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# 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## **Outdated skills:**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:**

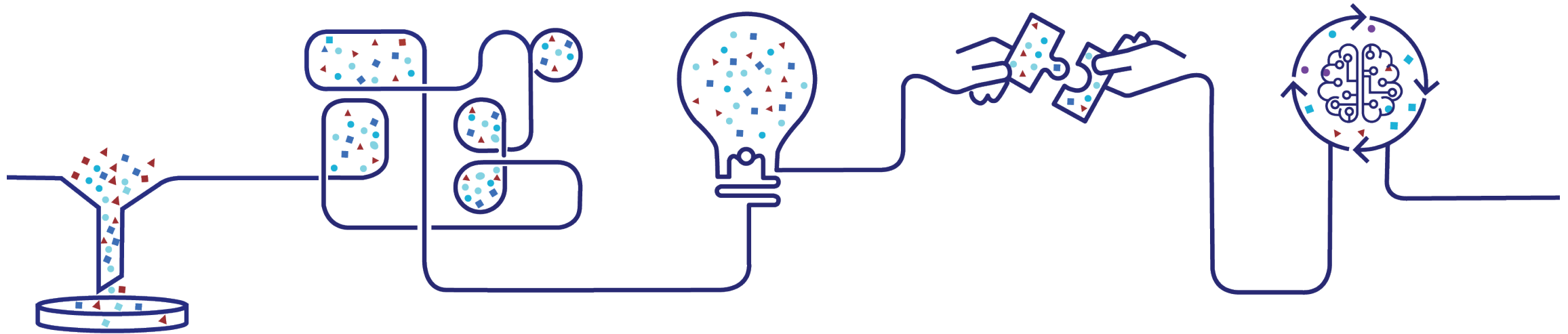
- Most systems at health departments are not flexible, do not use cloud, and are not scalable



## **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

# We are listening and connecting



THE KRESGE FOUNDATION



# WHAT WE'RE DOING

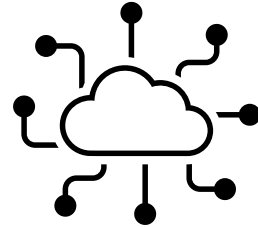
DMI is changing how we work.



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.**

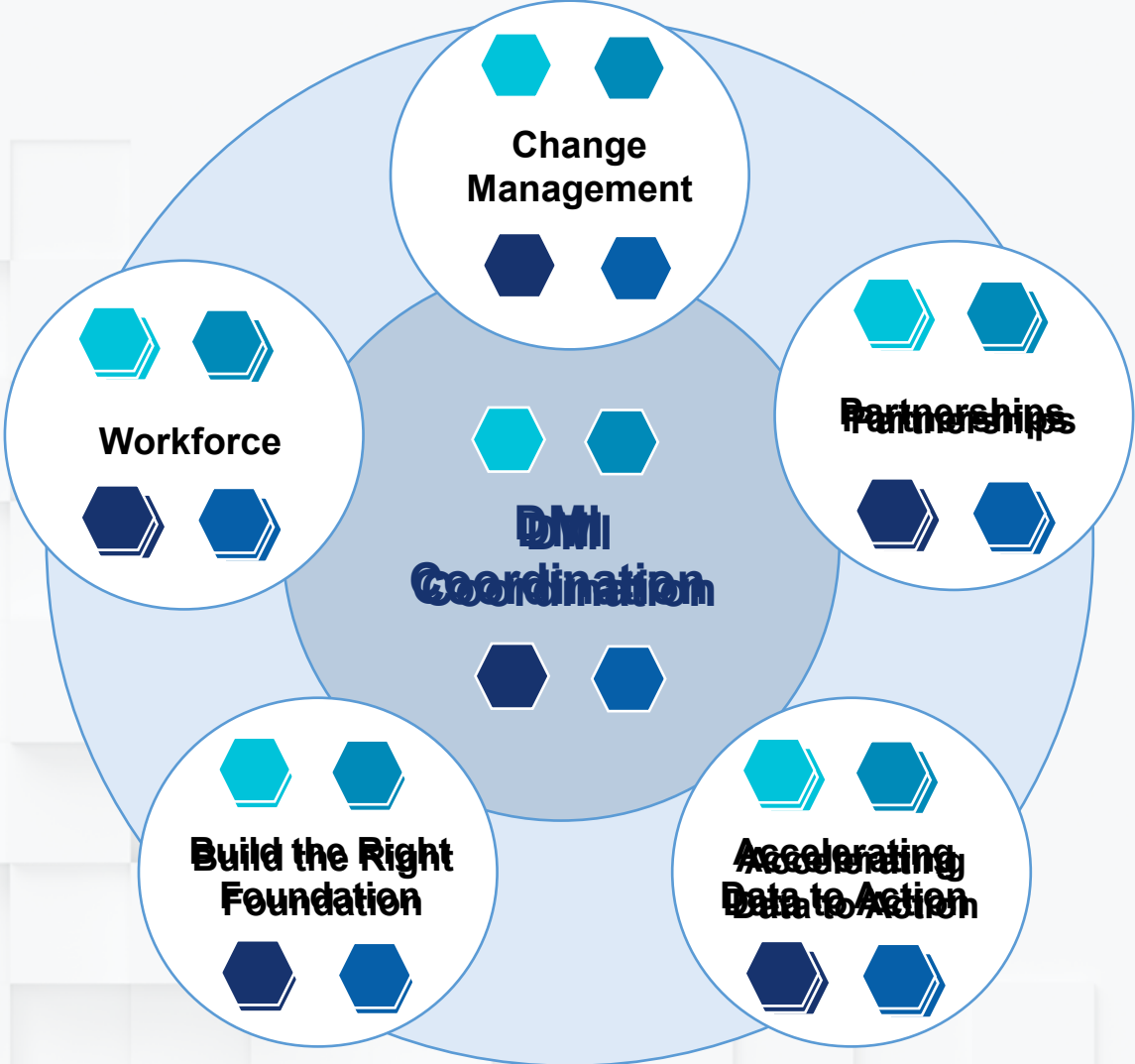
# We're changing the way we work at CDC.



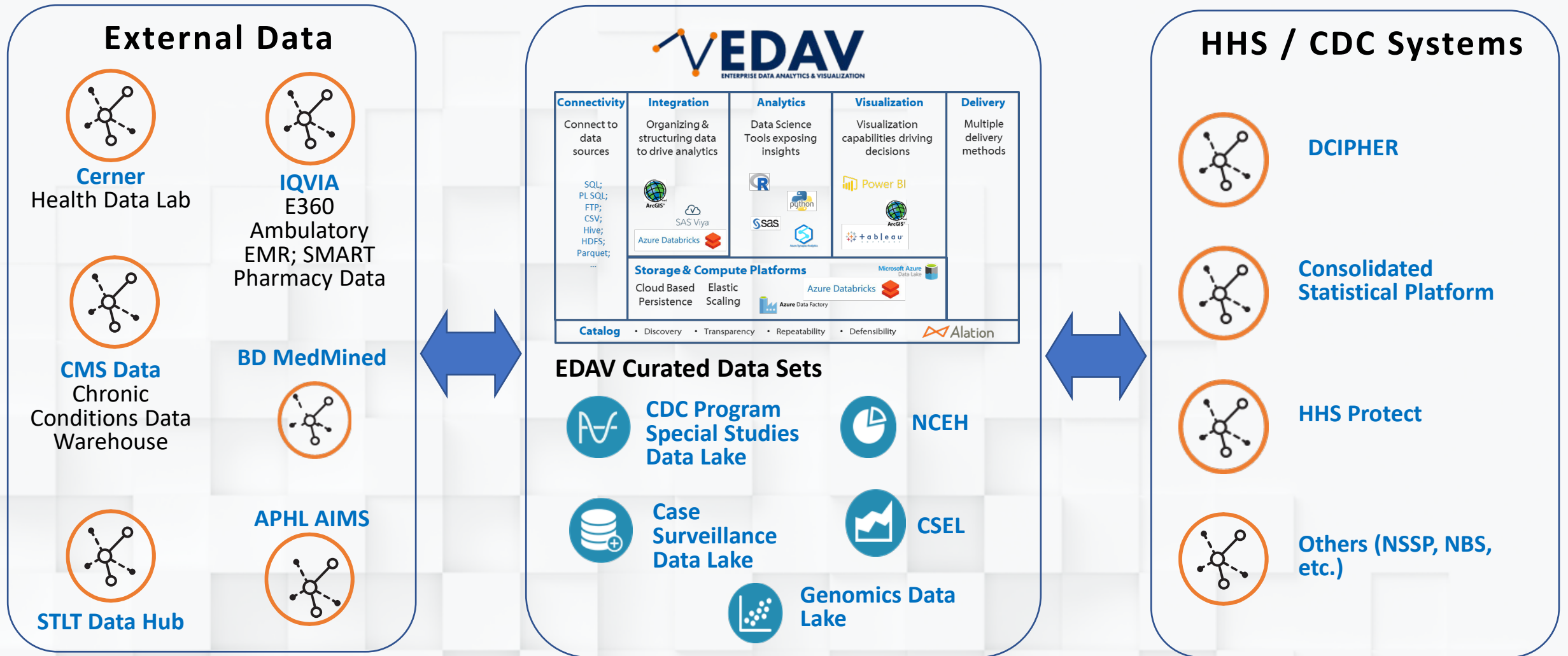
## CURRENT CDC STRUCTURE



## DMI IMPLEMENTATION APPROACH



# We're establishing cloud environments for managing and analyzing big data



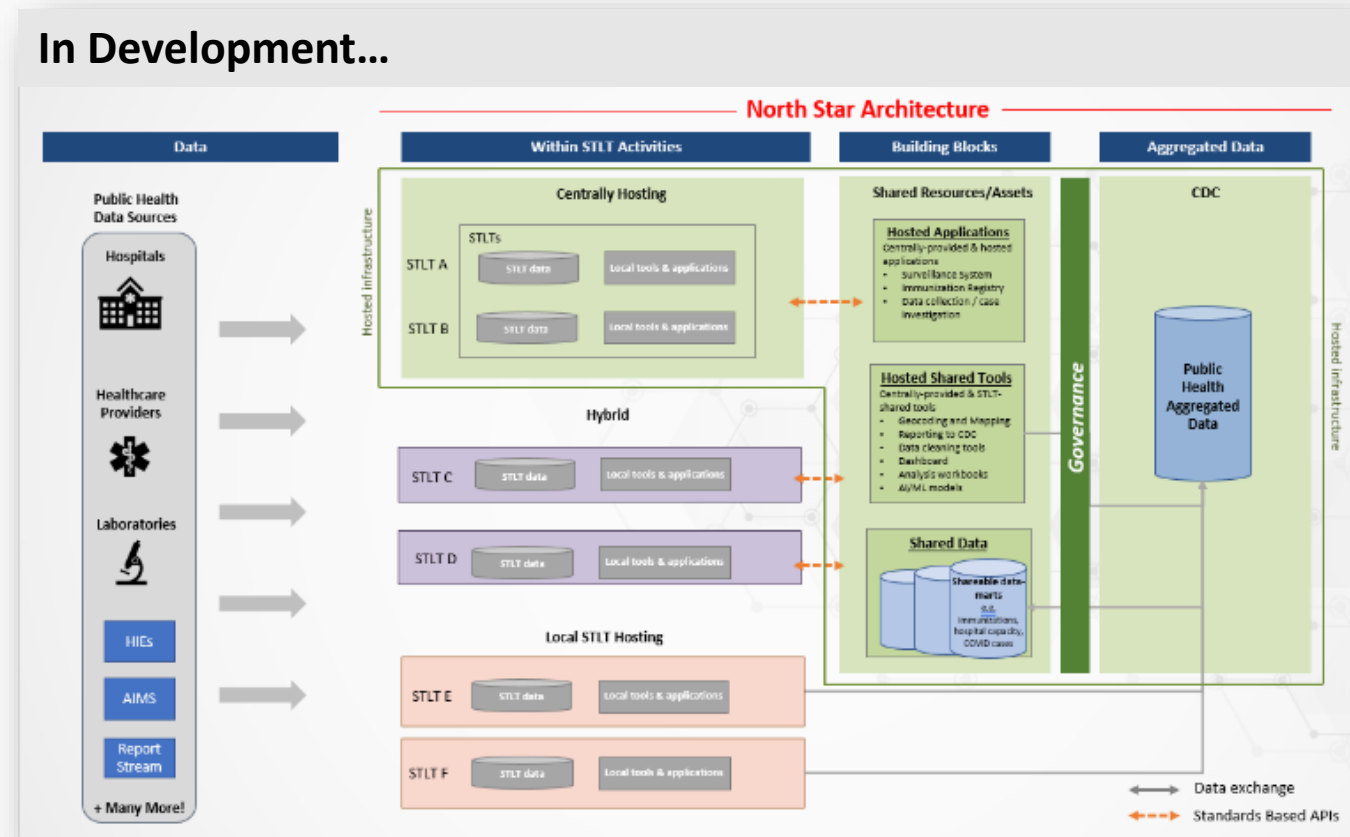


# We're developing a "North Star" Architecture

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



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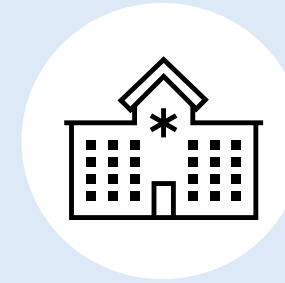
# We're changing how we engage with partners



**Consortium  
for Data  
Modernization**

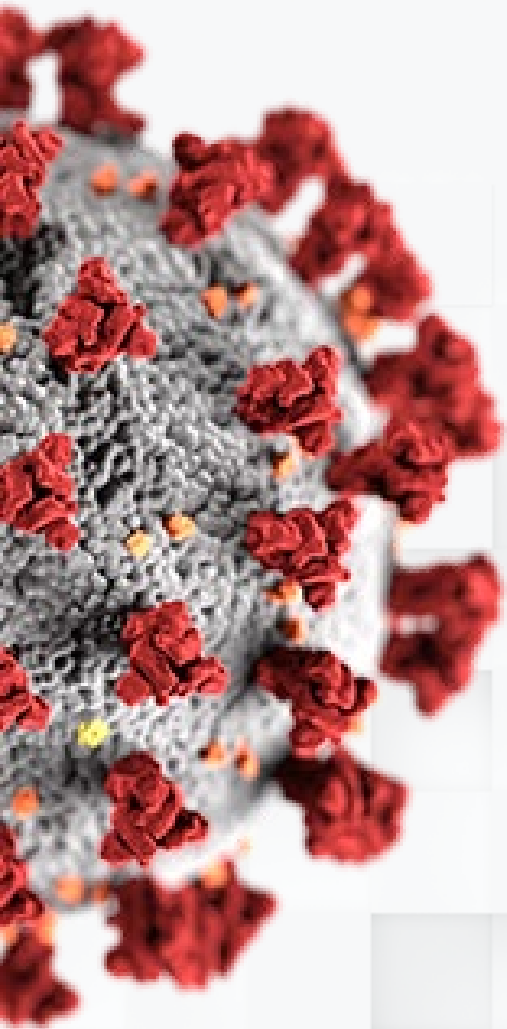


**Data and  
Surveillance  
Workgroup**



**Industry Listening  
Sessions**

# We are in a different place than we were before the pandemic



## Monitoring Disease Burden

### DATA COLLECTED

**Electronic Lab Reports**

**813M** COVID-19 Tests

**Case-Based Disease Surveillance**

**79M** Case Reports

**Emergency Department Visits**

**7.4M** COVID-19 ED Encounters

**Immunization Records**

**551M** vaccinations administered

**Virus Genomics Data**

**2.1M** published sequences

**Healthcare Data**

**140TB** of clinical and administrative data

**Hospitalization Data**

**4.6M** total admissions

# 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

