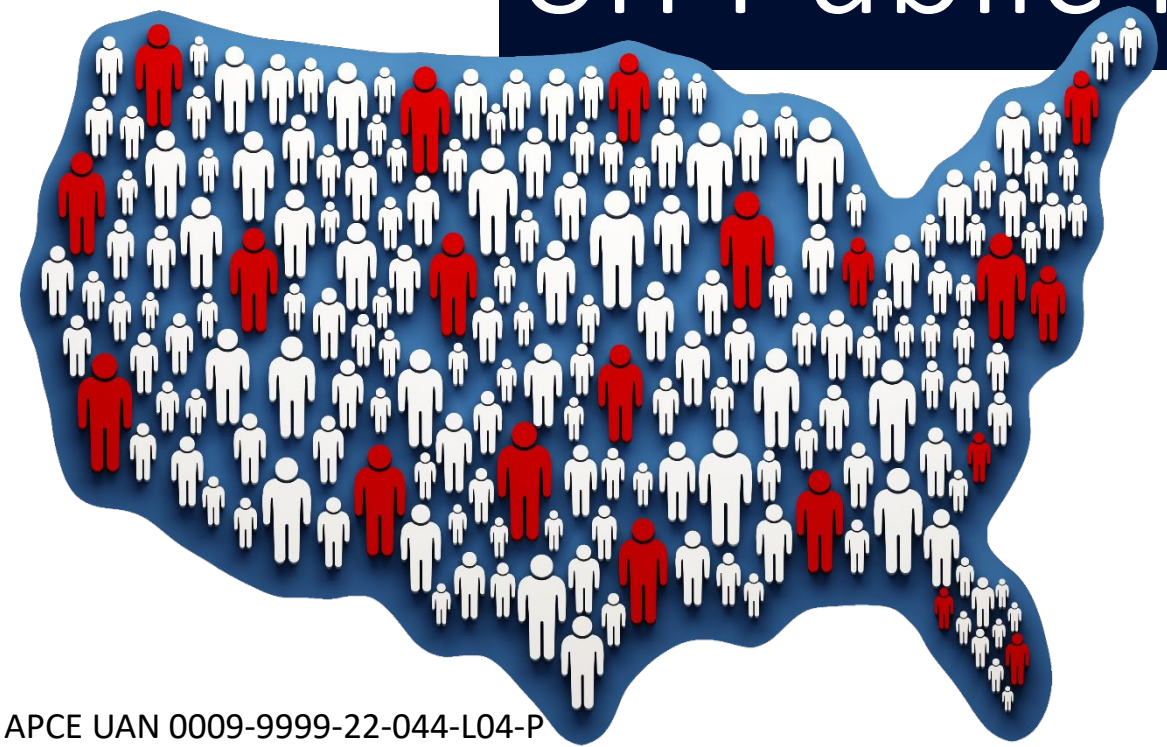
Making the Connection: Local & National Perspectives on Public Health Data Exchange



Thursday, June 9th, 2022

UCONN HEALTH

APCE UAN 0009-9999-22-044-L04-P

This webinar is funded by a grant from:

Connie has no undue influence on the content of this program.

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CME Series –
with CPE sought as appropriate

Health Information Technology for Clinicians:
How to Achieve Optimal Outcomes

Webinars and In-person events

Activity Director/Moderator: Thomas Agresta MD, MBI

Department of Family Medicine, Center for Quantitative Medicine

UConn Health

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Health Information Technology for Clinicians:
How to Achieve Optimal Outcomes

Sample Topics

- Medication Safety/ Reconciliation
- Health Data Analytics
- eCQMs (electronic clinical quality measures)
- Telehealth
- Image Sharing
- Precision Medicine
- Health Information Exchange
- Patient Consent models
- Public Health Informatics
- Patient-Generated Data

This series is funded by a grant from Connie, which did not influence the content of the program. Initial funding also from the Office of Health Strategy of CT

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Learning objectives

1. Define disease surveillance and the standards required for a robust network
2. Describe the current status of how public health data are collected and exchanged
3. Discuss lessons learned from COVID-related data exchange
4. Identify the optimal infrastructure necessary to develop a public health surveillance network

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Housekeeping

All participant lines will be muted during the panel discussion

The panelists will address your questions during the Q/A session from the Q/A chat feature

If we are not able to address your question today, we will follow up with you directly using your registered email.

This session will be recorded and available for download along with the slides used today.

Instructions on how to access will be sent after the session to your registered email along with instructions to earn CME and CPE credit.

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Presenters

Adi V. Gundlapalli, MD, PhD, MS

Chief Public Health Informatics Officer
Center for Disease Control
Center for Surveillance, Epidemiology, and Laboratory Services

Manisha Juthani, MD

Commissioner
Connecticut Department of Public Health

Disclosures: All presenters have reported they have no conflicts to disclose

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Poll

What do you believe is the most important outcome of public health surveillance?

a) Awareness of emerging health threats
b) Disease detection and intervention
c) Automated real-time data collection
d) Response-ready data sharing
e) Using the data to predict and forecast
f) Generating meaningful public health insights

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MAKING THE CONNECTION: NATIONAL PERSPECTIVE ON PUBLIC HEALTH DATA EXCHANGE

Public Health Webinar
University of Connecticut School of Medicine
June 9, 2022

Adi V. Gundlapalli, MD, PhD, MS
Chief Public Health Informatics Officer
Center for Surveillance, Epidemiology, and Laboratory Services

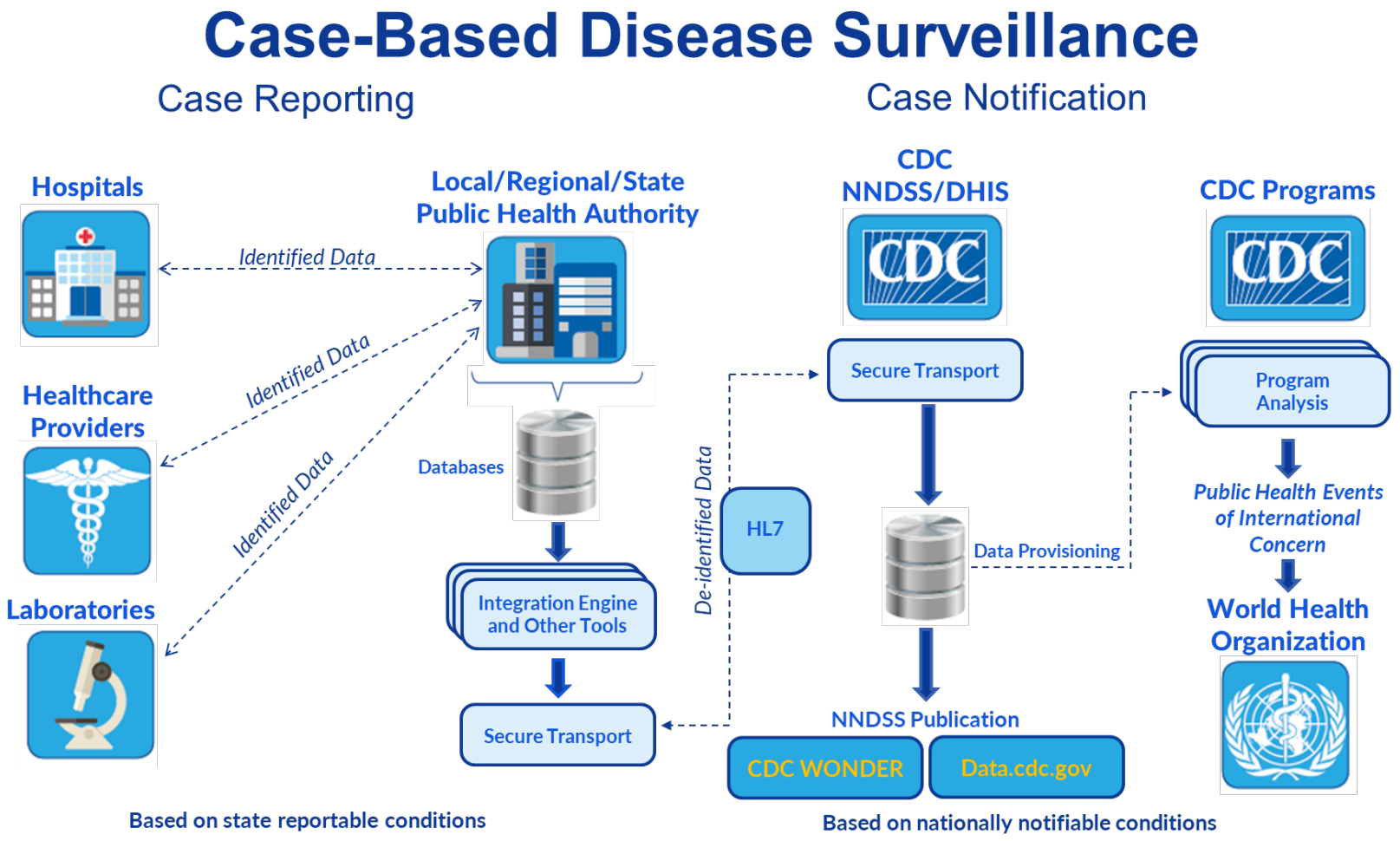
PUBLIC HEALTH "CLINICAL" EXAMPLE

“Data is moving slower than the disease…”

“The nation’s public health data systems are antiquated and in dire need of security upgrades - paper records, phone calls, spreadsheets and faxes requiring manual data entry are still are in widespread use and have significant consequences including delayed detection and response, lost time, missed opportunities and lost lives.”

Testimony of Janet Hamilton, Director of Science and Policy at CSTE, speaks at Public Witness Day, Labor, Health and Human Services, Education, and Related Agencies (116th Congress)
April 9, 2019

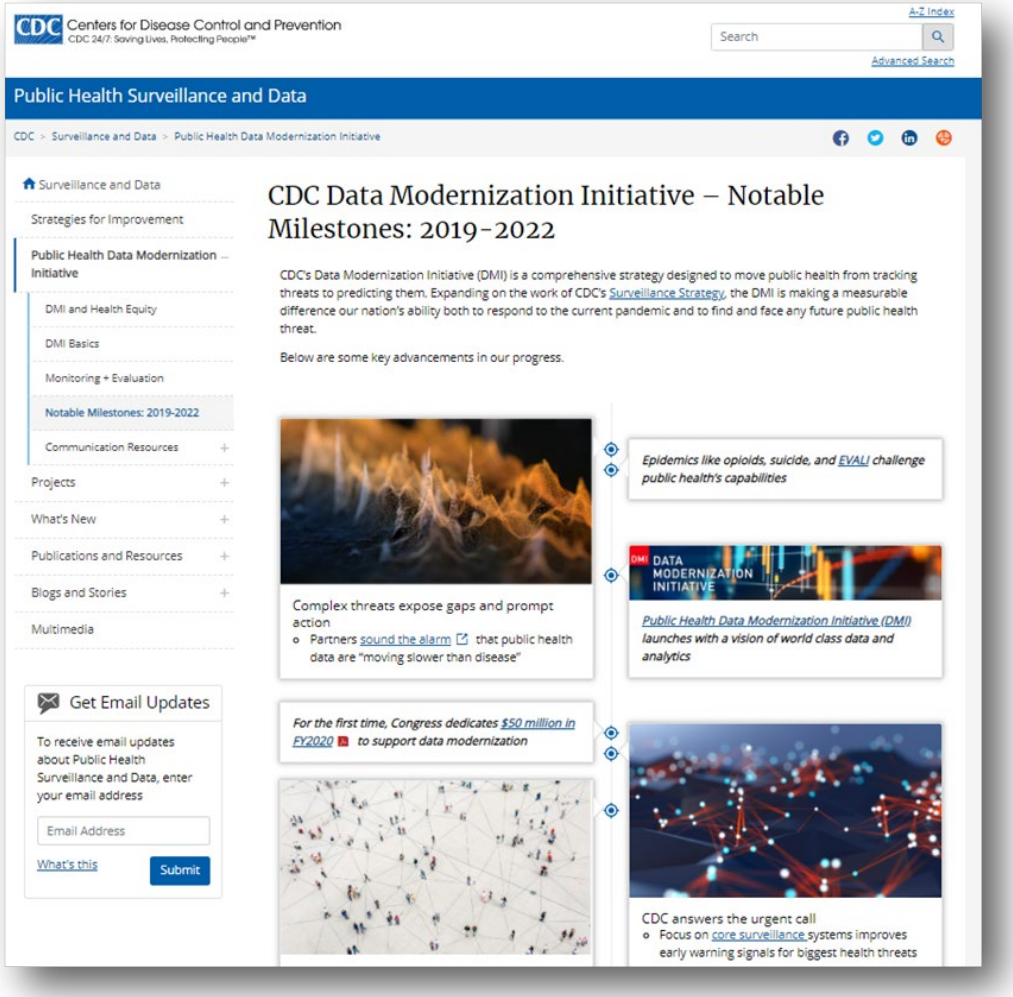
Complex public health data ecosystem



NNDSS: National Notifiable Diseases Surveillance System; DHIS: Division of Health Informatics and Surveillance;
HL7: Health Level Seven international standard
EHR: electronic health records; HHS: US Dept. of Health and Human Services; STLT: State, Tribal, Local, and Territorial partners

Data Modernization Initiative (DMI)

- Launched in 2019 by CDC in collaboration with public health partners
- Funded by CARES Act, American Rescue Plan, and dedicated appropriations
- Working to develop and sustain modern, integrated, and real-time public health data and surveillance



https://www.cdc.gov/surveillance/surveillance-data-strategies/milestones_2019-2020.html

Core Capabilities of Public Health

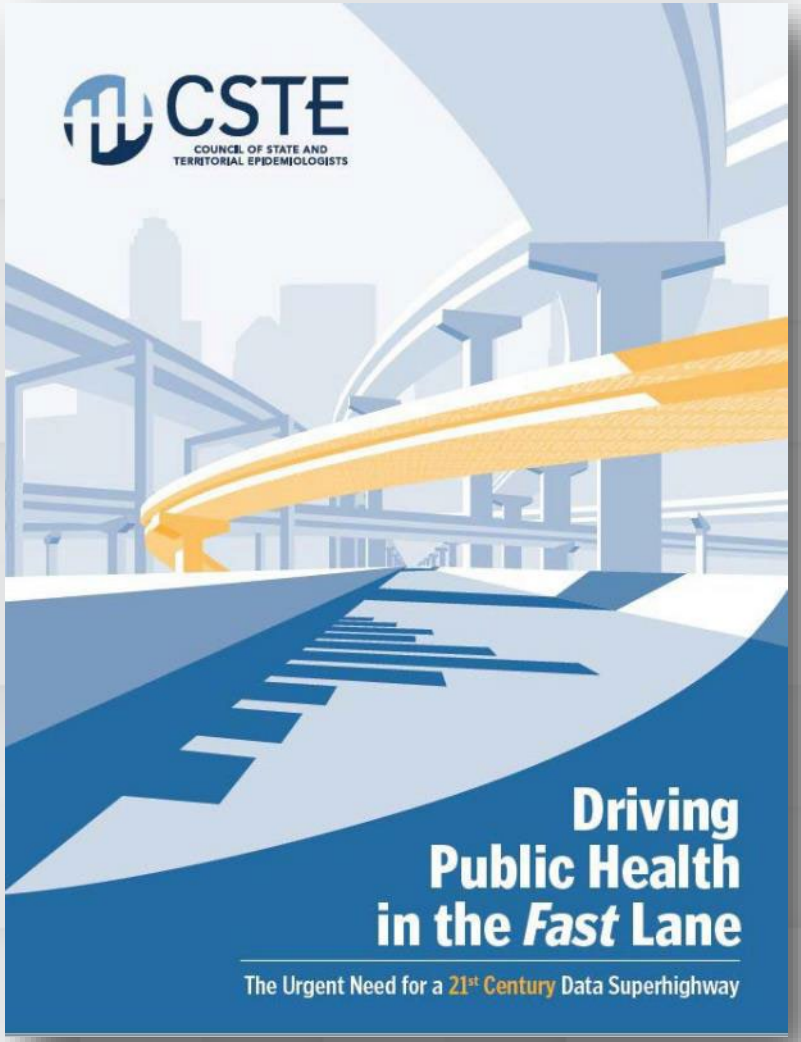
Gives faster understanding of emerging health threats through electronic reporting of emergency department visits

Reduces burden on states for reporting notifiable diseases to CDC through modernized electronic messages

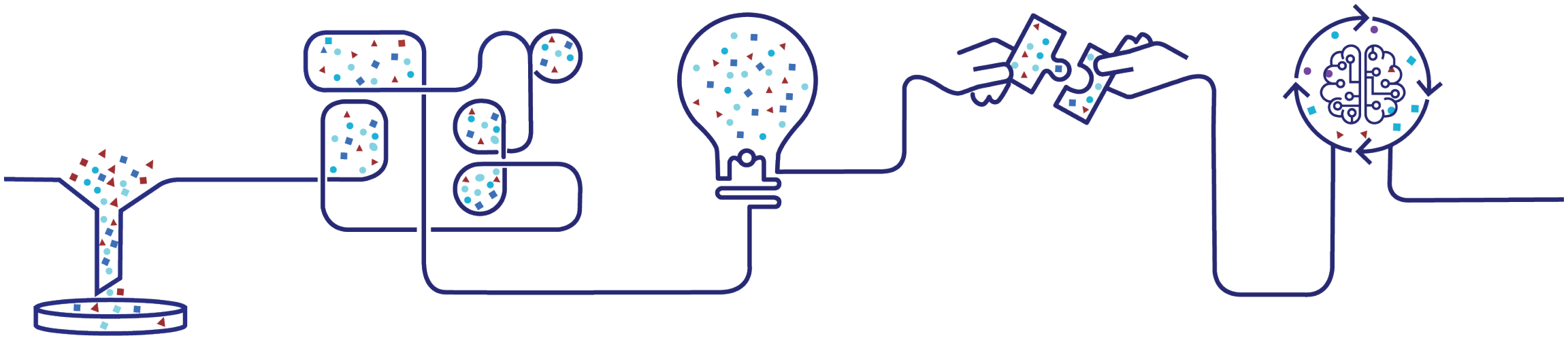
Offers earlier disease detection and intervention through automated reporting of certain diseases and conditions from electronic health records

Supports faster, more complete automated laboratory reporting of notifiable conditions to local and state health departments

Captures data from ~6 million births and deaths annually that can signal changes in trends, monitor urgent public health events, and provide faster notification of cause of death



DMI Priorities



Build the right foundation

Accelerate data into action

Develop a state-of the-art workforce

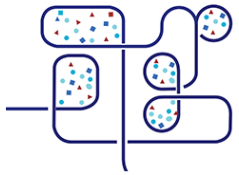
Support + extend partnerships

Manage change + governance

DMI Strategic Implementation Plan (cdc.gov)

Build the Right Foundation

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



Automated real-time data collection

eCR, ELR, Syndromic, Vital records, Immunizations

Reduce burden and allow data providers to “turn off their fax machines”

Cloud-based services

Streamline the way we process, store, and visualize data

“North star” architecture

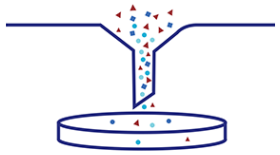
Create a collaborative vision to improve STLT access to actionable intelligence

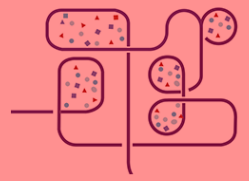
Reduced silos

Migrate stand-alone systems to a common architecture at CDC and STLTs

Accelerate Data into Action

Create faster, more integrated use of data for real-time situational awareness and forecasting.





Rapid outbreak response

Build on COVID-19 “Common Operating Picture” platforms and prepare pandemic-prone programs to scale up in emergencies

Forecasting and outbreak analytics

Use data in new ways to mitigate problems earlier and direct resources more effectively

Linking and opening data

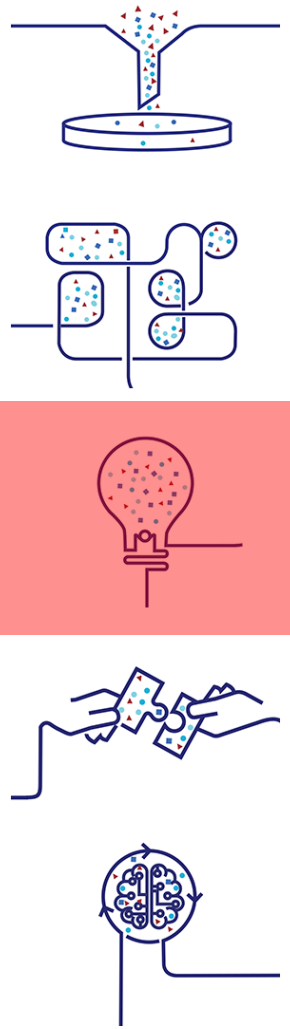
Link and integrate data from diverse sources for more actionable insights

Connected public health and healthcare data

Adopt interoperability standards and create hubs for data exchange while protecting privacy and security

Develop a State-of-the-Art Workforce

Identify, recruit, and retain experts to generate meaningful public health insights.



Recruitment

Attract a diverse, qualified public health science workforce

Training

Build the skills of the current and future workforce through team-based programs and fellowships

Forecasting workforce needs

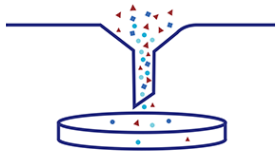
Modernize and expand the use of public health workforce data to identify future needs

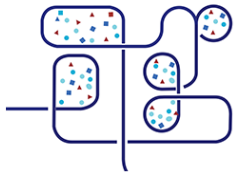
State + local support

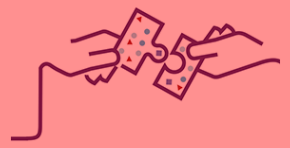
Build a public health workforce that represents the communities in which they work

Support + Extend Partnerships

Engage with state, territorial, local, tribal, and other partners to address policy challenges and solve problems.







Policies

Support the exchange and use of data between CDC, STLTs, partners, and data providers

Transparency

Increase access to modernization plans and progress for better alignment

Data Use Agreements

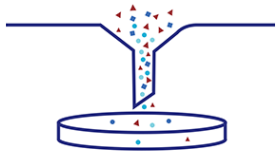
Reduce the burden for accessing, sharing, and using CDC data

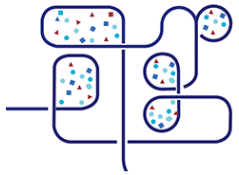
Collaboration

Innovate with research, academic, and public and private partners

Manage Change + Governance

Provide the necessary support for modernization and adoption of unified technology, data, and data products.





Governance

Approve strategic and efficient IT and data investments

Monitoring + Evaluation

Measure progress for accountability and continuous improvement

Change management

Encourage a culture of innovation, collaboration, inclusion, and adaptability

Procurement

Make acquisition processes more efficient and effective

What does success look like?

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

- **Free up public health staff time** 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

Thank you!

DMI@cdc.gov
agundlapalli@cdc.gov

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

Poll

What public health data would be helpful to share in Connecticut?

a) Birth and Death records
b) Infectious Disease status
c) Immunization status

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Dr. Manisha Juthani, MD

Commissioner Connecticut Department of Public Health

Core Systems That Support Public Health Surveillance – State and Local Health

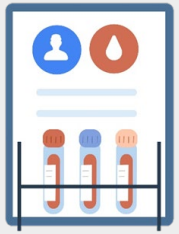
Syndromic Surveillance

Integrated Disease Surveillance

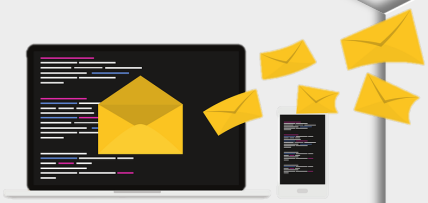
Birth & Death Registry

Immunization Registry

Tumor Registry



Public Health Laboratory Information Management System (LIMS)



Electronic Data Exchange

CT Violent Death Reporting System (CTVDRS)

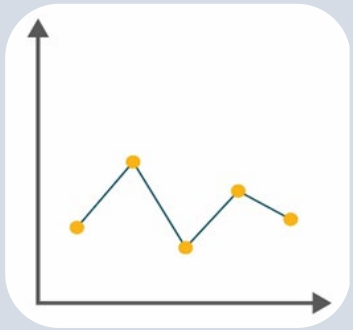
State Unintentional and Undetermined Intent Overdose Response System (SUDORS)

Highlighting EpiCenter Use Case:
The Opioid Crisis

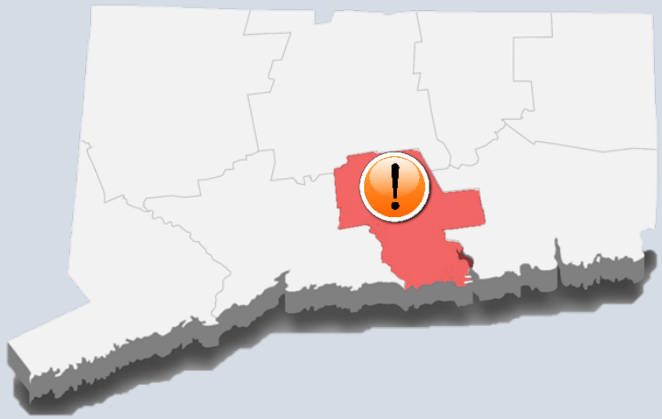
Near real-time reports on ED visits from all 38 licensed hospitals in CT

EpiCenter System

The Injury and Violence Surveillance Unit (IVSU)

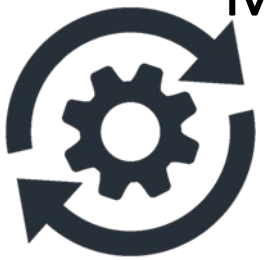


Drug overdose-related ED visits



DPH staff is alerted within 24 hours if overdoses spike in certain geographic areas, initiating an investigation

Infectious Disease Section Informatics Program



- Manages
  - Integrated disease surveillance and case management system for nearly all reportable diseases and other needs
  - Electronic data exchange for lab results and reporting to CDC

- COVID-19 Laboratory testing
  - Expanded from the State Lab to academic and commercial labs – PCR tests
  - Further expansion to testing at pharmacies, mobile sites, provider offices, schools, etc. as rapid PCR and then rapid antigen tests received FDA EUA

- COVID-19 Provider reporting
  - Open access provider COVID-19 case reporting portal stood up
  - Hospital IPs asked to do direct data entry into surveillance system for hospitalized cases

Improvements

Pre-pandemic	Year 3 pandemic
3.5 FTE Program Staff + 1 FTE IT Staff	8 FTE Program Staff (3 pending) + 7 FTE IT Staff (6 pending)
~390K Lab tests, all diseases/year	19M COVID-19 test alone
Electronic Lab Reporting (ELR), all reportables, with: 3 Hospital Systems, 2 Stand-Alone Hospitals, - Quest and State Lab	>200 Lab Entities– all but 2 acute care hospitals, all major commercial labs, Labs doing COVID-19 testing across US >300 POC, Mobile, Pharmacy, etc. COVID-19 Testing Locations reporting via flat files
No Electronic Provider Reporting of Tests, Electronic Case Reporting	NEW Development of data analytics platform as data warehouse, selected data is automatically pulled and available for analysis Electronic case reporting project

Successes

19 Million

COVID-19 Lab Results Processed and Captured

Automated processing to capture data for the COVID-19 Daily and Weekly Reports

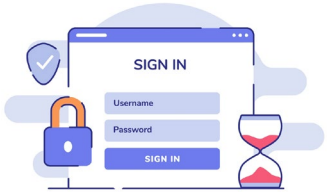
Never missed a day of COVID-19 reporting to the public

DPH

CT WIZ

Originally used to monitor vaccination status for children ages 0 to 5, primarily for school entrance

CT Wiz expanded to meet federal requirement for state level tracking of COVID-19 vaccines administered



Infrastructure Improved, allowing information to be more accessible, CT residents have access to their COVID-19 vaccine information

Legislation passed this session to make this permanent and make ALL vaccine information available

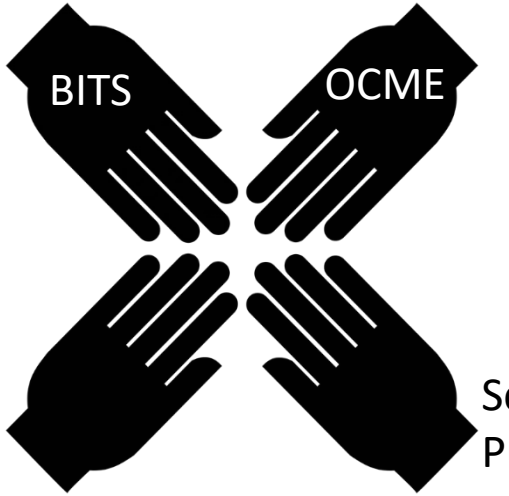
Legislation presented communications challenges around HIE and how to make people comfortable with public health surveillance

CT DPH DMI Efforts

Building a Private Cloud Data Center

Enterprise Data Exchange

Increased Staff in Critical Areas



Other State Agencies

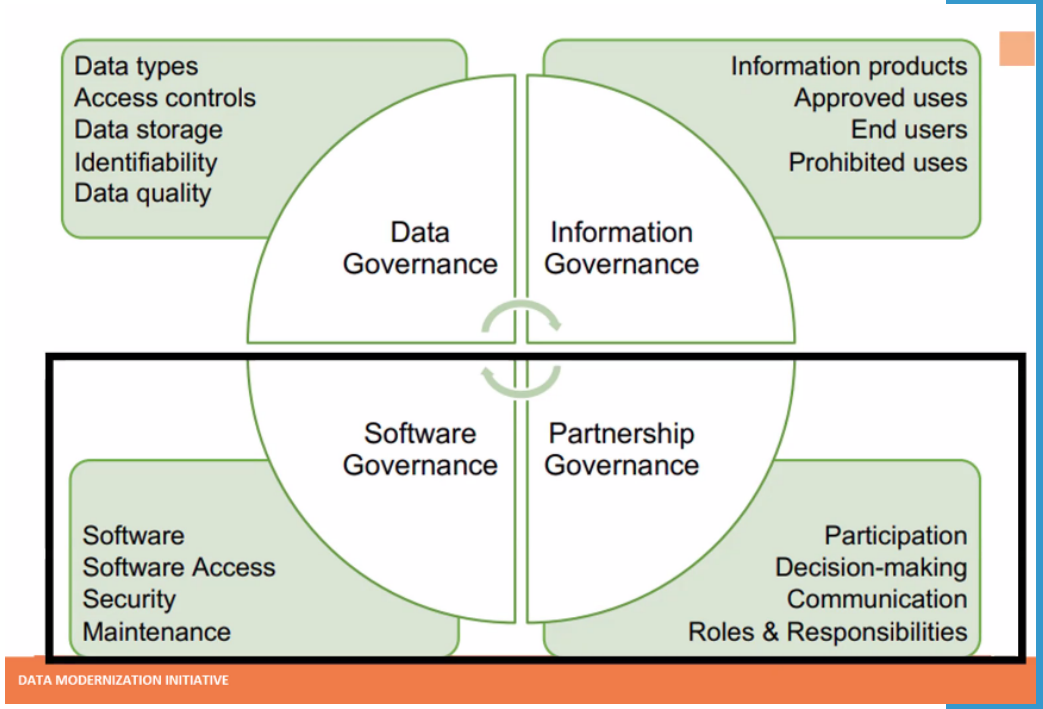
School of Public Health

Strong Partnerships

Establishing Enterprise Governance Framework

Data Modernization Initiative Gaps Identified During Assessment – April 2022

- Agency Data Governance Needed
  - Follow the DMI Governance 'Circle'
  - Establish a DPH DMI Champion
  - Assign a DPH DMI Lead
  - Create a DMI Steering Committee with participation from key program staff as well as management
- Outdated State Job Titles & Classifications
  - Informatics
  - Information Technology
  - Data Scientists
- Under Resourced Areas
  - Not enough staff
    - Informatics
    - Information Technology



Example Public Health Use Cases

Maryland PDMP

COVID-19 Results, Vaccinations & POC Test Reporting

Public Health Investigations

Registry Integration

Colorectal Cancer Screening

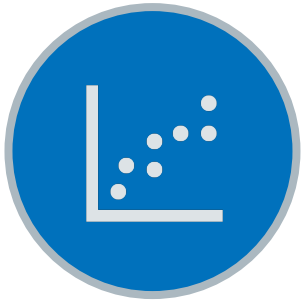
HIV/AIDS Lost to Care

PREP Medication Reporting

WIC Access

Birth Score Alert

Heat Maps



Questions

- Contact us for further information /
  HIELearning@uchc.edu
  Or
- Visit us at:
  https://health.uconn.edu/health-interoperability-learning/

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Stay tuned for the next event!

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