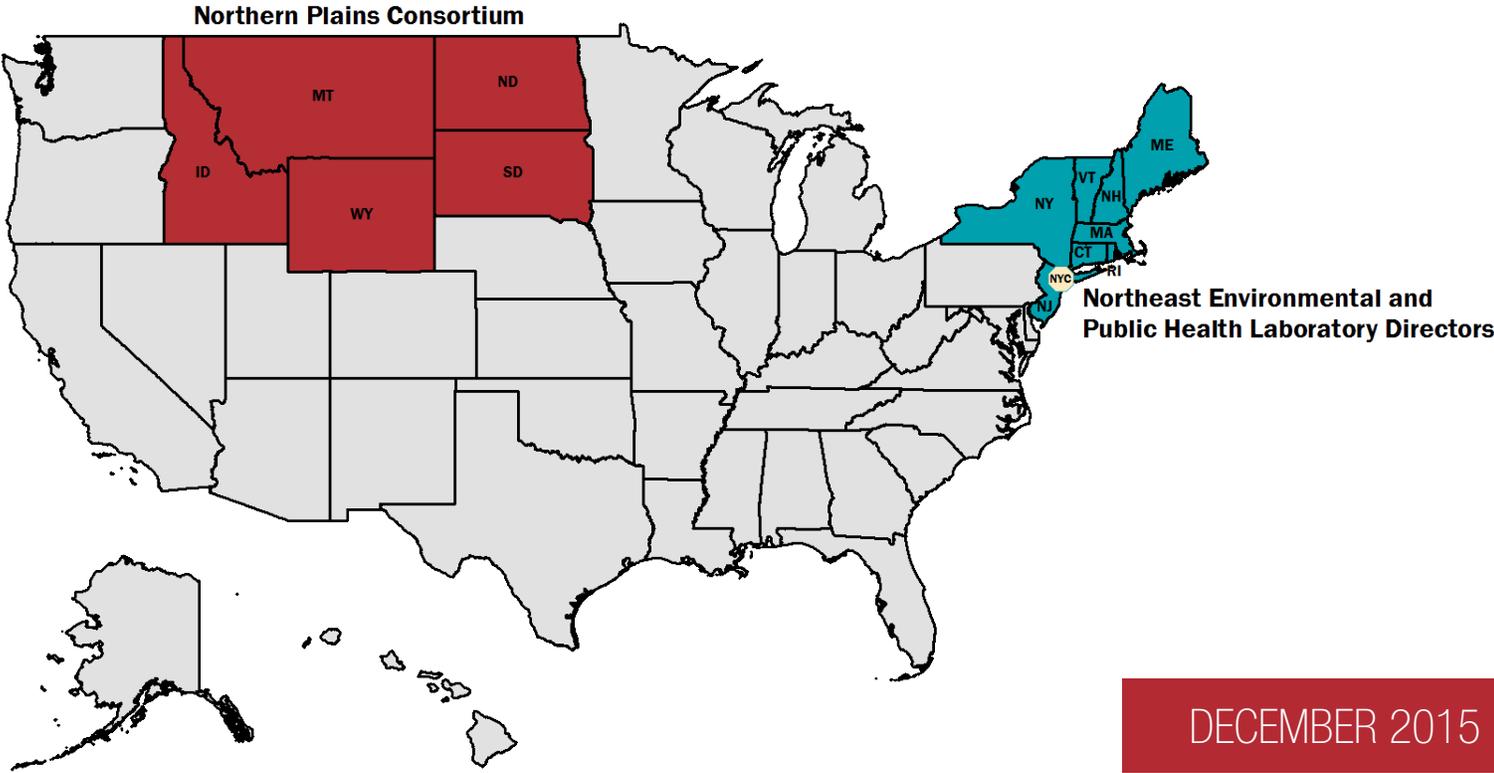


Regional Networks and Ensuring Future Access to Comprehensive Public Health Laboratory Testing Services:

An APHL/CDC Consultation

FINAL REPORT



DECEMBER 2015

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Table of Contents

Executive Summary.....	4
Purpose and Background.....	6
Introductions.....	8
Figure 1: Value of Regional Networks	8
Existing Network Models	8
State-directed Network Models	8
Table 1: State-Directed Network Models	9
CDC Program Models	10
Table 2: CDC Program Models	10
Best Practices among Existing Models	11
Table 3: Best Practices among Existing Models	11
Challenges and Mitigation Strategies	12
Table 4: Top 3 Identified Challenges and Mitigation Strategies	13
Components of a Strategy for Regional Networks	14
Figure 2: Components of a Strategy for Regional Networks	14
Next Steps	16

Executive Summary

The Association of Public Health Laboratories (APHL) and Centers for Disease Control and Prevention (CDC) held a consultation on November 12-13, 2015 to discuss comprehensive testing services in support of public health programs. The purpose of the consultation was to address the uneven access to, and support for, testing services for public health programs in the different states and territories by identifying opportunities and barriers to supporting a shared strategy for public health laboratory (PHL) service provision in the U.S. More specifically, the goals of this meeting were to:

- Explore current state-directed regional networks* along with CDC program referral and tiered testing models and
- Provide recommendations to improve the effectiveness and reduce the burden on all the individual states and programs working to develop their own solutions in the absence of a unified strategy for PHL service provision.

Information was shared about state-directed regional networks that support peer-to-peer service sharing that strengthens comprehensive PHL infrastructure and services through state-to-state technical assistance that may not be available from APHL or CDC. The final agreement by participants was to pursue a strategy for establishing and supporting regional networks in order to increase access to testing services, technical assistance, resources for workforce development, and other areas through collaborative partnerships between state and local PHLs.

Several key findings were identified during the consultation:

- Regional networks are instrumental for public health and there should be more focus on how to promote and incentivize service sharing and activities that support PHL sustainability across all states.
- Several best practices exist among state-directed consortium models and CDC program models that can be applied to future regional network strategies. Best practices include sharing testing services, leveraging the services of existing referral or tiered models (e.g., LRN and PulseNet), establishing public and private relationships, utilizing shared tools and resources, sharing biomonitoring capabilities, and engaging in peer-to-peer interactions to support a strong infrastructure.
- There are many challenges in adopting regional network systems. Top challenges involve the sustainability of networks; the nature of categorical funding to support comprehensive network activities; inconsistent informatics capabilities; reimbursement for testing services and perceived benefits and barriers of memoranda of understanding (MOUs) and other formal agreements.
- Although individual PHLs may be reluctant or challenged to form networks, the pilot regional network projects demonstrated that PHLs gain, rather than lose, testing capabilities and other services that cannot be maintained in all 50 states.
- There are many components that should be incorporated in a coordinated strategy for regional networks such as standardized models, consideration of existing infrastructure, technical assistance, workforce development, laboratory management skill-building, and the integration of new services and technology.
- It is important for CDC and APHL to serve as catalysts in this strategy as they can provide a wide array of resources and support.

In order to drive a coordinated strategy forward, involved stakeholders will need to take several next steps. The following includes next steps for CDC and APHL:

- Create a strategy that supports state-directed networks
- Develop a process to identify and address gaps and barriers to creation and sustainability of networks
- Expand data sharing platforms
- Explore CDC program funding opportunities and ways to better communicate their availability
- Establish business models for networks
- Enhance sharing of training resources

The following includes next steps for PHLs:

- Identify grant/funding opportunities
- Share information and resources
- Share success stories with APHL and CDC
- Make voices heard about needs with stakeholders

Overall, APHL, CDC, and PHL directors recognize that this is the time to work toward models of service provision that more comprehensively support the needs of PHLs and public health. By utilizing existing resources, infrastructure, and expertise and by working collaboratively, stakeholders can take tangible next steps to work towards the development and success of regional networks that ensure long-term sustainability for PHLs across the U.S.

*Regional networks do not necessarily need to be geographic regions, but experience has shown that partnerships of PHLs from neighboring or bordering states does greatly facilitate travel, face-to-face meetings, and peer-to-peer engagement.

Purpose and Background

On November 12-13, 2015, state and local public health laboratory (PHL) directors, staff from the Association of Public Health Laboratories (APHL) and Centers for Disease Control and Prevention (CDC) convened in Atlanta, Georgia to discuss comprehensive testing services in support of public health programs. The aim of this meeting was to explore current regional network models and provide recommendations to improve the effectiveness and reduce the burden on all the individual states and programs with a unified strategy for public health laboratory (PHL) service provision.

Participants in the one and a half day event included directors from 11 state and local PHLs, as well as CDC and APHL program leaders, facilitated by Booz Allen Hamilton, Inc. This group engaged in a participant-driven discussion sharing their experiences, concerns, and recommendations involving regional networks, referral centers and tiered testing services. The facilitated discussion was designed to outline the advantages and disadvantages to maintaining and establishing regional or other network models and referral centers and identify solutions to overcoming jurisdictional and programmatic barriers to supporting a shared strategy for PHL service provision. Group dialog was driven by three discussion questions, each which had some sub-questions. These questions led the group into a variety of topics that fell into three main categories. These categories are referenced in the facilitated discussion section below and include the following:

1. Best practices among existing networks
2. Challenges and mitigation strategies
3. Components of a national strategy

The discussion questions and sub-questions were:

- ▶ **Question 1: What are the advantages and disadvantages of existing models for regional networks and referral centers?**
 - What are the challenges faced by current networks or anticipated challenges in future types of networks?
- ▶ **Question 2: What are the costs and gaps in PHL services from continuing the status quo of separate parallel efforts for service provision?**
 - Should we develop a national strategy?
 - Should a strategy include forming all state/local laboratories into regional networks/consortiums?
- ▶ **Question 3: What are the requirements to move toward a unified system of networks (geographic or other types of laboratory system partnerships) and referral centers that share mechanisms and approaches across multiple programs and jurisdictions?**
 - What is best strategy for getting other PHLs involved in any current networks or future ones?
 - What other types of networks are needed?

- Could CDC program models be merged with state networks to support both CDC-directed and state-directed service sharing?
- Could/Should CDC and APHL support a system of peer-to-peer assistance in the form of regional networks with:
 - SharePoint services for technical documents
 - Prioritized funding for multistate efforts, where appropriate
 - Support for regional workforce strengthening in leadership program and training delivery
 - Recognition of interstate service sharing in funding allocations (avoids difficulties of interstate transfers of funding)

The consultation was initiated by a previous series of national conversations on PHL service provision and sustainability. Currently, the capability of PHLs to conduct testing and other services varies greatly from state to state due to the lack of public resources available to individual PHLs. In 2011, the Laboratory Efficiencies Initiative (LEI) was formed to sustain PHL testing services through strategies of improving informatics, workforce, public health test service information required for decision making, and multistate consortiums for service sharing. However, it was not funded as a new budget initiative. Nevertheless, it did provide the impetus for national discussions across all the involved stakeholders. PHL service provision and the need for state-directed service sharing and network strategies was identified as the top priority in several APHL and CDC consultations. The topic of service provision also explored the cost drivers for PHL services, including billing, procurement, shared testing platforms, informatics and a trained workforce. One major challenge is that the majority of PHL testing and other services are not funded by the federal government and therefore require a model other than federally designated referral centers or other models to establish sharing between PHLs across the wide variety of services and activities.

There are many challenges and barriers to working toward one or more models of shared services. Programs have invested in their current service provision in the absence of a broader strategy and may be reluctant to abandon current mechanisms that work for the testing services they support. Additionally, program funding and management is distributed across multiple centers and divisions at CDC that have independent funding mechanisms and accountability. Similarly, state PHLs act independently and may require external support and assistance to initiate networking with other PHLs. PHLs are more likely to act if networks are formally endorsed, if not supported, by the multiple national and state programs that provide support for specific testing services. Another barrier is the perceived value of networks, which cannot be measured entirely by cost savings for the often limited number of tests that may be referred between PHLs. What is evident from existing networks is the value of PHLs working together as a team and sharing information and best practices for the many activities that laboratories must address on their own. While this value has led to sustainability for thirteen PHLs currently involved in regional networks, what combination of incentives or mandates would be required for the remaining 37 state PHLs and the territories to take the initial steps of forming networks, which would allow the U.S. to adopt and CDC programs to support a comprehensive network structure?

Introductions

In order to help navigate the group discussions, each participant was asked to provide two adjectives that describe the value of regional networks to strengthen public health testing services or other shared services. Overall, the group used many positive adjectives to describe the value of regional networks. The overwhelming sentiment from the group is that regional networks are instrumental for public health and that there should be more focus on how to promote and incentivize regional networks across all states.

Figure 1 summarizes the adjectives that participants used to describe the value of regional networks.

Figure 1: Value of Regional Networks



Existing Network Models

The first portion of the consultation focused on exploring current regional network models through a short series of presentations. The purpose of these presentations was to determine how the different network models work to enhance testing services and how certain aspects can be applied in other PHLs. The network models included state-directed network models and CDC program models.

State-directed Network Models

Thirteen PHLs have formed two multistate consortia – the Northeast Environmental and Public Health Laboratory Directors (NEEPHLD) program and the Northern Plains Consortium (NPC). These networks are grass-roots oriented and are based upon informal agreements, meaning that the PHLs involved share testing services and other expertise and resources on an ad hoc basis. These types of agreements tend to be grounded in preexisting, professional relationships among laboratory directors.

Table 1 indicates the purpose of the state-directed network models, the shared testing services provided, and the shared activities.

Table 1: State-Directed Network Models

Network	Purpose	Testing Services	Shared Activities
Northeast Environmental and Public Health Laboratory Directors (NEPHLD)	<ul style="list-style-type: none"> Resource for laboratory directors in the region Informal agreements Partners: Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and the New York City PHL 	<ul style="list-style-type: none"> Environmental testing <ul style="list-style-type: none"> Gross alpha rad Cyanotoxins Clinical Testing <ul style="list-style-type: none"> Arboviral testing for humans HCV NAAT/Typing 	<ul style="list-style-type: none"> Regional emergency response plan with EPA Multi-state exercises and COOP planning Sharing of test costing; job descriptions; methods sharing; training; LIMS implementation Shared services during emergency responses Peer-to-peer engagement
Northern Plains Consortium (NPC)	<ul style="list-style-type: none"> Create a regional public health laboratory system Work on rural laboratory system improvement Mostly all informal agreements Partners: Montana North Dakota, South Dakota, Wyoming, Idaho 	<ul style="list-style-type: none"> HIV Multispot supplemental testing 16s Ribosomal bacterial identification Hantavirus serology Certain VPD IgM tests Hepatitis C RNA, genotyping Lyme disease western blot TB NAAT Testing 	<ul style="list-style-type: none"> Surveys and trainings with clinical laboratories Regional and state communication plans Workforce development plans TB NAAT testing educational campaign Electronic test orders and results (ETORs) projects Transportation exercises LRN and other proficiency testing (PT) Sharing technical SOPs Succession planning Biosafety outreach Peer-to-peer engagement

Based on these presentations, participants offered the following insights:

- Both networks are faced with funding, legality, and liability challenges
- Networks do not have MOU's or other agreements in place and rely on informal agreements, as MOUs often can cause loss of flexibility
- Face-to-face meetings foster relationships and are key to success

CDC Program Models

Several CDC program models were discussed including referral, tiers, and regional programs. Many of these programs fund some core services in all state and some local PHLs. However, many PHL tests have little to no federal funding support. Mechanisms have been carefully developed by the respective CDC program and represent effective models to ensure access to selected testing service.

Table 2 indicates the function of the CDC program models and the testing services provided.

Table 2: CDC Program Models

Model	Function	Testing Services
National Influenza Reference Centers	<ul style="list-style-type: none"> Perform surveillance testing on behalf of CDC Provide surge capacity for CDC 3 nationally-competent Centers in total 	<ul style="list-style-type: none"> Virus isolation and propagation Neuraminidase inhibition testing Whole genome sequencing (currently being phased in)
LRN-C	<ul style="list-style-type: none"> Improve response to chemical public health threats All state PHLs and the PHLs of the District of Columbia, Los Angeles County, New York City, and Puerto Rico participate 	<ul style="list-style-type: none"> Level 1 labs: identify and coordinate response to chemical exposure incidents, perform testing to detect exposure, and act as surge capacity for CDC Level 2 labs: identify and coordinate response to chemical exposures and perform testing to detect exposure to multiple toxic chemicals Level 3 labs: assist hospitals; first responders identify and coordinate response to chemical exposure incidents
DST Reference Center for Mycobacterium tuberculosis Complex	<ul style="list-style-type: none"> Explore alternative service delivery models and evaluate potential cost savings and impact on quality of service delivery 1 Reference Center Network participation is voluntary 	<ul style="list-style-type: none"> First-line growth-based drug susceptibility testing (DST) for low volume PHLs Access to second-line DST and rapid molecular detection of drug resistance
Vaccine Preventable Disease (VPD) Reference Centers	<ul style="list-style-type: none"> Identification and characterization of VPD pathogens. Serve as network for new technology deployment and assay comparison studies 4 Reference Centers receive specimens from 38 state PHLs and 12 county and local labs 	<ul style="list-style-type: none"> All Centers provide rRT-PCR and genotyping for measles, mumps, rubella, and VZV 2 of the 4 Centers perform RT-PCR and molecular serotyping/grouping for pertussis, H. influenzae, S. pneumoniae, N. meningitides, and B. pertussis
PulseNet	<ul style="list-style-type: none"> Provides testing methods, technology, and data needed to connect foodborne illnesses to a common food source as well as other patients All 50 states and selected localities receive support Are 8 defined regions, each with an “area lab” 	<ul style="list-style-type: none"> DNA “fingerprinting” of foodborne disease-causing bacteria The Area labs provide surge capacity for subtyping, training, and troubleshooting assistance for PHLs within their regions

Based on these presentations, participants offered the following insights:

- The CDC programs provide access to selected specialized services
- Only a limited number of PHLs are selected to provide some of these services which concentrates expertise and related infrastructure in a small number of PHLs

Best Practices among Existing Models

Overall, the group agreed that there are many advantages among existing network models and PHLs can benefit from leveraging their existing infrastructure and expertise. The group identified best practices among different network models that could potentially be used in the future.

Table 3 outlines the best practices identified of existing network models.

Table 3: Best Practices among Existing Models

Best Practice	Description
Test Service Sharing among state-directed consortia	<ul style="list-style-type: none"> • Especially beneficial for low volume, expensive tests • May result in costs savings for PHLs • Allows a PHL to retain access to testing services or obtain access to new services that cannot be performed in that laboratory
LRN/PulseNet Services	<ul style="list-style-type: none"> • LRN and PulseNet provide standardized testing and reporting, which makes it easier to share services across PHLs • LRN enables rapid deployment of new test services and reagents. CDC is looking to improve and expand this model to meet other needs. • PulseNet has been beneficial in expanding training to regional areas so that CDC is not burdened with meeting overall training needs
Public/Private Relationships	<ul style="list-style-type: none"> • One lab director has established a public/private relationship with the Mayo clinic focused around data exchange • An additional laboratory has considered this type of relationship for newborn screening • Some data exchange services exist among labs and hospitals, which has been very beneficial • Can increase PHL capacity and provide more localized testing capabilities
Referral Centers	<ul style="list-style-type: none"> • Provides PHLs access to testing services for specialized testing and surge capacity • However, the communication and coordination between referral centers and PHLs does not extend beyond the designated test service
Cost Accounting Tools	<ul style="list-style-type: none"> • Tools have been developed to document costs per test to help PHLs decide whether to participate in test sharing. These tools could be shared further.
Biomonitoring Capabilities	<ul style="list-style-type: none"> • States with similar biomonitoring needs benefit in sharing these capabilities • Capabilities developed through the LRN-C program can be leveraged for biomonitoring science
Peer-to-Peer Engagement	<ul style="list-style-type: none"> • Identified as key factor to success • Helps foster and enhance relationships among PHLs • Expands service sharing outside of testing (e.g., training, technical SOPs) • Strengthens infrastructure, planning and preparedness (e.g., COOPs)

Challenges and Mitigation Strategies

There are many challenges in adopting regional network models. Often PHLs have specialized testing areas or state statutes that might make it difficult to share services. Other areas of concern involve lack of funding to support such networks and the concern over loss of valuable expertise. Key challenges expressed include the following:

- Data exchange and ownership
- Electronic test ordering and results reporting
- Establishing MOUs or other formal agreements
- Funding for peer-to-peer activities
- Possible loss of expertise and credibility
- Cost disparity for testing across PHLs
- Criteria for choosing networks and reference centers
- Variations in staff licensure requirements
- Categorical federal funding vs. state funding
- Advancements in technology
- Billing or compensation for shared testing
- Defining core capabilities of networks
- Sustainability of the network
- Ensuring support of state Health Officials and epidemiologists
- What is the balance between maintaining vs. sharing testing services?
- Will PHLs then be asked to give up more testing services?

In order to build an in-depth discussion around this issue and discuss potential mitigation strategies, participants identified the top three challenges:

- Sustainability of the network
- Categorical federal vs. state funding
- MOUs and other formal agreements

Table 4 provides a complete summary of the top three challenges and the mitigation strategies to overcome these obstacles.

Table 4: Top 3 Identified Challenges and Mitigation Strategies

		Challenges	Mitigation Strategies
Area of Focus	Sustainability of the Network	<ul style="list-style-type: none"> No clear core capabilities defined for PHLs or PHLs in a particular network/region PHLs are becoming more specialized Lack of information on what different PHLs perform Loss of funding leads to loss of workforce Limited informatics capabilities and lack of interstate electronic test order and result reporting (ETOR) capability Difficulty in applying practicality and flexibility on a broader level States fear losing their expertise if they send testing to other PHLs Lack of funding for state-directed networks 	<ul style="list-style-type: none"> Define core capabilities that are foundational for PHLs Maintain fundamental testing capabilities and expertise (i.e., PT) Improve recruitment methods, retention planning, and staff orientation Collaborating on leadership training Design functional roadmap to assist PHLs Provide a voice for grassroots efforts Develop a match-making system for network collaboration Publicize which capabilities can or cannot be outsourced Use the Public Health Laboratory System Database (PHLSD) and the resulting national PHL test directory to facilitate the sharing of information on different PHLs' test services and as a driver for network models CDC program funding for state directed networks CDC, APHL and PH partners advocate for state directed networks
	Categorical vs. State Funding	<ul style="list-style-type: none"> Funding varies from state to state Many people are unclear on where funding comes from for various PHL services Many tests do not have clear funding programs Organizational structure of labs (or the state's health department) can promote or detract from sharing resources Extremely difficult for PHLs to negotiate service contracts Unknown or limited opportunities to request CDC funding 	<ul style="list-style-type: none"> Improve communication regarding availability of federal funding opportunities (e.g., ELC, AMD, and Preventive Health and Health Services (PHHS) block grant) Foster cross-network engagement that leverages infrastructure (i.e., LRN-C) Explore collaborative opportunities within categorical funding Leverage CDC credibility for promoting and developing activities Assess economies of scale for larger purchases of assets and services (e.g., equipment, service contracts) CDC would like PHLs to voice their needs
	MOUs/formal agreements	<ul style="list-style-type: none"> Lack of standardized guidance for need and development of formal agreements COOP plans and emergency level agreements are in place, but many not at laboratory level Need MOUs in place to address various issues (i.e., determining "compensation" for testing services) Perceived liability Concerns for loss of flexibility once MOUs are in place Not all MOUs are the same 	<ul style="list-style-type: none"> Evaluate whether formal agreements (e.g. MOUs) are needed Establish general MOU guidance to serve as model for PHLs Use existing state MOU templates from Policy Guide Seek APHL's guidance for COOP standardization Assess alternative vehicles (e.g. contracts) Engage health department counsel and the Public Health Law Network

Components of a Strategy for Regional Networks

After discussing challenges and mitigation strategies, a large aspect of the consultation focused on factors or requirements that participants felt were critical in moving toward a shared strategy for networks. This led participants in identifying important components of a strategy that could work together to promote shared services.

Figure 2 outlines identified components of a strategy for regional networks.

Figure 2: Components of a Strategy for Regional Networks



The list below summarizes participants comments related to each component:

- **Catalysts to Expand Regional Networks** – CDC and APHL could serve as key drivers for grass-roots programs by generating interest and support on a national level. They could provide funding, endorsements, general infrastructure, identify categorical program funding opportunities and network-matching strategies. CDC and APHL could focus on generating interest and involvement from PHLs through a variety of incentives. APHL and CDC can assist in communication with external stakeholders on benefits, barriers and requirements.
- **Standardized Models** – The strategy could include developing standardized models such as identifying capabilities, costing, and business models for networks because the lack of standardized models makes it difficult for PHLs to adopt common practices and share services. Models could outline core competencies and capabilities that network partners and the network as a whole should have. Costing models or payment models could incentivize shared activities and clearly define how funds will be transferred across states. Business models could include details regarding annual and strategic planning, legal issues, culture change, marketing, and COOP plans. Guidelines could also be developed that help shape the charter, vision, and purpose of networks. Finally, it is important to provide guidance to help PHLs define the role of epidemiologists and state health officials within networks.
- **Existing infrastructure** – Resources such as templates for formal agreements/MOUs, cost accounting tools, existing training materials, and relationships among stakeholders can be leveraged when developing a national strategy. These resources can help to sustain and enhance shared services and expertise.
- **Technical Assistance** – One key piece to a strategy is technical assistance to help networks address various challenges. Assistance can be provided by CDC programs, APHL, and partner PHLs in a network (depending on the need). For instance, networks would likely need to rely on CDC and APHL expertise to develop solutions to challenges with ETOR activities. A PHL test services directory database is currently under development and could serve as a useful tool in sharing about capabilities.
- **Workforce Development** – Network activities regarding workforce development could incorporate and build on needs for succession planning, professional development, recruitment, and retention. Activities could include partnership for development, delivery and sharing of trainings specific to certain tests, federally required annual trainings, or trainings that address more general topic areas such as quality assurance, quality control, ethics, safety, and good laboratory practices (GLP). A starting point could be sharing of current training opportunities that each PHL is already offering.
- **Laboratory Management** – This ties in closely with overall workforce development and would encompass several subject areas that laboratory managers specifically need to address such as business plan and grant writing, emergency response management, budget planning, and diversity. Sharing best practices for laboratory management amongst the network members could be a central part of this component.
- **Integration of new services and technology** – Due to the constant influx of new technology and services within laboratories, it is important to consider how these will be managed within the networks and as part of the strategy.

Next Steps

Overall, the group agreed that pursuing a strategy to promote the establishment and support of regional networks was the right direction given the significant value of shared services and enhanced partnerships that have been demonstrated by the existing state-directed networks. It was clear that several key actions need to be taken by involved stakeholders in order to move a regional network strategy forward. CDC and APHL can play a significant role in promoting and advancing regional networks among PHLs, but PHLs can also make collaborative efforts without the support of external institutions. Additionally, it is important to incorporate best practices, mitigation strategies, and the proposed components of a coordinated strategy when initiating the next steps.

The following includes a list of the identified key action items for different stakeholders:

CDC's and APHL's Next Steps:

1. **Create a strategy that supports state-directed networks** – A strategy is needed to promote multi-state partnerships to explore service sharing and strengthen PHL services through peer-to-peer engagement. This strategy should include identifying, assessing, and evaluating capability gaps for networks and presenting these gaps or findings to ensure a comprehensive portfolio of services. This strategy should also consider how to integrate new tests and technology, leverage existing standardized testing and reporting practices (e.g., like in the LRN), and share biomonitoring capabilities. Ultimately, this model can be used to enhance information sharing across all PHLs.
2. **Develop a process to identify and address gaps and barriers to creation and sustainability of networks** – A process should be developed to assess national capabilities and needs and to identify areas for improvement.
3. **Expand data sharing platforms** – These platforms (such APHL's Member Resource Center (MRC) and the national PHL test directory) can serve as centralized resource centers that provide PHLs access to online tools and information such as MOU templates, core capabilities documentation, standardized models, and trainings. These platforms can serve as part of the technical assistance component of the national strategy.
4. **Explore CDC program funding opportunities and ways to better communicate their availability** – CDC programs should explore opportunities to support opportunities to support needs of network member activities (such as travel) through their respective grants and/or cooperative agreements. By providing these opportunities, programs can facilitate the peer-to-peer exchanges that are critical to building strong relationships and allowing network PHLs to strategize and carry out identified activities. In addition, programs should improve communication in the following ways:
 - Assess whether current guidelines allow for funds to be used to support regional network activities
 - Develop clearer or more explicit guidance on how PHLs can use federal funds to support the establishment and maintenance of regional networks and how PHLs can quantify their accomplishments
 - Share success stories of impact and lessons learned with CDC programs to promote support for network collaboration efforts

5. **Establish business models for networks** – A national-level business model is needed to guide how to support regional networks in a coordinated fashion. In addition, regional networks require business plans to guide member PHLs around issues such as annual and strategic planning, legality/liability, change culture, marketing, formal agreements, and COOP plans. Existing MOU templates should be assessed and evaluated. The Assistant Secretary for Preparedness and Response (ASPR) also provides guidance for COOP standardization, which may be useful for this approach. In addition, core and potentially shared capabilities should be identified.
6. **Enhance sharing of training resources** – Shared resources should focus on coaching, leadership, management, and testing skills that are common needs for PHLs.

PHLs' Next Steps:

1. **Identify grant/funding opportunities** – PHLs should make an effort to explore federal grant opportunities through CDC programs and the PHHS block grant (but not limited to these), as well as opportunities in their communities and through other potential partners. They should ensure that their needs are reflected across these funding mechanisms.
2. **Share information and resources** – PHLs should gather existing templates, documents, and other resources and plan on including future resources (such as newly developed MOU templates or COOP plans) that can be useful across PHLs. Laboratory leaders and managers should utilize APHL's MRC to share these resources and also keep information up to date in the Public Health Laboratory System Database (PHLSD) to enable faster and more efficient sharing of information on PHL test service capabilities.
3. **Share success stories with APHL and CDC** – PHLs can share success stories with APHL and CDC as a way to advocate and promote new ideas, shared strategies, and best practices. PHLs can use this information to identify strategic partnerships and actively engage in or join these shared efforts.
4. **Make voices heard about needs with stakeholders** – Many PHL leaders and managers are involved in working groups, committees, forums, and other engagements with internal and external stakeholders, including national public health partners and state leadership and policy makers. PHLs can use these opportunities to advocate for regional network strategies to address unmet needs.

Overall, APHL, CDC, and PHL directors recognize that this is the time to work toward models of service provision that more comprehensively support the needs of PHLs and public health. By utilizing existing resources, infrastructure, and expertise and by working collaboratively, stakeholders can take tangible next steps to work towards the development and success of regional networks that ensure long-term sustainability for PHLs across the U.S.

Association of Public Health Laboratories

The Association of Public Health Laboratories (APHL) is a national nonprofit dedicated to working with members to strengthen laboratories with a public health mandate. By promoting effective programs and public policy, APHL strives to provide public health laboratories with the resources and infrastructure needed to protect the health of US residents and to prevent and control disease globally.



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