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Data Modernization Tactical Guide:
Strengthening Data Modernization through Collaboration and Partnerships

Contents

Introduction

The purpose of this document is to detail key strategies and tactics for **facilitating collaboration and developing partnerships** to support data modernization within a state, tribal, local, or territorial (STLT) public health agency. This document is intended for Data Modernization (DM) Directors and other agency leadership who will be implementing data modernization.

This Tactical Guide is part of a multi-part series on data modernization for STLT health agencies.

1. Data Modernization Primer: Guide for State and Territorial Health Officials

2. Data Modernization Tactical Guide: Planning Data Modernization Activities

3. Data Modernization Tactical Guide: Identifying and Implementing Data Modernization Projects

4. Data Modernization Tactical Guide: Building, Equipping, and Sustaining a Data Modernization Workforce

5. **Data Modernization Tactical Guide: Strengthening Data Modernization through Collaboration and Partnerships**

6. Data Modernization Tactical Guide: Ensuring Long-Term Sustainability for Data Modernization Efforts

Each agency is approaching data modernization with their own unique set of structures, resources, strengths, and challenges. These documents are not designed to prescribe a "one-size-fits-all" approach. They serve as a guide rather than a set of stringent instructions to follow. Each agency will follow different routes, but all are traveling to the same destination—a stronger public health ecosystem that allows for data-driven decision making to promote population health for all.

Overview

Public health agencies cannot meet data modernization goals without deliberate focus and attention to collaboration and partnerships. Partnerships can comprise any collaborative effort between two or more parties (i.e., organizations) to realize a mutual benefit or shared outcome. The structure of partnerships can range from informal agreements to formal contractual arrangements. For data modernization, public health agencies may partner with health care providers, laboratories, community-based organizations, the public, other state agencies, private sector companies, as well as federal agency partners such as CDC, Assistant Secretary for Technology Policy/Office of the National Coordinator for Health Information Technology (ASTP), and HHS. Partnership can offer several benefits to member parties including:

- Increased credibility, relevance, and influence with third parties, the public, and specific target audiences.
- New or expanded subject matter expertise, access to research and evidence, and expanded core competencies or capabilities.
- Enhanced communication and outreach to target populations and niche audiences.
- More effective and efficient operations, programs, and initiatives.
- Greater efficiencies and reduced duplication of effort.
- Enhanced data-sharing and risk mitigation.
- Improved responsiveness, capacity, and scalability for preparedness and response.

The remainder of this paper will go into more detail on identifying key areas of data modernization work that may benefit from partnerships, tips for identifying potential partners, and strategies to initiate and maintain partnerships.

Identifying Potential Partners

Public Health Organizations and Other Public Health Agencies

There are numerous public health organizations that offer resources to public health agencies for data modernization efforts. These include trainings, technical assistance, insight and best practices, and more. It may be helpful to familiarize yourself with these organizations as you begin to engage partners in supporting agency data modernization efforts. This pre-work will help the DM Leadership team as it prioritizes key areas of work that may benefit from partnership. The table below highlights key private sector partners for public health data modernization. To learn more about a particular organization, follow the embedded links included in the parenthesis for each.

Key National-level Partners

American Immunization Registry Association (AIRA)

Promotes the development and implementation of immunization information systems.

American Medical Informatics Association (AMIA)

Provides education, training, accreditation, and certification to professionals and students interested in informatics.

Association of Immunization Managers (AIM)

Dedicated to establishing a nation free of vaccine-preventable disease. Its members are the leaders of state, local, and territorial immunization programs.

Association of Public Health Laboratories (APHL)

Works to strengthen laboratory systems serving the public's health in the United States and globally.

Association of State and Territorial Health Officials (ASTHO)

Supports, equips, and advocates for state and territorial health officials by providing capacity building and technical assistance in a variety of areas.

Big Cities Health Coalition (BCHC)

Provides a forum for leaders of the United States' largest metropolitan health departments to exchange strategies and address public health issues

CDC Foundation (CDCF)

Mobilizes philanthropic and private-sector resources to support CDC's critical health protection work.

Civitas Networks for Health

Brings together organizations that focus on improving health in communities throughout the country through data-led multi-stakeholder collaboration.

Council of State and Territorial Epidemiologists (CSTE)

Brings together public health epidemiologists to advance public health policy, epidemiologic capacity, and program and surveillance efforts.

Healthcare Information and Management Systems Society (HIMSS)

A global advisor and member-based society committed to reforming the global health ecosystem through the power of information and technology.

National Association of Public Health Statistics and Information Systems (NAPHSIS)

Provides expertise on vital records data to ensure secure access to vital records data while keeping personal identities protected.

National Association of County and City Health Officials (NACCHO)

Aims to improve the health of communities by strengthening and advocating for local health departments.

National Network of Public Health Institutes (NNPHI)

The central hub for public health institutes working to improve public health in the United States and a go-to resource for analysis and best practices.

Network for Public Health Law (NPHL)

Provides leadership in the use of law to protect, promote, and improve health and health equity.

The Pew Charitable Trusts

Works to research and share best practices to help public health agencies analyze and effectively use health care data.

Public Health Accreditation Board (PHAB)

Supports health agencies to improve quality, accountability, and performance. They administer the public health accreditation program.

Public Health Informatics Institute (PHII)

Guides public health professionals to become powerful users of information, use data to remove barriers to healthy living, and transform communities.

The Sequoia Project

Works to identify barriers to interoperability and pioneer processes to make health information exchange work on a national level.

Identifying Key Areas for Partnership

The first step in forming advantageous partnerships for data modernization is to determine which areas of work would benefit from the assistance of external organizations. Review previous assessments and grant priorities, and speak with internal teams to gain a better understanding of where gaps may exist that partners can help fill. The table below outlines key areas of work where partnerships may be beneficial, as well as potential partners to consider for each.

Table 1: Key Areas for Partnerships

Key Area	Description	Potential Partners
Planning and Implementation	This area includes the entire process of preparing for and implementing data modernization within an agency. Initial stages may include mobilizing a team, identifying DMI goals, and developing strategic plans. During the implementation phase, agencies may need support with project management and change management.	Public Health Technical Assistance Providers (e.g., ASTHO, NNPHI, PHAB, PHIG Implementation Centers, APHL, CSTE); other Public Health Agencies
Technology and Systems	This area covers any technological changes an agency plans to undergo as part of their data modernization efforts. These may include system migrations, upgrades, or enhancements, development of APIs, or development of data storage solutions such as a data lake.	PHII, ASTP, CDC, EHR Vendors, Private Entities (e.g., AWS, Google, Tableau)
Data Exchange	This area covers all aspects related to the secure transmission of health data among different health organizations. Data modernization projects in this area may include implementing FHIR or developing an ETOR system.	Labs, Hospitals, Local Health Care Providers
Workforce	This area includes all work related to building, equipping, and sustaining a data modernization workforce. Data modernization projects in this area may include upskilling, training, and hiring and recruitment.	Universities, Academic Institutions, Public Health Organizations
Data Visualization and Analytics	This area refers to all work in data visualization, forecasting, and predictive analytics to translate public health data into actionable decision-making. Data modernization projects in this area may include creating dashboards or using artificial intelligence methods to link and process data from disparate sources.	Universities, Academic Institutions, Insight Net, Public Health Organizations, Other Public Health Agencies
Legal and Policy	This area includes work related to review and development of national, state, local, or agency policies impacting data modernization and data exchange activities.	Public Health Lawyers, NPHL, Public Health TA Providers (e.g. ASTHO, NNPHI, PHAB, PHIG Implementation Centers, APHL, CSTE)

Roles for Partners

Once an agency has identified which areas of work to prioritize, the DM Leadership team can begin thinking about about the roles different organizations may play as partners.

Many of these organizations also provide collaborative membership networks that give public health agencies the opportunity to connect with other public health agencies. A few examples include ASTHO's Peer Networks, CSTE's DMI Workgroup, and PHII's DMI Learning Community. Membership in these groups is an effective way to learn about the kinds of strategies other public health agencies are employing to advance data modernization efforts. Additionally, it provides an opportunity to develop working relationships with staff from other agencies. Read more about approaches other agencies are taking in PHIG Success Stories from the PHIG National Partners and DM Stories from the Field from PHII and CSTE.

There are also many benefits to peer-to-peer connection with other state and local public health agencies. Many states share similar systems and may have common challenges, creating the opportunity to share effective solutions. Additionally, many local health agencies have provider-based coalitions that collaborate and discuss public health interventions. These local groups can be an avenue to talk through and plan for DMI efforts such as moving from paper-based to electronic reporting of reportable conditions.

Finally, it is important for public health agencies to collaborate with tribal nations meaningfully and consistently. Tribal public health agencies and Tribal Epidemiology Centers (TECs) work hard to protect and promote the health of their communities and are working towards similar goals as other public health agencies. As such, it may be helpful to collaborate with tribal nations on public health initiatives and programs that impact both non-tribal and tribal populations. Before engaging with a tribal nation, consider designating a specific point of contact (e.g., State Tribal Liaison) from the agency to serve as the liaison between the two organizations. This person should be trained in the history and culture of the tribe and be well-versed in the nature of tribal relationships with federal and state governments.

Universities and Academic Institutions

Many academic institutions have public health schools and researchers who may be willing to share knowledge and collaborate on data modernization projects. Partnering with these institutions is also an effective way to attract skilled workers to the agency via internships or fellowships. Universities may also be willing to provide certifications or offer discounts to existing public health agency staff that wish to enroll in courses. Universities would benefit from this relationship as well, as it would open employment and learning opportunities for students. Agencies could also provide insight into the day-to-day practice of public health that can inform public health programs and curriculums.

State Spotlight: Washington DOH and UW Partnership

The Washington State Department of Health (DOH) has collaborated with the University of Washington for the past few years on several innovative projects. This partnership was solidified by signing an official interagency agreement between the two organizations.

Specifically, the School of Public Health has provided community engagement support, evaluation expertise, and other public health consultation on several DOH projects. Additionally, the Clinical Informatics Research Group has offered capacity both in academic informatics and in the development and deployment of software systems. Washington DOH has found this partnership to be essential for their data modernization work.

Labs, Hospitals, Local Health Care Providers, and Health Information Exchanges (HIEs)

Labs, hospitals, local healthcare providers, and HIEs that provide or transfer health data can be important partners for data modernization efforts. Agencies can work with these organizations to improve data exchange and promote common data standards.

Public health agencies may also consider engaging with local chapters of national provider groups, such as the American Academy of Pediatrics (AAP), American Academy of Family Physicians (AAFP), American College of Obstetricians and Gynecologists (ACOG), and local medical societies. Many of these groups have committees on public health or specific topic areas (e.g., immunizations) that act as lobbying arms within state and local governments.

CDC's Public Health Laboratory Electronic Test Orders and Results (ETOR) Initiative

As part of DMI, CDC is collaborating with the nation's public health laboratories (PHLs) and other partners to modernize data systems. CDC and its collaborators are building the technical infrastructure to facilitate the exchange of electronic test orders and results between health care facilities and PHLs, an activity abbreviated as "ETOR."

This multidirectional platform will streamline channels of data transmission and improve interoperability between partners. This exchange will decrease the use of paper-based test orders and reports, reducing the risk of errors in manual data entry and result reporting, and ensuring that accurate testing information is captured and transmitted to a patient's medical record in a timely manner.

Implementing ETOR will also strengthen public health surveillance and emergency response by linking laboratory data with patient information through standardized data elements included in the test order. Public health agencies should consider implementing ETOR as part of their data modernization efforts.

Public health laboratories can request technical assistance with implementing ETOR through the APHL Technical Assistance Form or by emailing DLS_Informatics@cdc.gov.

Source: CDC

Initiating and Maintaining Partnerships

Partnerships are not formed in a vacuum—open dialogue between agencies and potential partners will help shape opportunities to work together and build trust over time. This will in turn increase impact and overall partnership effectiveness. Below are key aspects to keep in mind when initiating and maintaining partnerships.

1. **Promote Bidirectional Awareness:** Desire and willingness to partner is not enough. Partners need to understand what each organization does, their capabilities, and how their activities might complement or overlap. All parties should identify clear points of contact and preferred methods of communication.

2. **Identify Mutually Beneficial Opportunities:** Mutual understanding helps support ongoing dialogue and knowledge to uncover new or better opportunities to partner. Collaboratively identifying these opportunities allows for more options, better alignment, built-in interest, and up-front buy-in. These opportunities can also spawn additional programmatic ideas.

3. **Shape Value Proposition and Incentives:** Partnerships are ultimately based around value, and it is important to know what everyone offers and how it addresses each other's needs. Developing a clear value proposition and offering incentives is key to driving initial discussions, formalizing partnerships, and determining governance structure and resources.

4. **Collaborate to Achieve Shared Outcomes:** Partnerships are successful when they focus on measurable outcomes while balancing mutual interests, resources, and risks. Clear roles and responsibilities help both parties understand expectations and align capabilities to contribute to the efficacy and efficiency of the project and ultimately achieve desired impact.

5. **Building Trust and Relationships:** Relationships and trust take time. Each partnership establishes norms for working together as a collaborative team and builds on a narrative of success. These formal and informal procedures make future partnerships easier to ramp up in times of need and lead to the identification of other areas of mutual interest.

It may also be helpful to develop a strategic partnering plan that lists all potential partners and tracks important information related to the partnership. This may include initial outreach, kickoff calls, meeting cadences, and any action items. For each potential partnership, be sure to identify a key point of contact that will spearhead the partnership effort and communicate with the partner organization throughout the engagement.

Key Questions To Ask Potential Partners

- How much time and effort will your organization be able to commit to this effort? Are there anticipated periods of heavy workload during which your bandwidth may decrease?

- What are your expectations regarding your role?

- How will we measure success?

- Who will serve as the main point of contact for your organization?

- What is your preferred method of communication for providing updates?

- How will we handle decision-making?

- What will be our process for resolving any challenges that may arise over the course of the partnership?

Key Takeaways

- The first step in forming advantageous partnerships for data modernization is to determine which areas of work would benefit from the assistance of external organizations.

- Key areas of data modernization work that may benefit from partnerships include planning and implementation, technology, data exchange, workforce, output, and analytics.

- There are numerous public health organizations that offer resources to public health agencies for data modernization efforts. These include trainings, technical assistance, insight and best practices, and more.

- Partnerships are not formed in a vacuum—open dialogue between agencies and potential partners will help shape opportunities to work together and build trust over time.

Additional Resources

Topic	Resources
Data Modernization	• CDC's Data Modernization Initiative • CDC Public Health Data Interoperability • CDC LDX Strategy • CDC Public Health Data Strategy • Federal Data Strategy • PHII Data Modernization Planning Toolkit • Stories: Surveillance and Data in Action • Trusted Exchange Framework and Common Agreement (TEFCA) • ASTHO DMI 101 for Health Agency Leaders
Collaborative Membership Networks	• ASTHO Peer Networks • CSTE DMI Workgroup • PHII DMI Learning Community
Collaboration and Partnerships	• NAACHO Partnerships and Coalitions Document • ASTHO Building Effective Partnerships Training Presentation • CDC Foundation Recommendations for Strengthening Partnerships Between Health Departments and Community-Based Organizations