Data Modernization:
Priorities and Next Steps

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What is the problem we are trying to solve?

Siloed information:
Disconnected and/or proprietary disease systems driven by disease-specific budget lines keep us from seeing the complete picture

Outdated skills:
The public health workforce needs training to use today's technologies more effectively

Heavy burdens for Providers:
Providers in healthcare and at health departments are burdened with sending data to many places in many ways

Older technologies:

- Most systems at health departments are not flexible, do not use cloud, and are not scalable

Public health is not a part of the healthcare data ecosystem

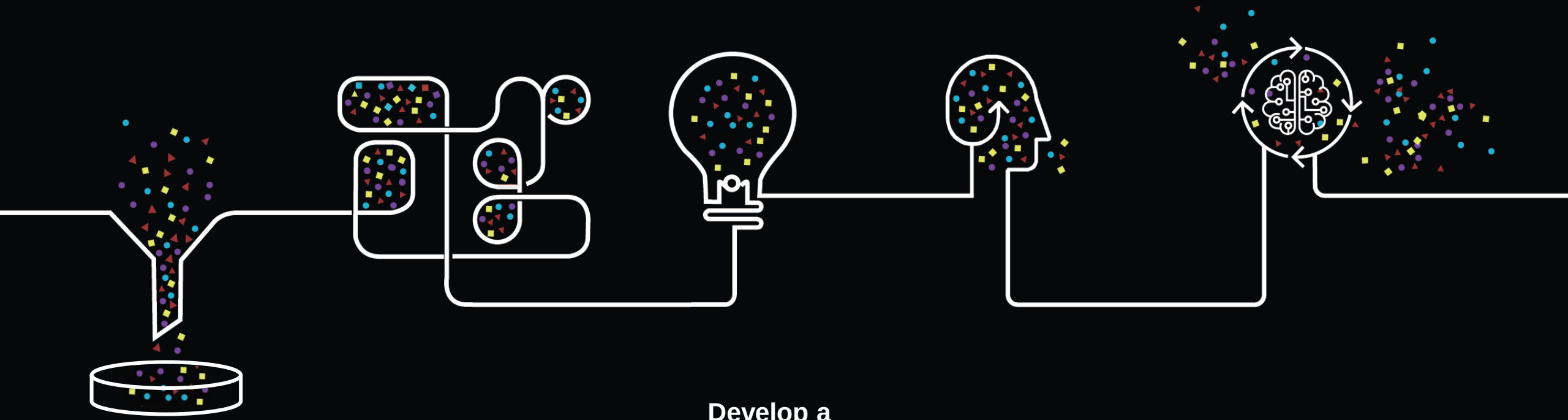
- Public health got left behind as federal incentives and regulations helped healthcare systems to be able to easily share data automatically in the Electronic Health Record.

Our Ultimate Goal

DMI @ CDC

To move from siloed and brittle public health data systems to connected, resilient, adaptable, and sustainable **‘response-ready’** systems that can help us solve problems before they happen and reduce the harm caused by the problems that do happen.

DMI Priorities



Build the right foundation

Provide the new information infrastructure and automated data sources for pandemic-ready data sharing

Accelerate data into action

Create faster, more integrated use of data to have more real-time situational awareness and forecasts of health threats for greater prevention and response

Develop a state-of the-art workforce

Identify, recruit, and retain experts in Health IT, Data Science, and Cybersecurity to generate meaningful public health insights

Support + extend partnerships

Engage with state, territorial, local, and tribal partners to address policy challenges and create new strategic partnerships to solve problems

Manage change + governance

Provide the necessary structure to support modernization and aid adoption of unified technology, data, and data products

Priority 1: Build the right foundation

Alignment to DMI Roadmap: Coordinate People and Systems

Provide the new cloud foundation and automated data sources for response-ready data sharing and to break down data system silos.

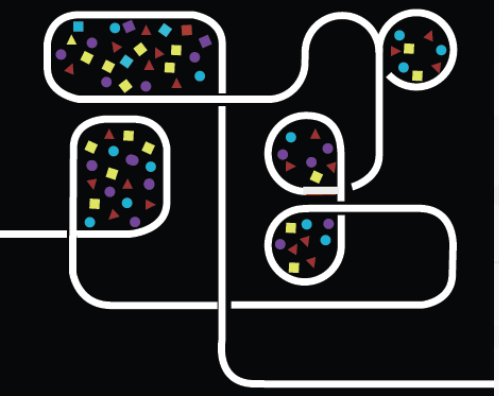
a. **Develop a shared vision of a public health ecosystem** for coordinated and seamless exchange of actionable data between healthcare data providers and public health agencies.

b. **Expand foundational infrastructure** to provide scalable, flexible services for timely and appropriate access to actionable data in the public health ecosystem.

c. **Modernize and connect public health systems and sources** for streamlined and consolidated collection, routing, exchange, and linkage of public health data using standards and the foundational infrastructure.

d. **Transform legacy public health data systems, processes and activities** to use the foundational infrastructure, thereby replacing and combining existing siloed systems with systems that work for all diseases and conditions and will reduce duplicative activities, cost, and time to scale up and respond in emergencies.

e. **Create the ability for CDC and STLT staff to easily store, discover, analyze, and visualize data** in the public health ecosystem.



Priority 2: Accelerate data into action

Alignment to DMI Roadmap: Accelerate Data for Action

Faster, more interoperable data provides high-quality information that, in turn, leads to knowledge and provides a more real-time, comprehensive picture to improve decision-making and protect health.

a. **Develop, align, test, and implement new data standards** to increase interoperability

b. **Increase data linkages** across diverse data assets

c. **Advance the use of forecasting and predictive analytics** to make efficient and effective decisions to respond to outbreaks, emerging threats, and exposures

d. **Implement tools for scalable outbreak or emerging threat response**

e. **Identify health inequities and promote equitable health outcomes**

Priority 3: Develop a state-of the-art workforce

Identify, recruit, and retain critical workforce in Health IT, Data Science, and Cybersecurity Specialists to be stewards of larger quantities of data and tools – better and faster – to generate meaningful public health insights.

a. **Identify workforce capacity and capability** needs and opportunities

b. **Increase the data science capacity and capabilities** of the CDC workforce.

c. **Facilitate data science upskilling** for epidemiologists and technologists at STLT agencies

Priority 4: Support + extend partnerships

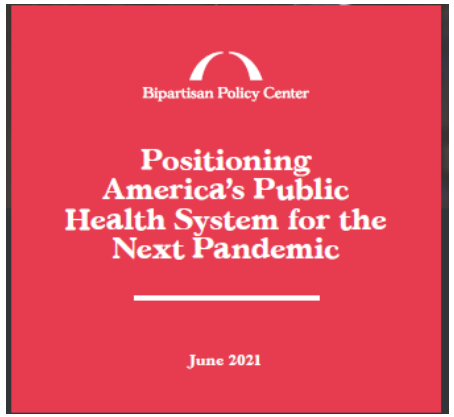
Engage with state, territorial, local, and tribal partners to ensure transparency, address policy challenges, and create new strategic partnerships to solve problems.

a. **Increase collaboration, communication, and messaging** among CDC and partners to ensure alignment and participation across DMI activities

b. **Public health policies support the exchange and use of data** between CDC, STLTs, partners, and data providers

Priority 5: Manage change + governance

We are listening...



digital bridge

Public Health API Concept Paper Version 1.0

Prepared by the Digital Bridge Public Health API Workgroup

Workgroup Chair – Walter Suarez, MD, MPH

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What will be different because of DMI?

When the next emergency happens, we will have:

- A foundation for data sharing across all levels of public health for coordinated, scalable and timely case investigation, management, and reporting

- Shared analysis capabilities for rapid identification of trends within and across jurisdictions, including:
  - Race/ethnicity-specific trends and risk factors
  - Improved forecasting and response capabilities

Questions