CDC’s Data Modernization Initiative... Changing the Way We Work

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Our Ultimate Goal

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.

Better, Faster, Actionable Intelligence for Decision-Making at All Levels of Public Health
What are the problems 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**Outdated skills:**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.
DMI Priorities

**Build the right foundation**
- Decreased burden on reporters
- Free up staff time to focus on prevention and control
- Faster data for detecting emerging threats at all levels of public health

**Accelerate data into action**
- Better data integration, visualization
- Robust forecasting / modeling
- Response-ready platform

**Develop a state-of-the-art workforce**
- Identify, recruit, and retain experts to generate meaningful public health insights

**Support + extend partnerships**
- Better / more timely access to data within and across ecosystem
- Common tools to support STLT partners

**Manage change + governance**
- Adaptive, agile approaches
- Collaboration
- Improved acquisition

DMI Strategic Implementation Plan (cdc.gov)
We are listening and connecting
WHAT WE'RE DOING

DMI is changing how we work.

Changing how we work with each other and share data inside CDC...

And also changing how we work and share data with others...

Which changes the data we have and can use...

... to change the future of health.
We’re changing the way we work at CDC.

CURRENT CDC STRUCTURE

- Infectious Diseases
- Non-infectious Diseases
- Science & Surveillance
- Service & Implementation Science

DMI IMPLEMENTATION APPROACH

- Change Management
- Workforce
- Partnerships
- DMI Coordination
- Build the Right Foundation
- Accelerating Data to Action
We're establishing cloud environments for managing and analyzing big data.
We're developing a "North Star" Architecture

The **North Star Architecture** is a joint ONC-CDC effort to help articulate a shared vision of a public health data infrastructure for STLTs to share data with each other and CDC.

**Key ideas:**

- **Flexible but standardized:** Offers a range of support levels to our STLT partners, depending on their needs
- **Secure cloud environment:** Offers more efficient sharing of infrastructure, applications, tools, and data
- **Collaboration and transparency:** Rules and products will be developed through joint CDC/STLT governance
- **Time and planning:** We will work on this with partners over the next two years
We're changing how we engage with partners

Consortium for Data Modernization

Data and Surveillance Workgroup

Industry Listening Sessions
We are in a different place than we were before the pandemic

<table>
<thead>
<tr>
<th>Monitoring Disease Burden</th>
<th>DATA COLLECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Lab Reports</td>
<td>813M COVID-19 Tests</td>
</tr>
<tr>
<td>Case-Based Disease Surveillance</td>
<td>79M Case Reports</td>
</tr>
<tr>
<td>Emergency Department Visits</td>
<td>7.4M COVID-19 ED Encounters</td>
</tr>
<tr>
<td>Immunization Records</td>
<td>551M vaccinations administered</td>
</tr>
<tr>
<td>Virus Genomics Data</td>
<td>2.1M published sequences</td>
</tr>
<tr>
<td>Healthcare Data</td>
<td>140TB of clinical and administrative data</td>
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<tr>
<td>Hospitalization Data</td>
<td>4.6M total admissions</td>
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CDC COVID Data Tracker [covid.cdc.gov/covid-data-tracker]
What will be different overall because of DMI?

Success means we will:

• **Decrease burden** on doctors and hospitals by replacing faxes and phone calls with automated reporting directly from electronic health records

• **Free up public health staff** by providing them the infrastructure, tools, and training to use data for more targeted interventions for their communities

• **Have awareness of emerging threats** across the U.S. to inform forecasting and to direct resources to prevent or mitigate public health impacts
Discussion