APHL, 2022



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2025 KENTUCKY L-SIP ASSESSMENT

FACILITATORS



Kathryn Wangsness

Deputy Bureau Chief, Arizona State Public Health Laboratory

Kathryn Wangsness, MHA, is the Deputy Bureau Chief for the Bureau of State Laboratory Services (ASPHL) at the Arizona Department of Health Services (ADHS). Kathryn began her career at ADHS as a scientist in the Office of Chemistry performing testing on various samples. Since then, she has held roles as a Blood Alcohol consultant, Environmental Laboratory Certification Officer, Quality Assurance Officer and then Manager, and Office Chief of Support Services. In her current role, she leads the Offices of Chemistry, Laboratory Licensure and Certification, Support Services and Operations, and Environmental Health Epidemiology.



Genie Davis

Quality Assurance Director, Glen F. Baker (Arkansas) Public Health Laboratory

Genie Davis is the Quality Assurance Director at the Glen F. Baker Public Health Laboratory (formerly Arkansas Public Health Laboratory). She has been in the position for 4 years but has worked in the Quality Assurance section at the Public Health Laboratory for 18+ years. Genie is very passionate about public health and the importance of reliable, defensible results produced by the Public Health Laboratory. She served on the CLSI Quality Management Systems expert panel for 3 years and was part of the planning committee for the 2023 APHL Annual Conference. Genie is also a national and international CAP inspector. She holds a Bachelor of Science from University of Arkansas at Little Rock. She started her professional career at a private environmental testing laboratory in the Biomonitoring department- moving from a testing analyst to manager within 8 years of employment. In her spare time, Genie enjoys traveling, doing yoga, and reading. Her favorite time is spent with her teenage goddaughter, Lauren, and 2 kitties – Bats and Tiger Lily.



Kara Levinson

Laboratory Director, Tennessee Division of Laboratory Services

Kara Levinson, PhD, MPH, D(ABMM), received her BS in microbiology from Northern Arizona University, her MPH in hospital and molecular epidemiology from the University of Michigan and served as an APHL Emerging Infectious Diseases fellow at the Iowa public health laboratory. She completed her PhD in immunology and infectious disease at the New York State Department of Health, Wadsworth Center, where she studied vaccine development and host-pathogen interaction in *Vibrio cholerae*. After obtaining her PhD, she completed a CPEP fellowship in clinical microbiology at the University of North Carolina at Chapel Hill. She then joined the Centers for Disease Control and Prevention as a Laboratory Leadership Service fellow, where she focused on laboratory management and outbreak response at the New Hampshire public health laboratory. She joined the Tennessee public health laboratory as Deputy Director in 2020 and began her current role as Lab Director in 2022.

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2025 KENTUCKY L-SIP ASSESSMENT

PUBLIC HEALTH IN THE COMMONWEALTH

★ 4 ★

MILLION

According to 2020 US Census data, there are approximately 4,505,800 Kentuckians.

Kentucky is home to 120 counties, and is the 36th largest state in the US.



Our Virology lab can detect a wide range of pathogens, from respiratory viruses to those linked to STIs, and the presence of rabies in mammals.



Each year DLS records approximately 60 positive cases of TB, the world's deadliest infectious disease.



KY DLS Newborn Screening tests for 57 genetic disorders ranging from thyroid issues to potentially fatal conditions.



The DLS Business Operations Branch manages approximately 11 million dollars per fiscal year.



KY Environmental Microbiology conducts dairy product testing, including for the 3 largest milk suppliers in KY, as well as regulatory food testing for outbreak investigations, in addition to wastewater surveillance for respiratory pathogens.



Global Preparedness supplies 3,000+ testing and collection kits annually, along with media for outbreak response, as well as rapid detection of biothreats and emerging infectious agents to protect public safety.



On an annual basis, the KY state public health laboratory performs approximately 3.1 million tests.

DLS Environmental Chemistry can detect ~150 chemicals and metals, such as pesticides, mercury, and lead in food, water, workplaces, and homes.



DLS Sequencing Section provides capacity to discover, track, and prevent foodborne outbreaks; as well as surveillance on SARS-CoV-2 and other viral pathogens to determine lineages and monitor mutations.

Sources: 2020 United States Census Bureau, County Health Rankings, KY Division of Laboratory Services Internal Data

DLS Quality, Compliance, and Safety Branch ensures quality assurance and quality improvement, compliance with standards of accrediting agencies, and promotes a culture of safety for handling biological specimens and hazardous chemicals.



2025 KENTUCKY L-SIP ASSESSMENT

THE 10 ESSENTIAL SERVICES OF PUBLIC HEALTH

1. Assess and monitor population health status, factors that influence health and community needs and assets.

2. Investigate, diagnose and address health problems and hazards affecting the population.

3. Communicate effectively to inform and educate people about health, factors that influence it, and how to improve it.

4. Strengthen, support and mobilize communities and partnerships to improve health.

5. Create, champion and implement policies, plans, and laws that impact health.

6. Utilize legal and regulatory actions designed to improve and protect the public's health.

7. Assure an effective system that enables equitable access to the individual services and care needed to be healthy.

8. Build and support a skilled public health workforce.

9. Improve and innovate public health functions through ongoing evaluation, research and continuous quality improvement.

10. Build and maintain a strong organizational infrastructure for public health.

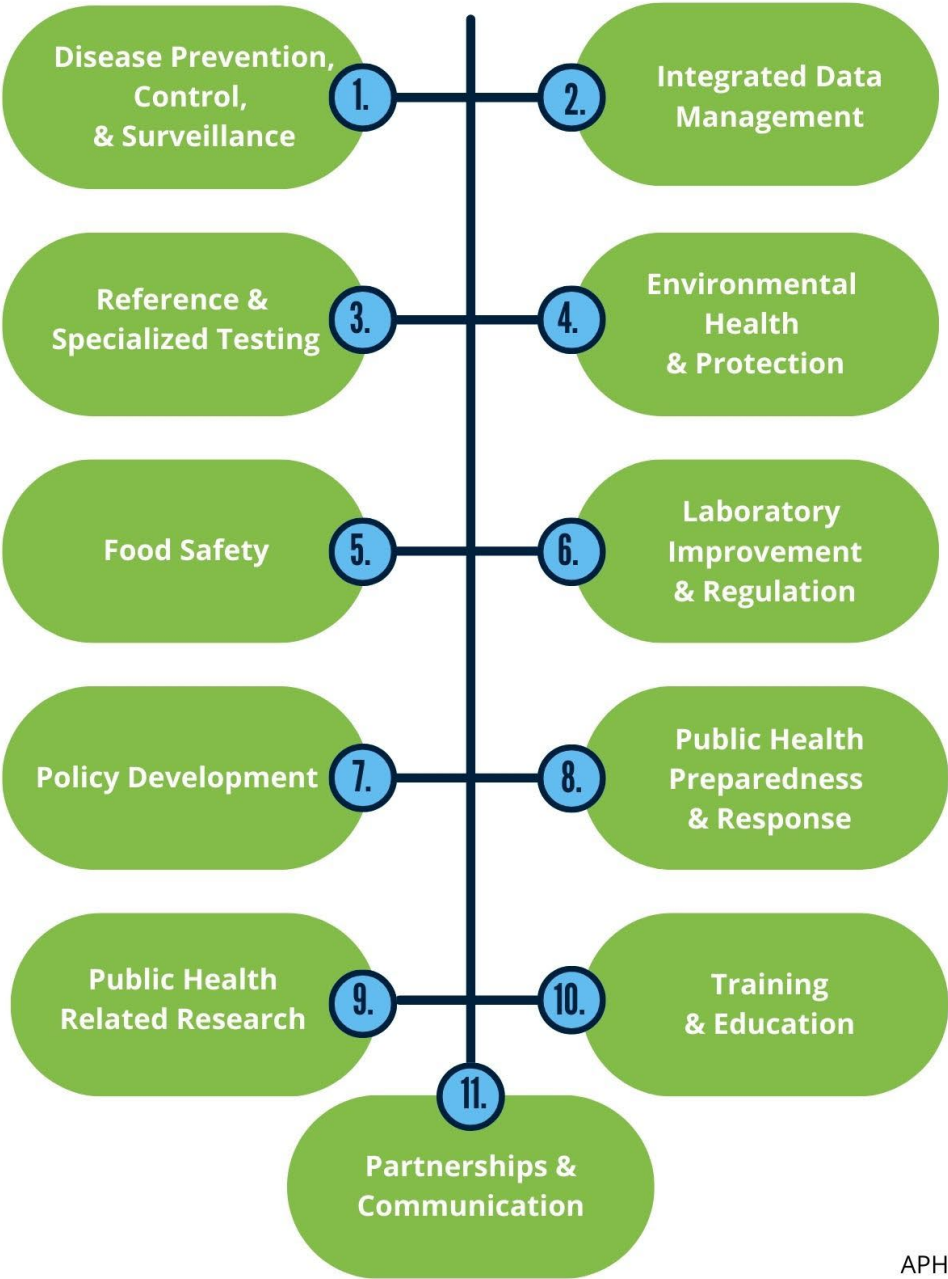
APHL, 2022

7



2025 KENTUCKY L-SIP ASSESSMENT

THE 11 CORE FUNCTIONS OF A PUBLIC HEALTH LABORATORY



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APHL, 2022

2025 KENTUCKY L-SIP ASSESSMENT

AIHA	American Industrial Hygiene Association
APHL	Association of Public Health Laboratories
BSL	Biosafety Level
CAP	College of American Pathologists
CHFS	Cabinet for Health and Family Services
CLIA	Clinical Laboratory Improvement Amendments
COOP	Continuity of Operations Plan
COT	Commonwealth Office of Technology
CST	Civil Support Team
DLS	Division of Laboratory Services
FEMA	Federal Emergency Management Agency
HAI	Hospital Acquired Infection
ICS	Incident Command System
IMS	Inventory Management System
ISO	International Organization for Standardization
KDPH, DPH	Kentucky Department for Public Health
LIMS	Laboratory Information Management System
LPA	Laboratory Program Advisor
MOU	Memorandum of Understanding
NBS	Newborn Screening
NFPA	National Fire Protection Association
NIMS	National Incident Management System
OATS	Office of Application Technology Services
PHL	Public Health Laboratory
QA	Quality Assurance
QC	Quality Control
QI	Quality Improvement
WMD	Weapons of Mass Destruction

COMMONLY USED ACRONYMS

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2025 KENTUCKY L-SIP ASSESSMENT

DLS LEADERSHIP CONTACT LIST

DLS Phone Number: 502-564-4446		
Name	Role at DLS	Phone Number
Dr. Vaneet Arora	Medical Director	502-782-7725
Matthew Johnson	Division Director	502-782-7729
Rachel Zinner	Assistant Director	502-782-7754
Emy Womack	Business Operations Branch Manager	502-782-7742
Tim Tracy	Procurement Section Supervisor	502-782-7735
Robin Cotten	Quality, Compliance, & Safety Branch Manager	502-782-7711
Beth Johnson	Global Preparedness Environmental Branch Manager	502-782-7728
Ashley Aurand-Cravens	Environmental Microbiology Section Supervisor	502-782-7726
Bebin Shrestha	Environmental Chemistry Section Supervisor	502-782-7745
Leigh Ann Bates	Preparedness Section Supervisor	502-782-7703
Lea Mott	Newborn Screening Branch Manager	502-782-7734
Amy Smith	Newborn Screening Metabolic Chemistry Section Supervisor	502-782-7747
Darrin Sevier	Newborn Screening Molecular Chemistry Section Supervisor	502-782-7743
Sarah Preston	Microbiology Branch Manager	502-782-0127
Teresa Fields	Virology Section Supervisor	502-782-7718
Rhonda Lucas	Bacteriology Section Supervisor	502-782-7731
Karim George	Sequencing Section Supervisor	502-782-7721

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2025 KENTUCKY L-SIP ASSESSMENT

Notes:

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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Appendix G: KDPH DLS L-SIP Save the Date Flyer

**KENTUCKY
LABORATORY SYSTEM
IMPROVEMENT
PROGRAM
(L-SIP) ASSESSMENT**

**SAVE THE
DATE**

THURSDAY, MARCH 6TH, 2025
8:00AM-4:30PM EST
KSU RESEARCH FARM: 1525 MILLS LN.
FRANKFORT, KY 40601



Appendix H: KDPH DLS L-SIP Welcome Sign

Welcome!

Kentucky Department for Public Health
Division of Laboratory Services

Laboratory System Improvement Program Assessment

March 6, 2025



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APHL

Appendix I: KDPH DLS L-SIP Evaluation Survey

KY L-SIP Evaluation & Feedback Form

March 6, 2025

Thank you for attending the KY L-SIP! Please provide your feedback within this survey. Responses are anonymous and confidential.

* Required

1. Please rate your responses on a 5 point scale regarding **utility of the meeting held.** *

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The established L-SIP meeting objectives were met	☐	☐	☐	☐	☐
Attendee dialogue was useful	☐	☐	☐	☐	☐
I support the public health efforts being made	☐	☐	☐	☐	☐
Next steps following the L-SIP are clear	☐	☐	☐	☐	☐
The L-SIP was a good use of my time	☐	☐	☐	☐	☐

2. Please rate your responses on a 5 point scale regarding **meeting arrangements**. *

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Advance notice of the meeting	☐	☐	☐	☐	☐
Email communications	☐	☐	☐	☐	☐
Facility accommodations	☐	☐	☐	☐	☐
Advance materials shared before meeting were useful	☐	☐	☐	☐	☐
Advance materials were received with time to review	☐	☐	☐	☐	☐

3. Please rate your responses on a 5 point scale regarding **meeting flow**. *

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
L-SIP started on time	☐	☐	☐	☐	☐
Goals and objectives of the L-SIP were clear	☐	☐	☐	☐	☐
Agenda was followed or appropriately amended	☐	☐	☐	☐	☐
Facilitation of discussions was effective	☐	☐	☐	☐	☐
The "right" people were in attendance	☐	☐	☐	☐	☐

4. What aspects of this L-SIP meeting contributed most to its success?

5. What areas of this L-SIP meeting do you think could be enhanced and improved?

6. Would you participate in another L-SIP assessment? *

- ☐ Yes
- ☐ No
- ☐ Undecided at this time

7. Did you feel that your contributions were needed and valued at the L-SIP? *

- ☐ Yes
- ☐ No
- ☐ Undecided at this time

8. Did you see the L-SIP as a helpful tool and process to better the delivery of public health laboratory services in KY? *

- ☐ Yes
- ☐ No
- ☐ Undecided at this time

9. Would you be willing to participate in an L-SIP reassessment in approximately 5-10 years? *

- ☐ Yes
- ☐ No
- ☐ Undecided at this time

10. Please provide any other comments you would like to share regarding the L-SIP.

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 Microsoft Forms

Appendix J: KDPH DLS L-SIP Participation Certificate



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CERTIFICATE

Of Participation

This certificate is granted to

Name

for your active participation and contributions to the
2025 DLS Laboratory-System Improvement Program Assessment

March 6th, 2025

Date



Matthew Johnson
DLS DIVISION DIRECTOR