



Glen F. Baker
Public Health Laboratory

Laboratory System Improvement Program (L-SIP) Assessment Report

April 2024



Acknowledgments

A big thank you to:

Tina Su and the Association of Public Health Laboratories (APHL) team for their unwavering support and dedication throughout this entire assessment process.

Dr. Katie Seely, Laboratory Director, for exemplifying leadership that encourages open communication and collaboration for the betterment of the entire state laboratory system.

All Arkansas state laboratory system partners who took the time to participate in our first ever L-SIP assessment.

We could not have accomplished this without you.



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I. Executive Summary

This report provides an in depth review of the entire Laboratory System Improvement Program (L-SIP) assessment process conducted on April 25, 2024 on behalf of the Glen F. Baker Public Health Laboratory (AR PHL). Through a guided process of system evaluation, the purpose of the L-SIP assessment is to identify areas for system improvements as well as strengthen state laboratory system partnerships.

A total of 38 AR PHL system partners participated in the AR PHL L-SIP assessment on April 25, 2024. System partners refers to all organizations and entities that work with the state public health laboratory in any way. Therefore, the AR PHL is just one example of a system partner that plays a vital role within the larger state laboratory system. Other examples of system partners include epidemiologists, first responders, physicians and clinicians, public health educators, health department employees, and environmental professionals in water, food and air surveillance. Specific system partners that were present for the AR PHL L-SIP included representatives from the Arkansas Department of Health (ADH), Arkansas Children's Hospital, Conway Regional Medical Center, Arkansas State Crime Laboratory, Arkansas Department of Agriculture, Arkansas Department of Veteran Affairs, the University of Arkansas for Medical Sciences (UAMS), and the Arkansas Nurses Association.

Through a series of facilitated discussions and the support of the L-SIP Performance Measurement Tool, each of these attending AR PHL system partners played a key role in the development of this final assessment report. The scores determined using the Performance Measurement Tool as well as major themes identified in the detailed discussion notes were used as indicators of laboratory system areas in need of attention and improvement. The key assessment themes that were identified included:

- Communication & Partnerships
- Implementation of New Technology & Data Reporting Systems
- Staff Training & Education
- System Evaluations & Regulations

The next steps of this assessment will be to address these highlighted areas through a variety of quality improvement projects in collaboration with other various system partners.

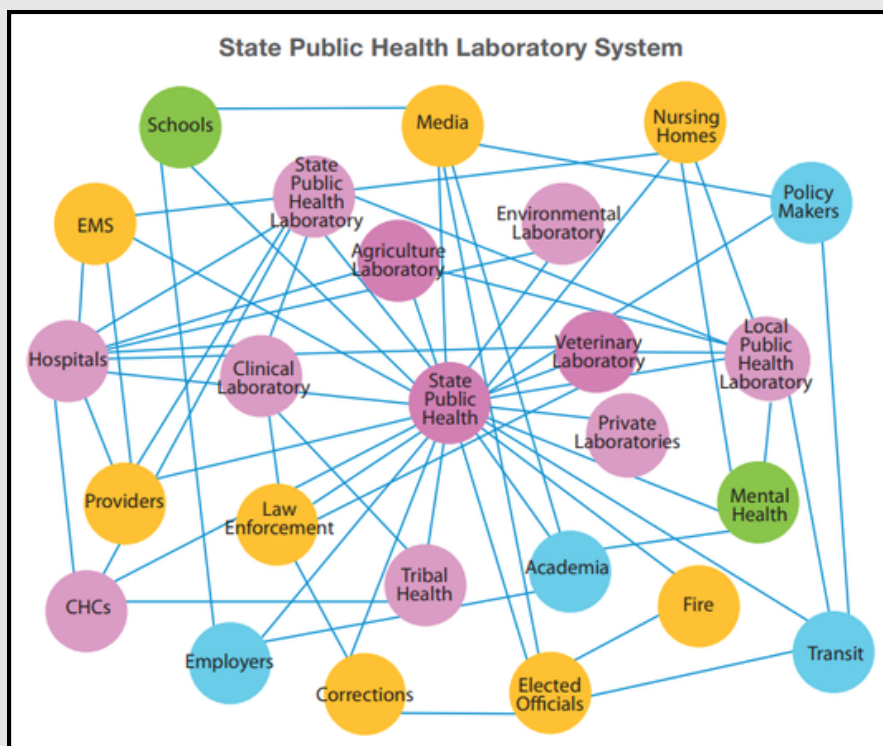
II. Introduction

On April 25, 2024, the Glen F. Baker Public Health Laboratory of Arkansas (AR PHL) collaborated with the Association of Public Health Laboratories (APHL) to conduct its first state-wide Laboratory System Improvement Program (L-SIP) assessment. According to the Association of Public Health Laboratories (APHL), the L-SIP assessment “advances the efficacy of state and local public health laboratory systems through a guided process of performance evaluation, system improvements, and periodic evaluation and reassessment”.¹ Not only is the L-SIP a powerful tool for identifying areas for system improvement, it is also used to strengthen system partnerships and communication. In short, the primary goals of conducting an L-SIP assessment include:

- 1) Assessing state laboratory system performance
- 2) Using data to plan for lab system improvements
- 3) Implementing improvement strategies
- 4) Periodically evaluating and re-assessing lab system performance

The phrase “laboratory system partners” refers to all participants involved in state laboratory testing, from those who initiate testing to those that use the test results. Some examples of state laboratory system partner categories include epidemiologists, first responders, physicians and clinicians, public health educators, health department employees, and environmental professionals in water, food and air surveillance.

The Glen F. Baker Public Health Laboratory plays a major role within the larger state public health laboratory system due to its involvement in areas such as disease surveillance and reporting, outbreak investigations, and emergency preparedness and response. The ongoing testing services and results delivered by the laboratory scientists within the AR PHL are essential for the protection and improvement of overall state and community health. Additionally, bidirectional communication and collaboration with other state laboratory system partners is critical for the continuation of accurate and timely test results.



1. Association of Public Health Laboratories. (n.d.) *Laboratory System Improvement Program*. <https://www.aphl.org/programs/QSA/performance/Pages/default.aspx>

III. Background

Framing Concepts

Used to support the entire assessment process was the APHL L-SIP Performance Measurement Tool, originally developed by public health laboratory experts and partners in 2002, and later revised in 2011 and 2022.² This assessment tool centers around the 10 Essential Public Health Services, incorporates all of the 11 Core Functions of State Public Health Laboratories,³ focuses on the overall state public health laboratory system rather than a single organization, and helps to measure the laboratory system against an optimal level of performance.

The 10 Essential Public Health Services:

1. Assess and monitor population health
2. Investigate, diagnose and address health hazards and root causes
3. Communicate effectively to inform and educate
4. Strengthen, support and mobilize communities and partnerships
5. Create, champion and implement policies, plans and laws
6. Utilize legal and regulatory actions
7. Enable equitable access
8. Build a diverse and skilled workforce
9. Improve and innovate through evaluation, research and quality improvement
10. Build and maintain a strong organizational infrastructure for public health

The 11 Core Functions of a Public Health Laboratory:

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 & Response
9. Public Health Related Research
10. Training and Education
11. Partnerships and Communication

2. Association of Public Health Laboratories. (2022) *L-SIP Performance Measurement Tool*
<https://www.aphl.org/aboutAPHL/publications/Documents/QS-2022-LSIP-Toolkit.pdf>

3. Association of Public Health Laboratories. (2024) *The Core Functions of Public Health Laboratories*
<https://www.aphl.org/aboutAPHL/publications/Documents/PHL-Core-Functions.pdf>

IV. Assessment Process

Prior to the L-SIP assessment day, a variety of decisions were made in order to ensure that this one-day assessment would be an effective and collaborative system evaluation for the Glen F. Baker Public Health Laboratory (AR PHL). Firstly, this involved the selection of a project coordinator and the formation of an internal L-SIP team to assist throughout the entire assessment process. The L-SIP team worked together to create a list of AR PHL system partners to invite and participate in this assessment, as well as securing a date and venue for the event. Over the next few months, the APHL L-SIP User Guide and Performance Measurement Tool were studied thoroughly and used to design a program for participants to reference on the day of the assessment (*see appendix A for the full L-SIP Program*).

As RSVP responses started to arrive, participants planning to attend were organized into 3 breakout groups (Group A, B, and C), each assigned to discuss 3 out of the 10 Essential Services listed on the previous page. This just left Essential Service #2, which was discussed as a collective group on the actual assessment day. The assigned Essential Services for each of the breakout discussion groups are listed below.

- **Group A:**
 - Essential Service #1: Assess and monitor population health
 - Essential Service #3: Communicate effectively to inform and educate
 - Essential Service #7: Enable equitable access
- **Group B:**
 - Essential Service #5: Create, champion and implement policies, plans & laws
 - Essential Service #9: Improve and innovate through evaluation, research and quality improvement
 - Essential Service #10: Build and maintain a strong organizational infrastructure for public health
- **Group C:**
 - Essential Service #4: Strengthen, support and mobilize communities & partnerships
 - Essential Service #6: Utilize legal and regulatory actions
 - Essential Service #8: Build a diverse and skilled workforce

Discussion facilitators and theme takers were also assigned to a breakout group prior to the assessment day. A total of 3 discussion facilitators, all employees from varying public health laboratories within the United States, and 5 theme takers, all employees from the Arkansas Public Health Laboratory (AR PHL), were assigned to a breakout discussion group. An L-SIP agenda was prepared and shared with all the expected participants, facilitators, and theme takers in the weeks leading up to the assessment day (*see appendix B for full agenda*), and a virtual L-SIP facilitator and note taker training session was hosted by an APHL employee prior to the assessment day as well.

Assessment Day:

A total of 38 AR PHL system partners were present on April 25, 2024 to participate in the L-SIP assessment hosted at the University of Central Arkansas (UCA) Brewer-Hegeman Conference Center. Attending system partners included representatives from the Arkansas Department of Health (ADH), Arkansas Children’s Hospital, Conway Regional Medical Center, Arkansas State Crime Laboratory, Arkansas Department of Agriculture, Arkansas Department of Veteran Affairs, the University of Arkansas for Medical Sciences (UAMS), and the Arkansas Nurses Association. The jobs of attending participants included experts in Health Information Technology (HIT), public health evaluation, patient care management, microbiology, toxicology, nursing, Newborn Screening (NBS), infection prevention, laboratory science education, quality improvement management, as well as healthcare technical and financial support.



Towards the end of each hour allotted for breakout group discussions to take place throughout the day, color-coded scoring cards were used among participants to measure how well the state laboratory system is performing the assigned Essential Services. The scoring options for participants are listed to the right.

After the first round of votes were complete, the discussion facilitators for each group would provide an opportunity for deliberation among participants followed by a second round of voting. The decided final scores for each discussed Essential Service were then documented by the discussion facilitator and theme takers within each breakout group. The final voting scores for each discussed Essential Service can be found on the following page.

In addition to these scores and detailed discussion notes, an evaluation form was completed by each of the attending participants towards the end of the assessment day. These evaluations revealed overwhelmingly positive reactions from participants about the opportunity to meet and discuss with system partners face-to-face, and that a majority would participate again in a future assessment event (*see appendix C for Evaluation Form*).

Scoring Options

Optimal Activity	Greater than 75% of the performance described is met within the public health laboratory system.
Significant Activity	Greater than 50%, but no more than 75%, of the performance described is met within the public health laboratory system.
Moderate Activity	Greater than 25%, but no more than 50%, of the performance described is met within the public health laboratory system.
Minimal Activity	Greater than zero, but no more than 25%, of the performance described is met within the public health laboratory system.
No Activity	0% or absolutely none of the performance described is met within the public health laboratory system.

V. Results

Essential Service #1	Scores
Key Idea 1.1.1	Significant
Key Idea 1.1.2	Optimal
Key Idea 1.1.3	Significant
Essential Service #2	Scores
Key Idea 2.1.1	Moderate
Key Idea 2.1.2	Significant
Essential Service #3	Scores
Key Idea 3.1.1	Moderate
Key Idea 3.1.2	Moderate
Essential Service #4	Scores
Key Idea 4.1.1	Minimal
Key Idea 4.2.1	Moderate
Key Idea 4.3.1	Significant
Essential Service #5	Scores
Key Idea 5.1.1	Significant
Essential Service #6	Scores

Key Idea 6.1.1	Moderate
Key Idea 6.1.2	Significant
Essential Service #7	Scores
Key Idea 7.1.1	Moderate
Key Idea 7.1.2	Significant
Essential Service #8	Scores
Key Idea 8.1.1	Moderate
Key Idea 8.2.1	Significant
Key Idea 8.2.2	Moderate
Essential Service #9	Scores
Key Idea 9.1.1	Moderate
Key Idea 9.2.1	Moderate
Key Idea 9.2.2	Moderate
Essential Service #10	Scores
Key Idea 10.1.1	Significant
Key Idea 10.1.2	Significant
Key Idea 10.1.3	Moderate

Essential Service # 1: 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**
- **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**
- **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: Significant**

Key Discussion Points/Next Steps:

- System partners discussed the challenges faced in rural healthcare and how not all labs within the state have the same data sharing and reporting capacities. There are some labs that share testing results electronically while many others provide paper reports.
- Newborn Screening (NBS) partners specifically mentioned the prevalence of reports sent by fax and how there are too many avenues for releasing patient results. They are also noticing a gap when it comes to providers having access to the baby's test results in time for the patient's first postpartum visit.
- Clinics within the laboratory system seem to be experiencing issues with the Greenway EHR system such as staff training gaps and information security concerns. System partners are currently working on transitioning all staff to use the current StarLIMS (version 12) and Lab Web Portal software. The group also mentioned the effectiveness of regular IT and QA system/software auditing to address staff concerns.
- Lessons learned on the importance of system partnership and cooperation from previous system collaborations were discussed. Examples include an E. Coli Shiga toxin outbreak in Northwest Arkansas and emergency preparedness efforts prior and during the 2024 total solar eclipse. NBS participants discussed the success of having routine meetings with lab personnel and nurses to ensure processes are running smoothly.
- The discussion group concluded with the need for more internal and external partnership meetings to discuss information exchange improvements. The group discussed the idea of forming an advisory group with system partners to discuss ways of getting information out easier to the public. The need for more submitter packaging and shipping training was also noted by several participants.

Essential Service # 2: Investigate, Diagnose, and Address Health Problems and 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: Moderate**
- **Key Idea 2.1.2:** The System has the necessary capacity and authority in place to rapidly respond to public health events.
 - **Score: Significant**

Key Discussion Points/Next Steps:

- The consensus for this discussion group was that the state laboratory system could be doing much better with partner communication and collaboration. Outbreak Response and Environmental Health partners noted major improvements in two-way communications over the years. A lack of communication when any changes within the laboratory system are made was also noted.
- Local Health Unit (LHU) clinicians expressed frustration about always feeling like the last to know when and why changes are being made. Educators in laboratory sciences discussed hopes of improving communication and collaboration with the AR PHL and other local labs within the state.
- There is a need for an updated sentinel laboratory contact list. A representative from the Office of Preparedness and Emergency Response (OPERS) expressed uncertainty about the right person to call next if they were unable to reach their first call. They also discussed the success of previous tabletop exercises and drills related to sudden outbreak response and communication procedures.
- Food Science partners requested that the laboratory system build its capacity to test environmental swabs so that the state can respond to outbreaks at a faster rate.
- Staff retention issues makes it difficult for system partners to know the right person to contact when a situation arises.
- The COVID-19 pandemic highlighted gaps in laboratory system communication strategies and point of contacts. Participants were uncertain if the current laboratory system would be able to handle another pandemic. On the other hand, NBS representatives discussed their proactive plan to utilize state police and the Emergency Operations Center (EOC) for transporting testing samples from remote locations if traffic became impassable during the total solar eclipse event. This example showcases the efforts that various system partners are making to improve communication and collaboration with one another. The need for an updated call down list was voiced by several participants once again.
- Supply chain issues were also identified with participants noting that they still run out of testing supplies at local health clinics post-pandemic.

Essential Service # 3: 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: Moderate**
- **Key Idea 3.1.2:** The System creates and provides educational opportunities to community partners.
 - **Score: Moderate**

Key Discussion Points/Next Steps:

- Health literacy is an important consideration when communicating with the public. ADH works to translate public health information into 3 languages (English, Spanish, and Marshallese), but there is a need for more translators and increased ADH marketing/messaging to the public.
- There is a need for an increase in community outreach that promotes local resources and utilizes trusted community leaders to influence health behaviors. Examples that were discussed included local churches, community pharmacies, and barber shops.
- Local legislators need more education and training on public health matters. Municipal League meetings are an example of a successful partnership gathering opportunity.
- An idea for a public health system app where people could opt in to send and receive text message alerts for better communication was discussed. A mentioned example included the CDC Health Alert Network (HAN) system.

Essential Service # 4: 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: Minimal**
- **Key Idea 4.2.1:** System members communicate in regular, timely, and effective ways to support collaboration.
 - **Score: Moderate**
- **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: Significant**

Key Discussion Points/Next Steps:

- A lack of formal partnership meetings between internal and external stakeholders was mentioned. Annual communication drills between the AR PHL and other system partners were suggested as well as the idea for a laboratory system/interagency newsletter.
- Partners have an understanding of their personal roles, but not so much their roles within the larger state laboratory system.
- Some partners are having success with system communication and collaboration for supply sharing purposes while others felt that it is hard to get the right information to the right people (one-sided communication).
- ADH Communication approvals take time and coordination. There is a need for increased information output through website and social media updates. Partners expressed a need for an updated ADH contact list and increased ADH webinars for clinical lab partners. More promotion is needed within the system for ADH training and outreach opportunities.

Essential Service # 5: 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
 - **Score: Significant**

Key Discussion Points/Next Steps:

- It is critical for system leadership to foster a culture of open communication and transparency with their staff. Participants expressed challenges with voicing their opinions and feeling heard by management and other system partners. Community-based partners should be included in discussions as well (e.g. NBS Parent-run community group).
- Mandatory Reporting Laws enable opportunities for system partner input. System partners should actively seek out and review new and existing health legislations.
- Increase use of the Staff Action Summary (SAS) and work on making the process less cumbersome.

Essential Service # 6: 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: Moderate**
- **Key Idea 6.1.2:** The System promotes compliance by all laboratories with regard to applicable laws and regulations.
 - **Score: Significant**

Key Discussion Points/ Next Steps:

- A majority of partners within the system have some sort of quality assurance checks, but this varies depending on the type of partner. Laboratory accreditation requirements ensure that protocols are being followed, and internal audits and quality practice trainings help to ensure regulatory compliance.
- Some labs within the system feel left out from law and regulation changes and decision making. Therefore, there is a need for increased communication with other labs regarding updates and changes in testing regulations.
- Training people takes time and money. Elected officials may not consider what resources are needed and what other programs may be impacted if they take resources away for something different. Better representation from various system partners could improve legislative decision making.
- Some system partners have better legislative representation than others. AR hospitals feel like they have the least say despite being affected the most, while the Nurses Association discussed having more input due to a larger amount of representation. The presence of federal lobbyists helps.
- Better promotion of AR PHL training resources for other labs and system partners regarding safe laboratory practices, packaging and shipping, and other relevant topics was noted.
- Leadership and management that encourages open communication and collaboration with partners is critical for system success.

Essential Service # 7: 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: Moderate**
- **Key Idea 7.1.2:** The System provides timely and accessible quality services.
 - **Score: Significant**

Key Discussion Points/Next Steps:

- There is a need for more grant research and writing skills to support system improvement opportunities.
- Allocation of funds can be challenging amongst the entire lab system. Funding allocations should focus more on prevention rather than treatment (e.g. diabetes diagnosis). It was noted that funding to increase A1C testing should be a system priority.
- Previous events confirmed the system's ability to continue testing during emergency situations. There is a need for increased promotion of local organizations that offer public health services and resources.
- More specimen submission information sharing with various system partners is needed. Some partners are submitting samples at their own expense. There is a need for increased promotion of the lab courier services. Partners and end users see gaps in test result turnaround times causing a delay in either diagnosis and treatment (or remediation if non-clinical).
- There is a need for system partners to increase communication with the public regarding available services, specifically drinking water testing.
- The importance of having corrective actions, root cause analysis, and multiple backup plans was also discussed.

Essential Service # 8: Build and Support a Diverse and Skilled Public Health Workforce

- **Key Idea 8.1.1:** The System maintains an environment to attract and retain diverse and highly qualified staff.
 - **Score: Moderate**
- **Key Idea 8.2.1:** The System works to assure a competent workforce by encouraging and supporting staff development through training, education, coaching and mentoring.
 - **Score: Significant**
- **Key Idea 8.2.2:** The System identifies and addresses current and future workforce shortage issues.
 - **Score: Moderate**

Key Discussion Points/Next Steps:

- There is a dire need to address state employee wages for the purpose of supporting a skilled public health workforce. Low wages, misrepresentation of salary ranges on job postings, and the absence of exit interviews are creating issues with staff retention.
- An increase in overall system collaboration for cross training opportunities in various public health areas is needed. It is critical that leadership supports transparency and open communication for this to take place.
- Increasing system collaborations with academia/universities and other labs could help to support a skilled public health workforce. Course transfers can be difficult between Arkansas (AR) universities which in turn could impact the abundance of the future workforce. It was also noted that some specialized testing areas require outsourcing which could create difficulties with keeping students interested in a particular area.
- Staff shortage makes it difficult for clinical laboratory scientists and employees to attend research and training conferences.
- Expanding the ADH career models/ladders for ADH employees and providing training opportunities with other system partners is needed.

Essential Service # 9: 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: Moderate**
- **Key Idea 9.2.1:** The System has adequate expertise and capacity to plan research and innovation activities.
 - **Score: Moderate**
- **Key Idea 9.2.2:** The System promotes research and innovative solutions.
 - **Score: Moderate**

Key Discussion Points/Next Steps:

- Leaders need to encourage system innovation, improvement, and open communication. This could be achieved by increasing survey development for employee feedback and ideas.
- It is important to ask the end users their opinions and ideas on needed quality improvements as well as documenting all system evaluations for future reference.
- The entire system could benefit from grant research and writing training opportunities.
- Increased communication with system partners regarding quality improvement initiatives taking place and an updated system contact list is needed.

Essential Service # 10: 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: Significant**
- **Key Idea 10.1.2:** The System's leadership acts ethically and strategically and communicates proactively to the public through different mechanisms.
 - **Score: Significant**
- **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: Moderate**

Key Discussion Points/Next Steps:

- Need to increase frequency of system partner meetings and improve partnerships with other labs and agencies throughout Arkansas.
- Lessons were learned from previous events (COVID-19 and solar eclipse preparedness) in regards to the importance of system communication and collaboration.
- Needed communication improvements include updating and improving usability of the ADH website, as well as increased promotion of communication avenues such as the ADH Podcast and agency newsletter.
- There is a need for sustained funding opportunities. It was noted that even when funding is available, there is not enough for acquiring expertise and instrumentation. Improved laboratory system collaboration could improve resource and knowledge sharing.

VI. Summary

In addition to the key points identified in each Essential Service group discussion, this report utilized components of a thematic analysis to identify reoccurring themes revealed during the evaluation of all assessment results. The major themes and related discussion points include:

1) Communication & Partnerships

- Frequent meetings with internal and external stakeholders encourages collaboration, helps to address communication issues, makes employees feel heard, and cultivates a successful work environment.
- Previous public health emergencies highlight the system's ability to collaborate and the importance of strengthening and maintaining partnerships for future events.
- Leadership that encourages open communication and collaboration with staff and other organizations is essential for improving system partnerships.
- Prioritize digital communication improvements for system partners such as an updated sentinel lab and ADH contact/call down list, improve usability of the ADH website, increase social media outreach, and develop a laboratory system newsletter.
- Increase public outreach and education with the help of local community leaders, social media, and culturally appropriate promotional designs using health literacy techniques and relevant language translations.

2) Implementation of New Technology & Data Reporting Systems

- Varying methods of reporting data (digital vs. paper) within the system increase the digital divide among staff and other stakeholders.
- Increase partnership meetings specific to discussing information exchange systems to address security concerns, staff training gaps, and software transition hesitancy.

3) Staff Training & Education

- Improve system partnerships with labs, universities, and other public health entities to increase cross training and resource sharing opportunities.
- Opportunities for grant research and writing skills training would be beneficial for the entire laboratory system.
- Employee retention impacted by low state wages and funding create gaps in expertise and training.

4) System Evaluations & Regulations

- Legislative changes in regulations can impact the entire system and should be monitored on an ongoing basis. Variations in size of system partner representation impact legislation input.
- Quality improvement initiatives occurring throughout the system should be shared with system partners and evaluated on an ongoing basis.
- Mandatory accreditations help to ensure that quality protocols are being followed.

VII. Appendix

A. L-SIP Program

GLEN F. BAKER PUBLIC HEALTH LABORATORY LABORATORY SYSTEM IMPROVEMENT PROGRAM (L-SIP) ASSESSMENT



THURSDAY, APRIL 25, 2024

UCA Brewer-Hegeman Conference Center

SPONSORED BY THE ASSOCIATION OF PUBLIC HEALTH LABORATORIES (APHL)

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INTRODUCTION

Dear Colleagues,

On behalf of everyone at the Arkansas Public Health Laboratory (AR PHL), thank you so much for joining us today and **welcome** to our first ever Laboratory System Improvement Program (L-SIP) assessment.

At the AR PHL, we provide testing for safe food and drinking water, detect inherited genetic disorders in newborns, and help safeguard Arkansans of all ages against a variety of infectious diseases. But, we couldn't do what we do without all of you.

It's my hope that this assessment will be as informative for you as it will be for all of us at the State Public Health Lab. Please feel free to reference this program during discussions, and let me or your discussion facilitator know if you have any questions during or after the assessment.

*Sincerely,
Dr. Katie Seely,
Laboratory Director*



About the L-SIP Assessment:

The Laboratory System Improvement Program (L-SIP) assessment was designed to help partners identify system strengths and gaps, and is used to facilitate the improved performance of state and local Public Health Laboratory Systems.

The L-SIP centers around the 10 Essential Public Health Services (*see pg. 4*), incorporates all of the 11 Core Functions of State Public Health Laboratories (*see pg. 5*), focuses on the overall state public health laboratory system rather than a single organization (*see pg. 6*), and supports the commitment to a process of continuous quality improvement.

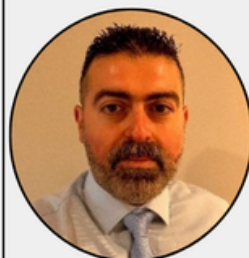
Source: APHL, 2010.

Meet the Facilitators



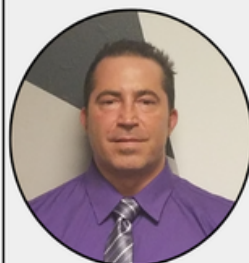
Crystal Barrett, Laboratory Systems Improvement and Training Manager
Virginia Public Health Laboratory

Crystal Barrett works for the Virginia Public Health Laboratory, in the Division of Consolidated Laboratory Services (DCLS), as the manager over Laboratory Systems Improvement and Training. She began her career with a BS in Medical Laboratory Science working at a large hospital. In 2004, Crystal entered DCLS as a scientist and then a Quality Assurance senior scientist. Pursuing a passion for training and education, Crystal earned a Master of Adult Education and Training and joined the DCLS training department. She also serves as adjunct faculty for a Medical Laboratory Sciences program. In her current role, she leads systems improvement initiatives throughout the lab by collaborating with staff, customers and partners at all levels to provide training, tools, and leadership for strategic priorities, lean initiatives, and workforce development.



Hyder Al Janabi, MPH, APHL Fellow - Food Safety Laboratories QA
Florida Department of Agriculture and Consumer Services (FDACS)

Hyder has a B.S. in Biology and a Master's degree in Public Health. Prior to the Florida Department of Agriculture and Consumer Services (FDACS) fellowship, he began his public health laboratory journey in 2010 as a Lab Technician, followed by becoming a Microbiologist in 2011. In 2015, Hyder became the Lab Manager and a member of APHL Mid-Atlantic Consortium (MAC). Between 2018-2021, Hyder served as the HIV Intervention Specialist Supervisor and in 2020, became the CLIA Director for the STD's program laboratory. More recently, Hyder began working on a project with the Florida Department of Agriculture and Consumer Services Food Safety laboratories' QA Unit to evaluate current Corrective Action Report Systems by implementing risk assessment and eventually improving the internal audit process.



Matt Johnson, Division Director
Kentucky Division of Laboratory Services

Matt is a graduate of the University of Kentucky where he studied Biological and Chemical Sciences. Prior to his career at the Division of Laboratory Services, Matt worked as a Clinical Laboratory Scientist at the University of Kentucky Hospital in the Microbiology Department. He has since dedicated the last 23 years of service to the Commonwealth of Kentucky at the Central Laboratory with the majority of his testing and management duties focused in the Bacteriology, Virology, and Serology sections of the laboratory. For the last several years, Matt has been an active member of APHL and is a graduate of the APHL Emerging Leader Program (Cohort 11).

The 10 Essential Public Health Services

- 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 diverse and 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.

Source: APHL, 2010.

The 11 Core Functions of State Public Health Laboratories

1. Disease Prevention, Control and Surveillance

2. Integrated Data Management

3. Reference and Specialized Testing

4. Environmental Health and Protection

5. Food Safety

6. Laboratory Improvement and Regulation

7. Policy Development

8. Public Health Preparedness and Response

9. Public Health Related Research

10. Training and Education

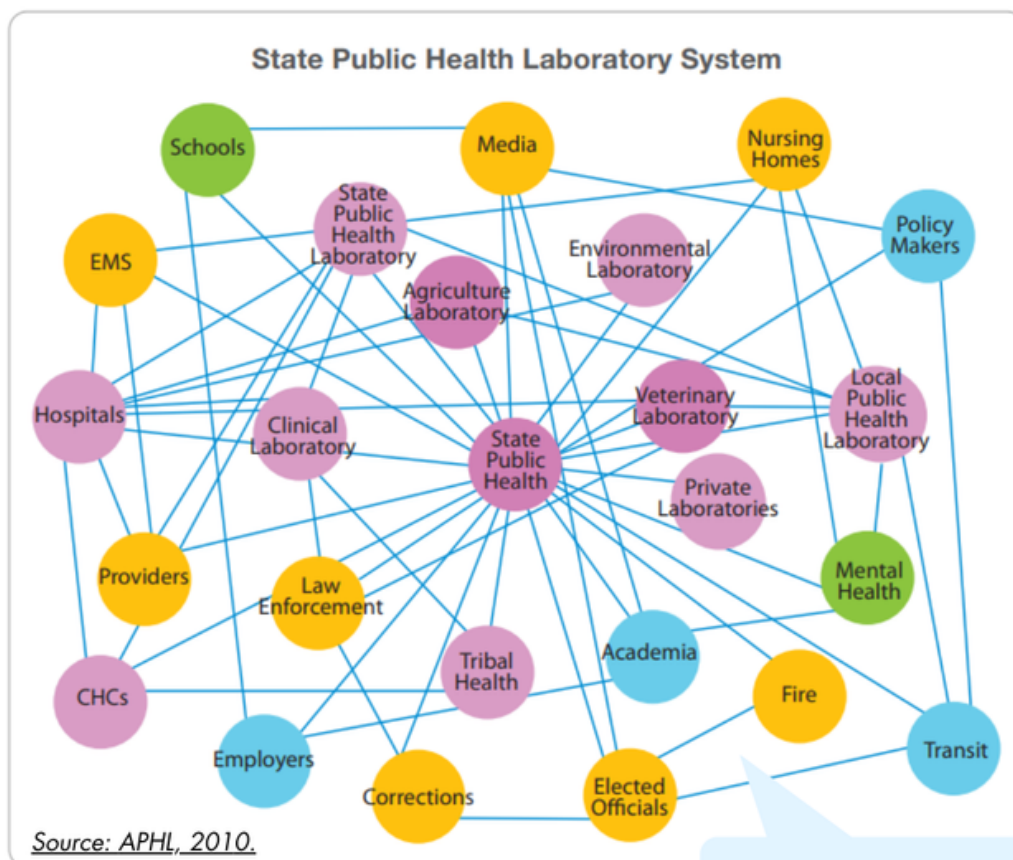
11. Partnerships and Communication

Source: APHL, 2010.

What is a State Public Health Laboratory System?

A State Public Health Laboratory System consists of all participants involved in public health testing, including those who initiate testing and those who ultimately use the test results. The System includes individuals, organizations, and agencies that are involved in assuring that laboratory data support the 10 Essential Public Health Services. Laboratory system partners such as epidemiologists, first responders, public health educators, environmental professionals in water, food and air surveillance, private clinical and environmental laboratories, and local laboratories all have a leadership role in developing and promoting the state public health laboratory system.

The chart below offers a visual representation of a State Public Health Laboratory System.



What essential state laboratory system category do you represent today?

Glen F. Baker Contact Information

General:

Email: adh.lab@arkansas.gov

Phone: 501-661-2220

Supervisor Contacts:

Dr. Katie Seely, Laboratory Director

Email: katie.seely@arkansas.gov

Phone: 501-280-4079

Genie Davis, QA Director

Email: eugenia.davis@arkansas.gov

Phone: 501-661-2363

Laura Bailey, Environmental Branch Chief

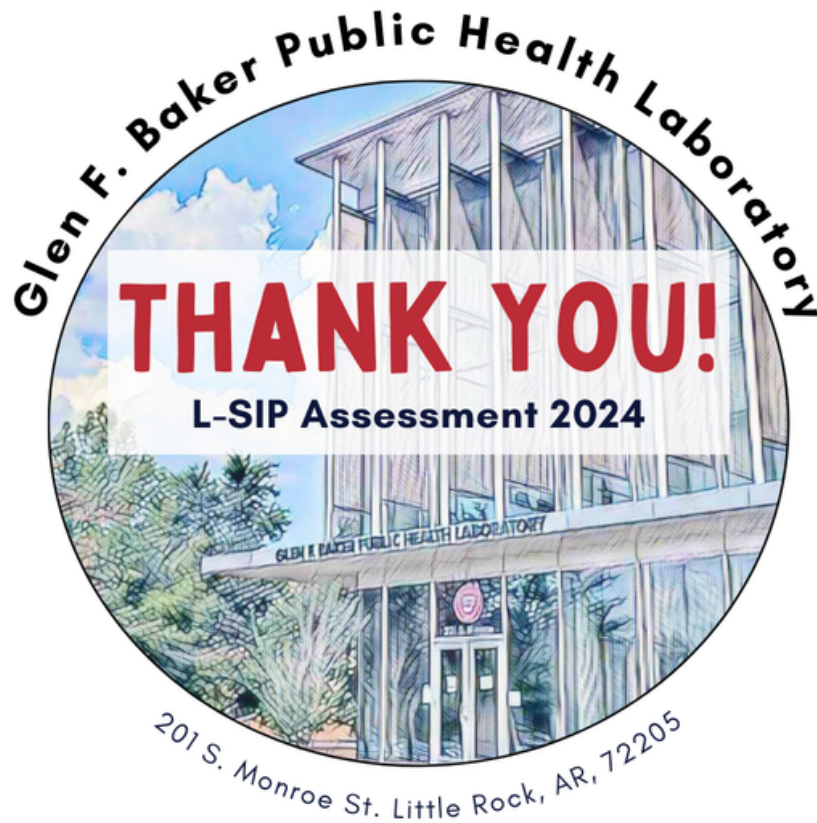
Email: laura.bailey2@arkansas.gov

Phone: 501-661-2429

Leslie Himstedt, Clinical Branch Chief

Email: leslie.himstedt@arkansas.gov

Phone: 501-661-2525



VII. Appendix

B. Assessment Day Agenda

Glen F. Baker Public Health Laboratory System Improvement Program (L-SIP) Assessment		
April 25, 2024		
Agenda		
Event	Time	Location
Check-in	8:00am	BHCC 111/113
Coffee & breakfast	8:00am	BHCC 111/113
Welcome & Introductions	8:30am	BHCC 111/113
Overview of the assessment day	9:00am	BHCC 111/113
Plenary: Essential Service (ES) #2 - Investigate, diagnose, & address health problems and hazards affecting population	9:15am	BHCC 111/113
Break	10:15am	
Breakout Sessions	10:30am	See below
Group A: ES #1 - Assess & monitor health		BHCC 101
Group B: ES #9 - Evaluation, research, and continuous quality improvement		BHCC 112
Group C: ES #8 - Build and support workforce		BHCC 114
Lunch (provided)	11:30am	
Breakout Sessions	12:30pm	See below
Group A: ES #7- Assure equitable access to health care services		BHCC 101
Group B: ES #10 - Build & maintain infrastructure		BHCC 112
Group C: ES #4 - Strengthen, support, & mobilize communities and partnerships		BHCC 114
Break	1:30pm	
Breakout Sessions	1:40pm	See below
Group A: ES #3 - Inform and educate		BHCC 101
Group B: ES #5 - Create, champion, and implement policies, plans, and laws		BHCC 112
Group C: ES #6 - Utilize legal and regulatory actions		BHCC 114
Break	2:40pm	
Summary	2:45pm	BHCC 111/113
Next Steps, Final Remarks, & Evaluation	4:00pm	BHCC 111/113
Adjourn	4:30pm	

VII. Appendix

C. Participant Evaluation Form

L-SIP Participant Evaluation Form



Thank you very much for your participation in today's Laboratory System Improvement Program (L-SIP) assessment for the Glen F. Baker Public Health Laboratory. Please take a moment to complete the following evaluation form. Your feedback is very important to us.

Please rate your responses on a 5 point scale by placing an "x" in the applicable box.

Utility of Meeting	Poor		Good		Superb
	1	2	3	4	5
Stated objectives of meeting were met					
Dialogue was useful & informative					
Next steps are clear					
Provided materials were useful					
Meeting was a good use of my time					
Flow of Meeting	Poor		Good		Superb
	1	2	3	4	5
Meeting started on time					
Agenda was clear and appropriately followed					
Discussion facilitation was effective					
A diversity of professionals were present at the event					

Comments:

What worked?

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What could be improved?

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- Would you participate in this process again? ☐ Yes ☐ No
- Was this assessment a helpful tool for you and/or your organization? ☐ Yes ☐ No
- Would you like to be contacted about volunteer opportunities and/or follow-up activities?
☐ Yes ☐ No If yes, please write your email address here: _____