

Arizona State Laboratory
Systems Improvement Program Reassessment
Summary Report



Arizona State Public Health Laboratory
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Phoenix, AZ

September 5th, 2024

Table of Contents

Acknowledgments.....	2
Executive Summary	3
Introduction	4
Background	4
The Ten Essential Services	5
The Eleven Core Functions.....	5
System Partners.....	6
Pre-assessment	7
Assessment Results	8
Web Session.....	26
Next Steps	26
Appendix A: Previous Assessment Highlights	27
Appendix B: Participant Feedback	28

Acknowledgments

The Arizona State Public Health Laboratory (ASPHL) extends its gratitude to the Association of Public Health Laboratories (APHL) for providing the funding, resources, and training essential for this reassessment.

Special thanks to the Kentucky Department of Public Health, and the Dallas County Health and Human Services for their facilitation. Support from the Indiana State Public Health Laboratory and Colorado State Public Health Laboratory is also recognized.

ASPHL also acknowledges the Maricopa County Sheriff's Office Training Center for hosting the event and thanks the Maricopa County Public Health Laboratory for the referral.

Executive Summary

On September 5, 2024, Arizona assessed its State Public Health Laboratory System for the second time. This evaluation utilized the Laboratory Systems Improvement Program Performance Measurement Tool developed by the Association of Public Health Laboratories (APHL) as part of its Quality Systems and Analytics Program.

The Arizona State Public Health Laboratory System aggregated scores from the assessment are as follows:

Optimal Activity: Greater than 75% of the activity described within the question is met within the state public health laboratory system.

- **Essential Service #3: Inform, educate, and empower people about health issues.**
- **Essential Service #7: Link people to needed personal health services and assure the provision of health care when otherwise unavailable.**

Significant Activity: Greater than 50%, but no more than 75% of the activity described within the question is met within the state public health laboratory system.

- **Essential Service #1: Monitor health status to identify and solve community health problems.**
- **Essential Service #2: Diagnose and investigate community health problems and health hazards in the community.**
- **Essential Service #4: Mobilize community partnerships and action to identify and solve health problems.**
- **Essential Service #6: Enforce laws and regulations that protect health and ensure safety.**
- **Essential Service #8: Assure a competent public and personal healthcare workforce.**
- **Essential Service #10: Research for new insights and innovative solutions to health problems.**

Moderate Activity: Greater than 25%, but no more than 50% of the activity described within the question is met within the state public health laboratory system.

- **Essential Service #9: Evaluate the effectiveness, accessibility, and quality of personal and population-based health services.**

Minimal Activity: - Greater than zero, but no more than 25% of the activity described within the question is met within the state public health laboratory system.

- **Essential Service #5: Develop policies and plans that support individual and community health efforts.**

The comparison of scores from the first assessment in 2010 to the second assessment in 2024 shows an increase in five essential services, no change in three services, and a decrease in two services. ASPHL will work with the Arizona Laboratory System to prioritize initiatives that enhance communication and outreach, implement a continuous quality improvement program, and expand access to services and collaboration efforts. These strategic focus areas will strengthen the capacity of the laboratory system in Arizona to adapt to public health needs and improve overall system reliance.

Introduction

The Laboratory Systems Improvement Program (L-SIP) is a quality systems initiative developed in 2006 by the Association of Public Health Laboratories (APHL) and the Centers for Disease Control and Prevention (CDC). The L-SIP aims to evaluate the performance of state public health laboratories, including partnerships both within and outside the laboratory network. This evaluation encompasses a thorough performance assessment, as well as follow-up and ongoing quality improvements.

The Arizona State Public Health Laboratory (ASPHL) first participated in this assessment in December 2010. That initial assessment identified key areas for improvement, such as monitoring, diagnosing, informing, policy development, and evaluation of health services, while also highlighting strengths in communication, regulatory enforcement, and workforce competency. On September 5, 2024, ASPHL held a reassessment with 32 partners, 28 of whom attended in person and 4 participated via a web session. This report provides a detailed overview of the planning, discussions, and results from the evaluation.

Background

The Arizona State Public Health Laboratory, along with the Arizona laboratory system, aims to protect the health of all Arizonans. ASPHL provides a multitude of services, including testing for infectious diseases, monitoring water quality, conducting emergency response testing, and ensuring the safety of food and drugs. The laboratory also plays a crucial role in disease surveillance and outbreak investigation to safeguard public health in Arizona.

The Laboratory System Improvement Program (L-SIP) aims to set performance standards for public health laboratory systems, promote collaboration among various partners, improve the quality of public health laboratory systems, and enhance the scientific foundation for public health practice improvement. This includes enhancing communication and collaboration, educating participants about interconnected public health laboratory activities, strengthening the network of partners, identifying strengths and weaknesses for quality improvement, articulating resources needed for system enhancement, and establishing a benchmark for practice improvements.

The Public Health Laboratory (PHL) System Standards were developed based on the following concepts:

- The Ten Essential Public Health Services ensure comprehensive coverage of public health actions at state and community levels.

- The eleven core functions of public health laboratories that underscore the capability of PHLs.
- The overall State public health laboratory system that includes all entities contributing to public health laboratory activities within a state.

The Ten Essential Services

The assessment was framed around the Ten Essential Public Health Services, which provide a holistic view of public health action at state and community levels:

1. Monitor health status to identify community health problems.
2. Diagnose and investigate health problems and hazards in the community.
3. Inform, educate, and empower people about health issues.
4. Mobilize community partnerships to identify and solve health problems.
5. Develop policies and plans that support individual and community health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services and ensure the provision of health care when unavailable.
8. Ensure a competent public health and personal health care workforce.
9. Evaluate the effectiveness, accessibility, and quality of health services.
10. Research for new insights and innovative solutions to health problems.

The Eleven Core Functions

ASPHL operates according to the 11 Core Functions established by APHL enabling the laboratory to fulfill the essential services:

1. Disease prevention, control, and surveillance
2. Integrated data management
3. Reference and specialized testing
4. Environmental health and protection
5. Food safety
6. Laboratory improvement and regulation
7. Policy development
8. Emergency response
9. Public health-related research
10. Training and Education
11. Partnerships and communication

System Partners

State Public Health Laboratories have internal and external stakeholders also known as system partners. Each state is encouraged to adopt the following model to suit its specific state system and utilize it for performance evaluation during the L-SIP assessment.

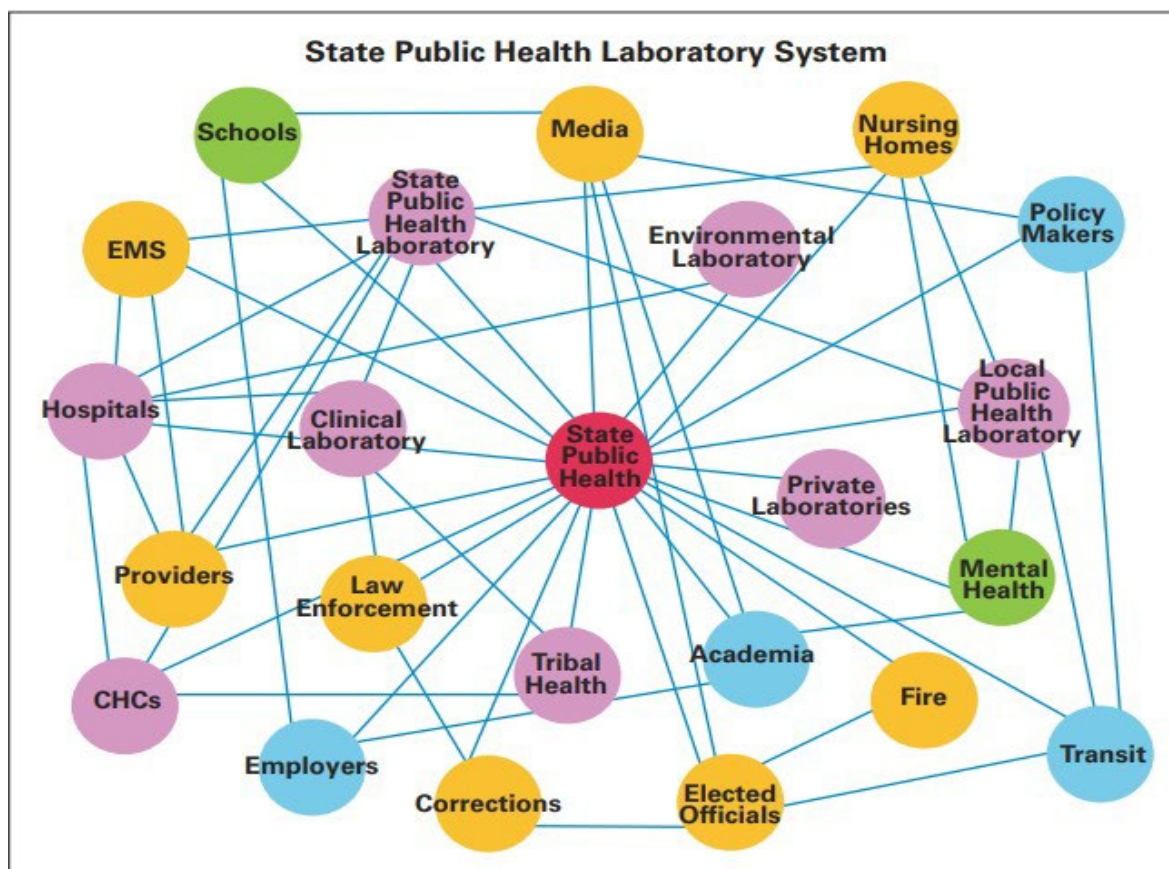


Figure 1: This graphic illustrates the state laboratory's integrated structure, highlighting the collaborative roles and functions that support public health statewide.

Together, the ten essential services, the eleven core functions, and the network of system partners form a comprehensive framework that enables laboratories within the State Public Health System to effectively address public health needs and improve community health outcomes.

Pre-assessment

The Arizona State Public Health Laboratory (ASPHL) began its L-SIP assessment process by appointing a lead coordinator from the APHL-CDC Fellowship Program. Working with the Deputy Chief and APHL's Quality Systems Manager, the fellow started planning in January 2024. The first task was to secure a low-cost facility and a suitable date for the assessment. After some challenges, the team, through a referral from the Maricopa County Public Health Laboratory, arranged to use the Maricopa Sheriff's Department Training Center at no cost. September 5 was confirmed as the assessment day, carefully selected to avoid conflicts with holidays and statewide events.

Next, the team identified assessment participants, facilitators, and support staff. ASPHL's 10 department chiefs were briefed on the assessment and contacts were selected. Invitations were sent to 100 participants via Eventbrite. After recognizing the need for broader access, the team also arranged a follow-up virtual session on October 1, 2024, for those unable to attend in person.

Facilitators were secured through ASPHL's professional network, with Dallas County and Kansas State Public Health Laboratories agreeing to facilitate. An internal call for volunteers at ASPHL resulted in 11 team members supporting assessment day as theme-takers and registrars as well as a photographer and a summarizer.

Final preparations included organizing catering, participant supplies, and assessment materials. Catering was selected based on RSVPs and dietary restrictions. The fellow prepared notebooks, folders, and lanyards for participants, while APHL's Quality Systems Manager supplied performance measurement tools and scorecards. The team set up the facility the day before the assessment, with leadership arriving early on the day of L-SIP to complete the final arrangements.



Figure 2: L-SIP Assessment participants and ASPHL team



Figure 3: Lab Director, Victor Waddell, kicking off the assessment

Assessment Results

On September 5th, 2024, 28 partners from around the state attended the L-SIP at the Maricopa County Sheriff's Office Training Center. Attendees represented a diverse range of organizations, including county health departments, clinical, environmental, and cannabis labs, consulting firms, hospitals, couriers, and non-profit organizations. This section outlines the assessment results, covering the scores, discussion points, and next steps.

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

	0	1	2	3	4
	No Activity	Minimal Activity	Moderate Activity	Significant Activity	Optimal Activity
Essential Service #1: Monitor Health Status				X	
Essential Service #2: Diagnose and Investigate				X	
Essential Service #3: Inform, Educate, Empower					X
Essential Service #4: Mobilize Partnerships				X	
Essential Service #5: Individual/Community Health		X			
Essential Service #6: Laws and Regulations				X	
Essential Service #7: Link People to Services					X
Essential Service #8: Competent Workforce				X	
Essential Service #9: Evaluate Effectiveness, Accessibility, Quality			X		
Essential Service #10: Research				X	

Figure 4: Aggregated results of the current laboratory system scored against the Ten Essential Services

Essential Service #1: Monitor Health Status to Identify Community Health Problems

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

Strengths

- Effective infectious disease response
- Timely and communicative system
- Optimal monitoring of congenital, inherited, and metabolic diseases

Areas for improvement

- Streamlined StarLIMS data distribution
- Enhanced data accessibility between partners
- Balanced clinical and environmental testing capabilities

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

Strengths

- Efficient testing and quick specimen transportation within city limits
- Standardized procedures
- Comprehensive system for parental care and referrals

Areas of improvement

- Expanded system for parental care and referrals

- Improved data access for doctors, balancing HIPPA compliance
- Broader testing capacity in the rural region

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: Moderate

Strengths

- Strong collaboration among partners
- Consistent methodology

Areas of improvement

- Enhanced feedback channels with medical professionals
- Improved affordability
- Expanded environmental and cannabis reporting

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: Significant

Strengths

- Quick reaction to issues
- Staff competency and education
- Resource expansion
- Improved communication for timely outreach.

Areas for improvement

- Proactive engagement with community partners
- Advancement in digital capabilities
- Enhanced utilization of resources



Key Idea 2.1.2

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

Score: Significant

Strengths

- Post-pandemic visibility improvements
- Enhanced public awareness

Areas of improvement

- Improved resource allocation

- Clear classification for response actions
- Enhanced public information relay
- Improved reporting processes for private labs regarding cannabis testing

Essential Services #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: Optimal

Strengths

- Clear and up-to-date webpage
- Timely health department communications
- Effective newborn screening outreach
- Adequate public information office

Areas for improvement

- Enhanced response to media inquiries
- Broader multimedia communication strategies



Key Idea 3.1.2

The System creates and provides educational opportunities to community partners.

Score: Optimal

Strengths

- Informative lab tours
- Timely heat advisory notifications
- Collaboration with Master of Public Health (MPH) schools for poison control education
- Opportunities through Arizona Biomedical Research Centre

Areas for improvement

- Improved distribution of information regarding cooling centers

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: Significant

Strengths

- Specialized Delivery Services (SDS) courier quarterly meetings with the State Health Lab
- Clearly defined roles in response settings
- Improved interaction between the lab and county health departments, particularly in epidemiology
- Conducting tabletop exercises

Areas for improvement

- Increase the frequency of meetings
- Clearly defined roles with cannabis facilities
- Enhanced communication strategies for partnerships

Key Idea 4.1.2

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

Score: Significant

Strengths

- Utilization of passive surveys
- Active feedback mechanisms
- Communication plans (i.e., on-call drills, press releases, social media, partner website updates, and health alert networks)

Areas for Improvement

- Variation in communication systems among entities
- Insufficient communication between cannabis organizations and the government

Key Idea 4.1.3

The PH Laboratory System works together to share existing resources and identify new resources to address health issues.

Score: Significant

Strengths

- Collaboration on grant applications
- State willingness to provide support
- Effective use of resources from partners

Areas for Improvement

- Increased communication from private labs
- Regular meetings among government entities

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 policy.

Score: Minimal

Strengths

- Quick response in addressing infectious diseases
- Collaborative efforts with the CDC
- Effective information relay and reportable results
- Engaging in discussions among partners prior to the implementation of new rules

Areas for improvement

- Limitations on public input during policy development
- Restricted release of cannabis industry data
- Lack of involvement from technical experts in rule-setting
- Limited power (authority) of the health department, resulting in overlooked input

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.

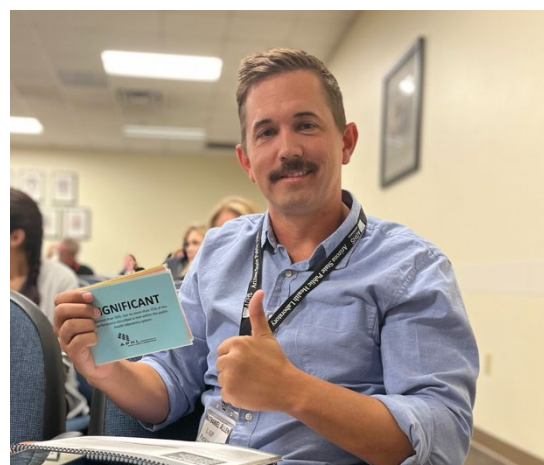
Score: Significant

Strengths

- Timely notification of new rules and regulations
- Established deadlines for reviews and comments

Areas for improvement

- Enhanced legislation response to technical input from the cannabis industry



Key Idea 6.1.2

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

Score: Optimal

Strengths

- Comprehensive educational materials for specimen collection
- Regular training on packing and shipping protocols
- Updates on compliance requirements
- Quarterly newsletters
- Detailed guides to lab services, reference manual, and analyte lists

Areas for improvement

- Increased leniency for failed proficiency tests
- Revisions needed for feedback timelines and implementation of changes
- Consideration of the role of private testing labs
- Clearer instructions on governing bodies involved

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: Optimal

Strengths

- Strong contractability
- Diverse capabilities of laboratory services
- Support provided for partners

Areas of improvement

- Clarified specifications for transport temperatures

Key Idea 7.1.2

The System provides timely and accessible quality services.

Score: Optimal

Strengths

- Open resources available from multiple organizations
- Direct access to DHS contact for poison control
- Accessible information on the ADHS website
- Rural communities benefit from resources in larger cities

Areas of improvement

- Improved access to resources in rural areas
- Strengthened relationships with tribal communities
- Clear terms of emergencies
- Enhanced timeliness and routine for service delivery

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

Strengths

- Availability of educational opportunities and professional development
- Annual conferences funded through grants
- Opportunities for fellowships and internships

Areas for improvement

- Enhanced compensation for government positions
- Innovative approaches to personnel management
- Increased training availability
- Reduction of high turnover rates
- Knowledge base gaps
- Addressing knowledge gaps within the workforce
- Flexible structures to encourage new ideas
- Competitive pay scale adjustments
- Mitigation of overwhelming workloads



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

Strengths

- Opportunities for student engagement

- Facility tours offered for learning
- Defined competencies for staff
- Conference participation encouraged
- Required specifications for private sectors training (e.g., cannabis)
- Internal databases for resource management

Areas for improvement

- Improved outreach across all departments
- More adaptable grants to support training and conferences
- Availability of webinars for ongoing education

Key Idea 8.2.2

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

Score: Significant

Strengths

- Knowledge retention strategies, such as hiring retired contractors
- Career ladders established for staff motivation
- Support provided for transition if funding ends
- Engagement with younger groups through Maricopa County's Educator Pro Connect

Areas for Improvement

- Enhanced workforce monitoring practices
- Development of succession planning strategies
- Attention to potential staff burnout
- Preparation for employee departures, especially in small organizations
- Improved hands-on training opportunities from universities

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

Strengths

- Proficiency testing conducted routinely
- CLIA accreditation maintained
- Compliance with regulatory standards ensured
- Regulation of clinical testing upheld
- ISO accreditation requirements met for cannabis laboratories
- Expansion of wastewater and mosquito testing for disease tracking and public alert systems post-COVID-19

Areas for Improvement

- Development of enhanced regulatory frameworks
- Improved evaluation and enforcement mechanisms for cannabis and environmental sectors
- Creation of responsive regulations for pesticides and toxins
- Timely updates to regulations governing wastewater testing

Key Idea 9.2.1

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

Score: Minimal

Strengths

- Allocation of grant funds for research initiatives



- Availability of resources for private laboratories

Areas for Improvement

- Increased focus on research and innovation within cannabis laboratories
- Provision of sufficient information and resources to support private laboratory research

Key Idea 9.2.2

The System promotes research and innovative solutions.

Score: Moderate

Strengths

- Ongoing quality improvement initiatives implemented
- Investment in equipment and a systemic approach to innovative solutions
- Collaborative efforts to address workplace challenges within clinical laboratories
- Opportunities for internal professional development

Areas for Improvement

- Enhancement of systemic resources
- Increased opportunities for career advancement
- Greater support for research initiatives
- Improved knowledge sharing within the network
- Constraints on external collaborations due to regulatory objectives

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

Strengths

- Well-established state laboratory system
- Active programs and partnerships with universities
- Established framework for collaboration among private laboratories and public health organizations
- Publication of a state laboratory newsletter
- Regular clinical laboratory meetings
- Compliance with federal government mandates
- Memoranda of understanding in place with other states and private laboratories

Areas for Improvement

- No deficiencies identified.

Key Idea 10.1.2

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

Score: Significant

Strengths

- Private clinical laboratories actively engage in legislative efforts to influence testing costs
- The Arizona Department of Health Services (ADHS) is regarded as ethical and professional
- Online dashboards are utilized for data dissemination.

- Public information systems and social media channels serve as effective communication tools
- Rapid dissemination process for cannabis recalls
- Actively shared information by poison control centers
- The state health laboratory conducts federally funded food testing surveillance and response.
- Members of the state health laboratory contribute to external Institutional Review Boards (IRBs)

Areas for Improvement

- Lack of transparency in the rule-making processes of the cannabis industry
- Public information regarding health and safety is not widely disseminated or known
- Absence of established metrics for evaluating public health communications
- Outreach efforts at local events lack visibility and recognition
- Consumer product safety testing at the state level is limited

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

Strengths

- Adequate resource availability for addressing public health emergencies
- Accessible technology and equipment for testing, along with sufficient system capacity to meet public health needs

Areas for Improvement

- Increased resources dedicated to safety measures
- Enhanced proactive engagement in public health initiatives
- Limited funding presents ongoing challenges
- Resource distribution could be optimized; significant crises often attract necessary funding and attention

Essential Service	2010 score	2024 score	Direction
#1	Optimal	Significant	↓
#2	Significant	Significant	-
#3	Moderate	Optimal	↑
#4	Minimal	Significant	↑
#5	Moderate	Minimal	↓
#6	Significant	Significant	-
#7	Minimal	Optimal	↑
#8	Significant	Significant	-
#9	Minimal	Moderate	↑
#10	Moderate	Significant	↑

The reassessment shows notable improvements in essential services #3, #4, #7, #9, and #10, which indicates progress in the effectiveness and responsiveness of public health initiatives. Notably, essential service #3, which focuses on effective communication and education, has transitioned from a moderate to an optimal score, highlighting improvements in outreach and information dissemination.

In contrast, essential services #1 and #5 have shown a decline, suggesting areas that require renewed focus and resources. Service #1, related to monitoring health status, dropped from optimal to significant, indicating potential challenges in disease surveillance and trend analysis. Service #5's decline from moderate to minimal underscores the need for better policy development and stakeholder engagement.

Essential services #2, #6, and #8 remained consistent, reflecting stability in investigating health problems and supporting a skilled workforce.

Web Session

Following the L-SIP assessment, the team organized a web session that included four additional participants: representatives from a hospital, rural county health departments, and a health diagnostic partner. During the two-hour remote meeting, these participants provided valuable feedback, which was incorporated into the discussion for each essential service.

L-SIP Overview

The Laboratory Systems Improvement Program (L-SIP)

- An APHL quality systems initiative that aims to enhance the capability and efficiency of public health laboratories nationwide.
 - Based on the 10 essential services
 - Focus on the overall public health laboratory system

Mission: To establish a system that measures the performance of public health laboratory systems and supports their continuous improvement.

Vision: A healthy world through improved public health practice and highly functioning and effective laboratory systems.

APHL

ADHS PREPAREDNESS
Arizona State Public Health Laboratory

Video call participants: Kathryn Wangsness, Terina Su, and Solomon Demile.

Next Steps

The 2024 L-SIP reassessment highlighted the Arizona laboratory systems' notable successes in public health laboratory operations while pinpointing areas needing development. The evaluation revealed significant advancements in essential services, particularly in communication, health monitoring, and community engagement. System partners prioritized improvements in workforce support and digital infrastructure to address existing gaps and enhance service delivery. The Arizona State Public Health Laboratory will incorporate this feedback into a strategic plan designed to reinforce the laboratory system's resilience, efficiency, and accessibility, ensuring it is well-equipped to meet evolving public health challenges.

References

- APHL Laboratory System Improvement Program User Guide, January 2023.
- Arizona Laboratory System Laboratory System Improvement Program (L-SIP) Assessment Report, December 2010.
- Core Functions and Capabilities of State Public Health Laboratories: A Report of the Association of Public Health Laboratories, September 2002.

Appendix

Appendix A: Previous Assessment Highlights

The 2010 Laboratory System Improvement Program (L-SIP) assessment convened 52 public health partners from Arizona to evaluate the state's Public Health Laboratory System. This assessment reviewed performance across the Ten Essential Public Health Services, identifying strengths as well as opportunities for targeted improvements.

Key Findings

- **High-Scoring Essential Services:** Essential services such as "Monitoring Health Status" and "Assuring a Competent Workforce" received high scores, reflecting Arizona's established processes in infectious disease surveillance, newborn screening, and workforce development.
- **Moderate to Minimal Scoring Services:** Several services, including "Mobilizing Partnerships" and "Evaluating Health Service Quality," scored at moderate to minimal levels, indicating limited community engagement and communication challenges among partners.

Primary Challenges Identified

- **Workforce Development:** Issues in recruitment, retention, and knowledge transfer emerged as prominent challenges, particularly with an aging workforce and limited new talent entering the public health field.
- **Communication and Outreach:** The assessment highlighted a need for enhanced communication strategies and feedback mechanisms, especially for rural areas, to improve information dissemination and partner engagement.
- **Funding and Resource Limitations:** Funding constraints affected training, technological upgrades, and outreach programs, underscoring the need for increased resources to support essential services.
- **Policy and Regulatory Alignment:** Participants noted a disconnect between scientific findings and policy execution, emphasizing a need for clearer communication between the laboratory system and policymakers.

Next Steps Identified in 2010

Based on the assessment findings, the 2010 L-SIP outlined key recommendations to strengthen Arizona's public health laboratory system:

1. **Enhance Workforce Training and Retention:** Strengthen career development initiatives and collaborations with educational institutions to attract and retain skilled professionals.
2. **Strengthen Communication Channels:** Establish centralized communication systems to facilitate information-sharing and improve coordination across the system, particularly during public health responses.
3. **Foster Strategic Partnerships:** Develop strategic partnerships to enhance resource-sharing and boost the laboratory system's response capacity.

4. **Expand Community Outreach and Education:** Increase public awareness of laboratory services through digital platforms and targeted health campaigns within public health networks and communities.
5. **Advocate for Resources and Policy Support:** Pursue stable funding sources to ensure continuous improvements and advocate for policies aligned with scientific and public health priorities.

Appendix B: Participant Feedback

Utility of meeting	Poor		Good		Superb	
	1	2	3	4	5	Average Score
Stated objectives of meeting were met				16	10	4.6
Dialogue was useful			1	6	19	4.7
I support the efforts being made				5	21	4.8
Next steps are clear			6	10	10	4.2
Meeting was a good use of my time				10	16	4.6
Meeting arrangements	Poor		Good		Superb	
	1	2	3	4	5	
Advance notice of the meeting			1	6	19	4.6
Meeting room accommodations			1	6	17	4.7
Advance materials for meeting were useful		2	2	7	14	4.6
Advance materials were received with time to review		3	5	5	13	4.3
Flow of meeting	Poor		Good		Superb	
	1	2	3	4	5	
Started on time		1	3	10	12	4.1
Clear objectives for meeting			2	8	16	4.2
Agenda followed or appropriately amended			1	7	18	4.5
Facilitation was effective			1	5	20	4.7
The "right" people were at the meeting			6	8	12	4.1

Overall	Yes	No				
Would you participate in this process again?	25					
Was this a helpful tool and process?	25					

What worked?

- Overall discussion
- Structure and organization
- Clear and easy-to-follow guidance

What could be improved?

- Participation and representation from more organizations
- Clarity on the system used to assess
- Decisiveness in group setting