Agenda

- Welcome & Introductions
- Setting the Stage for Weekend Activities
  - Opening Remarks by CDC Foundation and HL7
- Review of Agenda/Objectives
- Background
  - CDC Data Modernization Initiative
  - Supporting Public Health Partner Alignment

HOLD for slides from CDC Foundation

- # of participants
- Jurisdictions representing
- First time HL7
- New to FHIR
- Top interests around learning this week

Opening Remarks

- Setting the Stage for our Sessions

Objectives and Agenda

1. Participants will have a broad understanding of the CDC Data Modernization initiative
2. Participants will understand the relationship between STLTs and CDC related to this initiative
3. Participants will understand the interoperability strategy
4. Participants will learn about Interop policy as it pertains to public health (e.g.HTI-2)
5. Participants will learn about HL7, Helios project and the PH WG and their roles in standards development and implementation (virtuous cycle)
6. Participants will learn about public heath FHIR IG/projects
7. Participants will learn basic FHIR concepts with exercises

Challenges

- We still need to address our biggest challenges and long-standing pain points

Disconnect between public health and health IT.

Siloed systems across public health and within CDC and jurisdictions.

Manual processes, outdated technology and lagging skills.

"Driving Public Health in the Fast Lane: The Urgent Need for a 21st Century Data Superhighway." https://www.cste.org/page/DM-2021

Reduce burden for partners

Tennessee's Public Health Department found that for **11 diseases** they used at least **20 surveillance systems** to send case data to the CDC.

Public Health Data Strategy (PHDS)

- A path to achieve our vision by outlining the required data, technology, policy and administrative actions

Core public health actions

Public Health Data Goals

1. *Strengthen the core of public health data*
2. *Accelerate access to analytic and automated solutions to support public health investigations and advance health equity*
3. *Visualize and share actionable insights to inform public health action*
4. *Advance more open and interoperable public health data*

Opportunities within reach

- Advances in health IT connectivity, interoperability, standardization and regulation.
- Multiple federal agencies supportive of and engaged in modernization efforts.
- Modernized, scalable technical approaches ready to expand across public health.
- CDC prioritizing moving to enterprise approach for data governance and systems.
- State, Tribal, Local and Territorial (STLT) advances made during pandemic and with DMI funding.

Transformed Future State of Data Exchange

5-Years: Public health and healthcare data interoperability

eCR and query via TEFCA for near real-time reporting & investigations

2024: 75% of reportable conditions reported by eCR; 40% CAH coverage

Increase coverage of syndromic surveillance to ~100% of ED visits

2024: 95% ED visit coverage; continued improved visualization

~75% state & big city public health jurisdictions and CDC using TEFCA

2024: Two public health use cases live

Broad adoption of FHIR® for most core data sources and across jurisdictions

2024: FHIR® adoption for NVSS and health care measures

Broad adoption of USCDI, and USCDI+ across public health

2024: USCDI/+ adoption for case and lab data

Leading to:

- Near real-time reporting and investigation of novel and serious health threats.
- Faster detection of common public health threats and outbreaks.
- Better insights into chronic disease conditions and trends.
- Nationwide real-time monitoring of public health threats.
- Faster sharing of information back to HC, improving clinical decision-making and patient safety.

Data Modernization Initiative (DMI)

Problems DMI is Trying to Solve

Siloed information

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

Older technologies

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

Outdated skills

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

Patchwork of policies

The variable landscape of data collection and reporting across the nation complicates rapid response to emerging threats

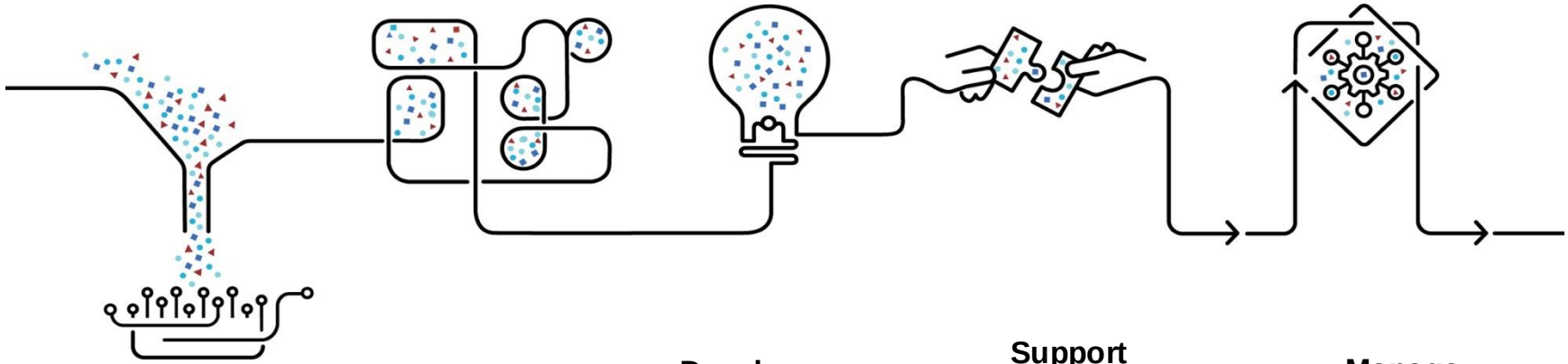
Heavy burdens for providers

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

Public health not in 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

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

Accelerate data into action

Create faster, more integrated data to provide a more real-time, 360-degree view of health 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

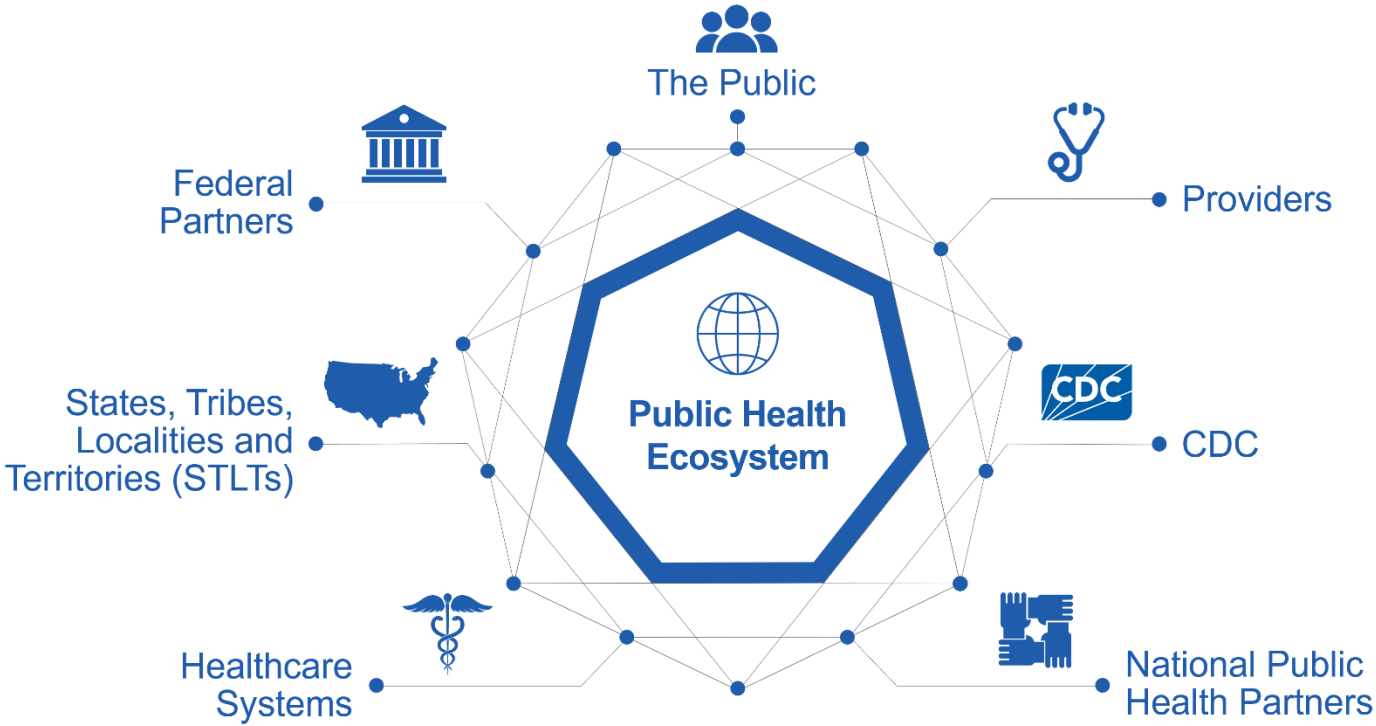
Support + extend partnerships and policies

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

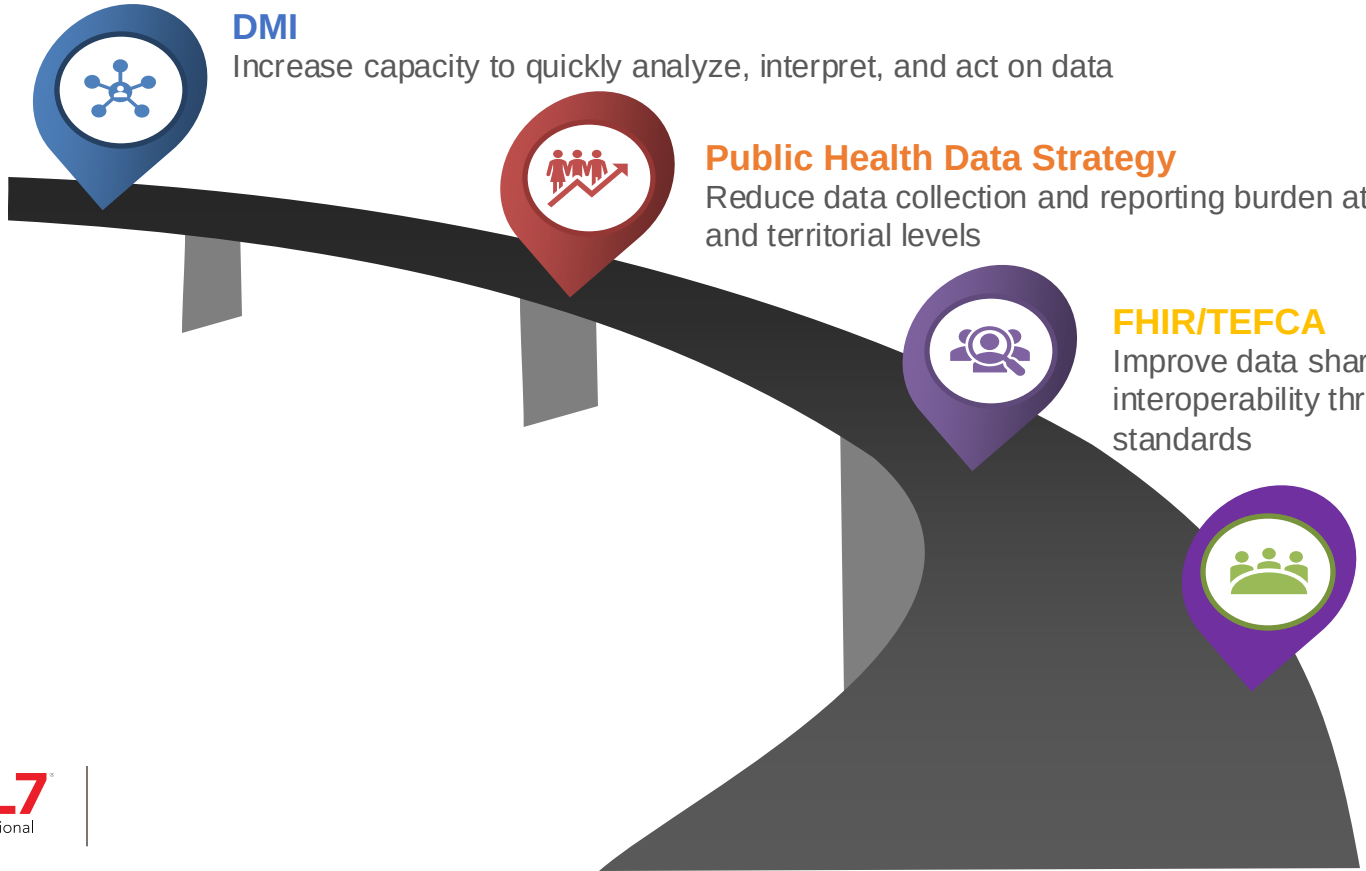
Manage change + governance

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

The Public Health Ecosystem



Roadmap to Data Interoperability



DMI
Increase capacity to quickly analyze, interpret, and act on data

Public Health Data Strategy
Reduce data collection and reporting burden at state, tribal, local, and territorial levels

FHIR/TEFCA
Improve data sharing and interoperability through common standards

Implementation Centers
Increase collaboration communications, and messaging around CDC and partners

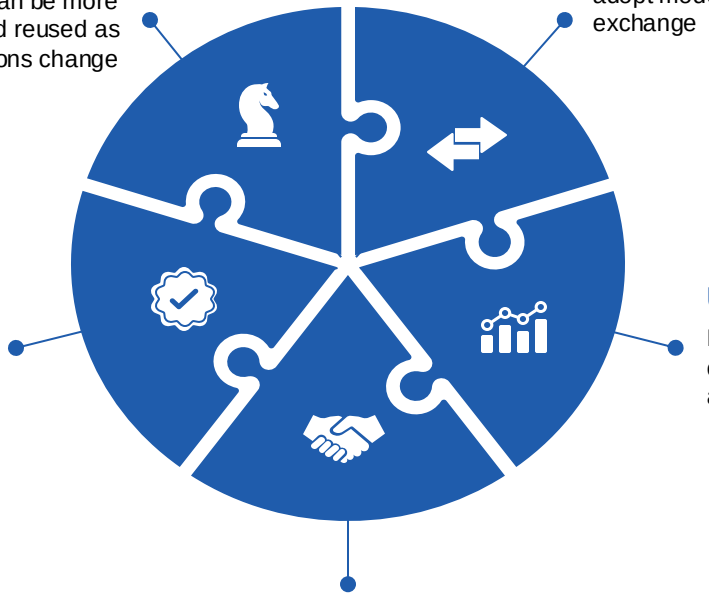
The Big Picture

FHIR® Advancement & Strategy

Adopt standards that can be more easily extended and reused as conditions change

Implementation Centers

Help public health jurisdictions adopt modern approaches to data exchange



Certification of IT & Data Systems

Ensure IT and data systems used by public health are sustainable and meet baseline requirements for security and functionality

USCDI & USCDI+

Prioritize and harmonize data most crucial to the needs of public health and beyond

TEFCA℠

Develop common, pre-negotiation agreements to simplify data exchange nationwide

Helios, PHFIC and how it all connects

HELIOS FHIR Accelerator

Community-led priority areas

Deliver Aggregate Information to

Make Data in Public Health Systems Accessible in Bulk

Public Health Query & Response

Public Health FHIR Implementation Collaborative –(PHFIC)'s Core Objectives

Build Community

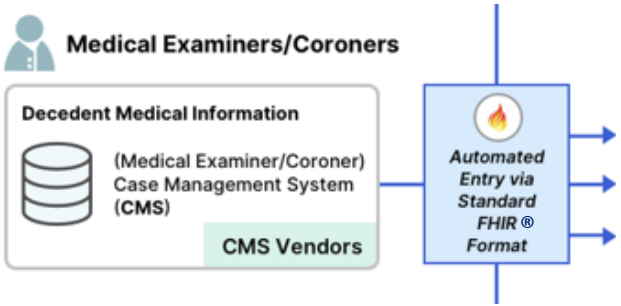
Pilot Test FHIR®

Advise on FHIR®

A community established in 2022 focused on improving public health data exchange with FHIR® by identifying key implementation challenges, providing training opportunities, demonstrating small scale impact, and promoting best practices.

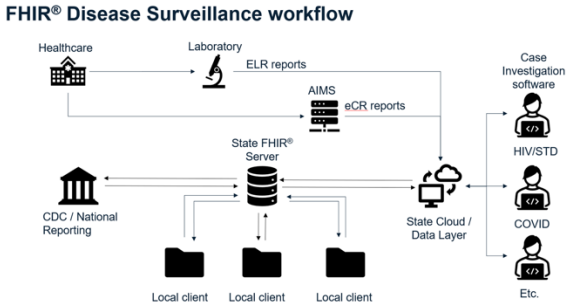
PHFIC's Three Pilot Use Cases

Facilitate data exchange between the Medical Examiner offices and the state vital records system



Death Reporting

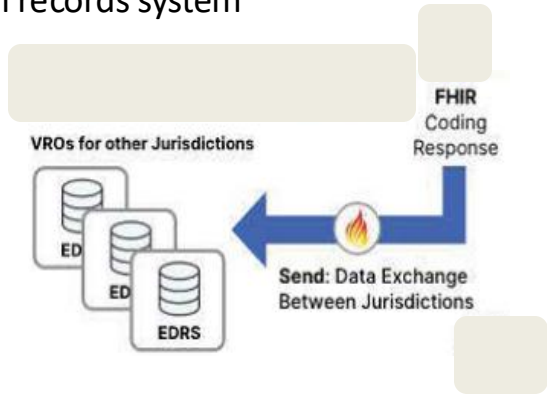
(Washington State/King County)



Surveillance Pull

(Minnesota State/Hennepin County)

Enhance surveillance data sharing between state and local agencies to reduce information sharing delays and epidemiologist burdens

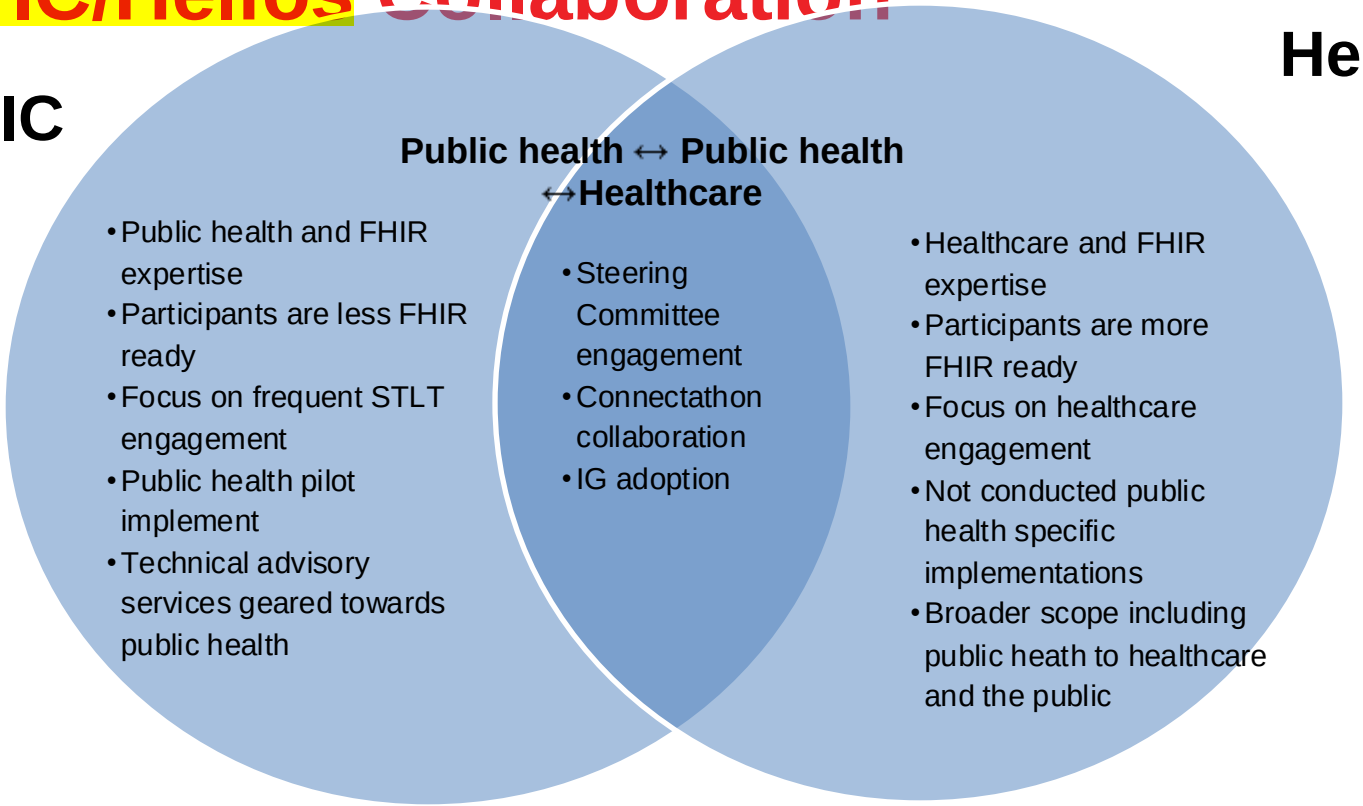


Death Record Pull

(Virginia State/Fairfax County)

Improve the speed and efficiency of death record sharing between state and local to better track opioid related deaths

PHFIC/Helios Collaboration



Policy Updates

21st Century Cures Act – Section 4003(b)

*"[T]he National Coordinator shall convene appropriate public and private stakeholders to **develop or support** a **trusted exchange framework** for trust policies and practices and for a **common agreement** for exchange between health information networks." [emphasis added]*

- The Trusted Exchange Framework and Common Agreement (TEFCA) guides how different, individual systems connect to share information consistently – without having to produce their own approaches and rules for doing so.

TEFCA℠

TEFCA – A Framework for Public Health Data Sharing

- The Trusted Exchange Framework and Common Agreement, known as TEFCA, aims to establish a universal policy and technical floor for nationwide health data interoperability by simplifying connectivity for public health authorities and agencies to exchange information
- TEFCA is the opportunity to connect public health into the Health IT ecosystem and get healthcare data to public health
- TEFCA could connect public health authorities to other public health authorities and agencies like the CDC

Benefits of TEFCA

Relevant, trusted information from nationwide sources for:

Individuals

Use an app to access their own records from TEFCA-connected sources located across the nation.

Providers and Health Systems

Improve care, coordination and population health by obtaining a more informed picture of care across settings through fewer connection points.

Public Health

Improve quality, reduce costs, and expand public health interoperability.

Payers

Get and share data needed for care management, value-based care, payer-to-payer exchange, etc.

Health Information Networks

Enhance the value of network participation and lower the cost of connecting with other networks.

Technology Developers

Provide a scalable policy and technical ecosystem for innovation.

Researchers (Future)

Improve quality, reduce costs, and expand participation in clinical research.

For more detail on the benefits of TEFCA for stakeholders, see factsheets at: https://rce.sequoiaproject.org/tefca-and-rce-resources/

TEFCA Goals

GOAL 1

Establish a universal policy and technical floor for nationwide interoperability

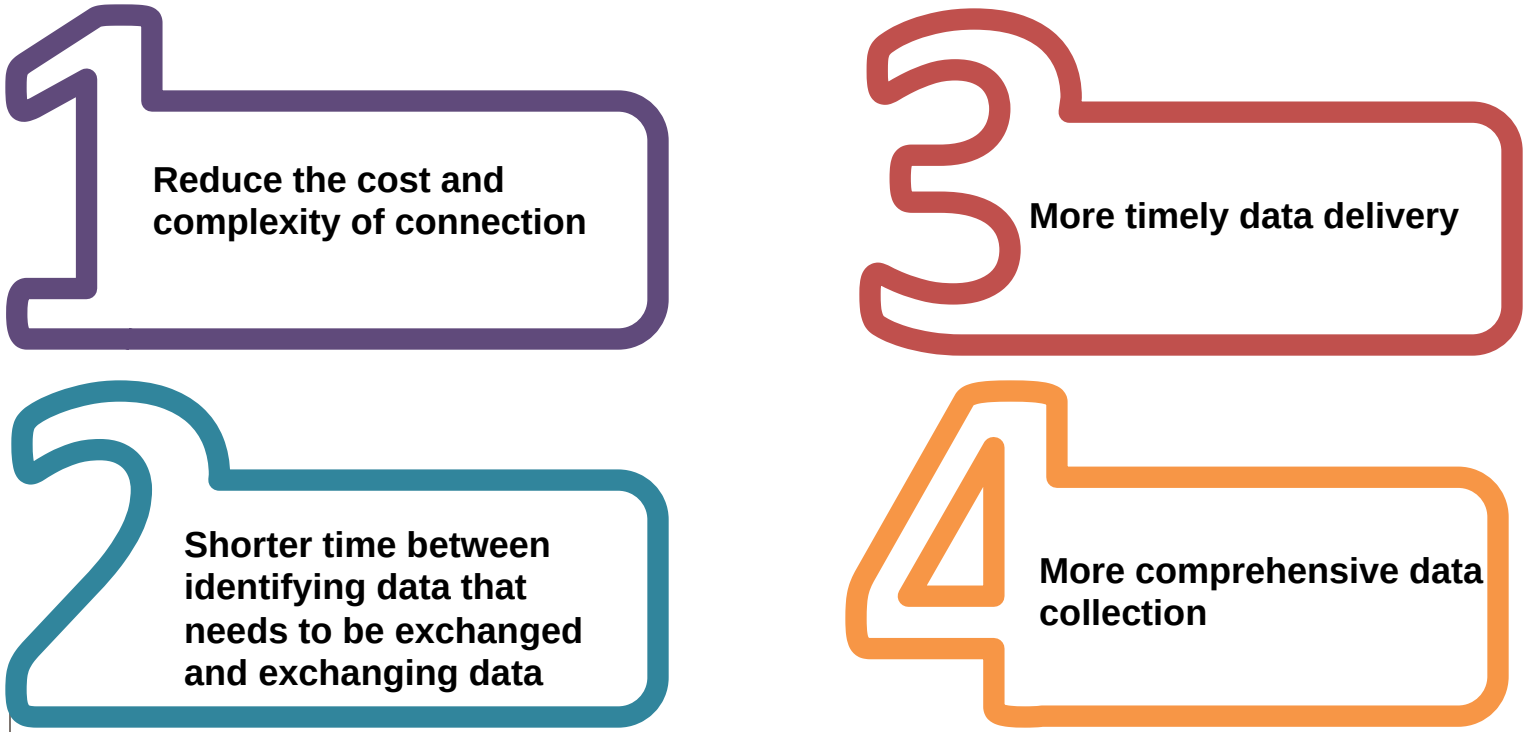
GOAL 2

Simplify connectivity for organizations to securely exchange information to improve patient care, enhance the welfare of populations, and generate health care value

GOAL 3

Enable individuals to gather their health care information

Potential Benefits of TEFCA to Public Health



OPHDST TEFCA Approach

Connecting public health to the health IT ecosystem

- Launch 2 use cases through TEFCA, using ONC USCDI and HTI standards
- Assist at least 5 STLTs adopt TEFCA and the same standards
- Complete 3+ interoperability innovation projects for clinical measures, patient queries, linkage, and others

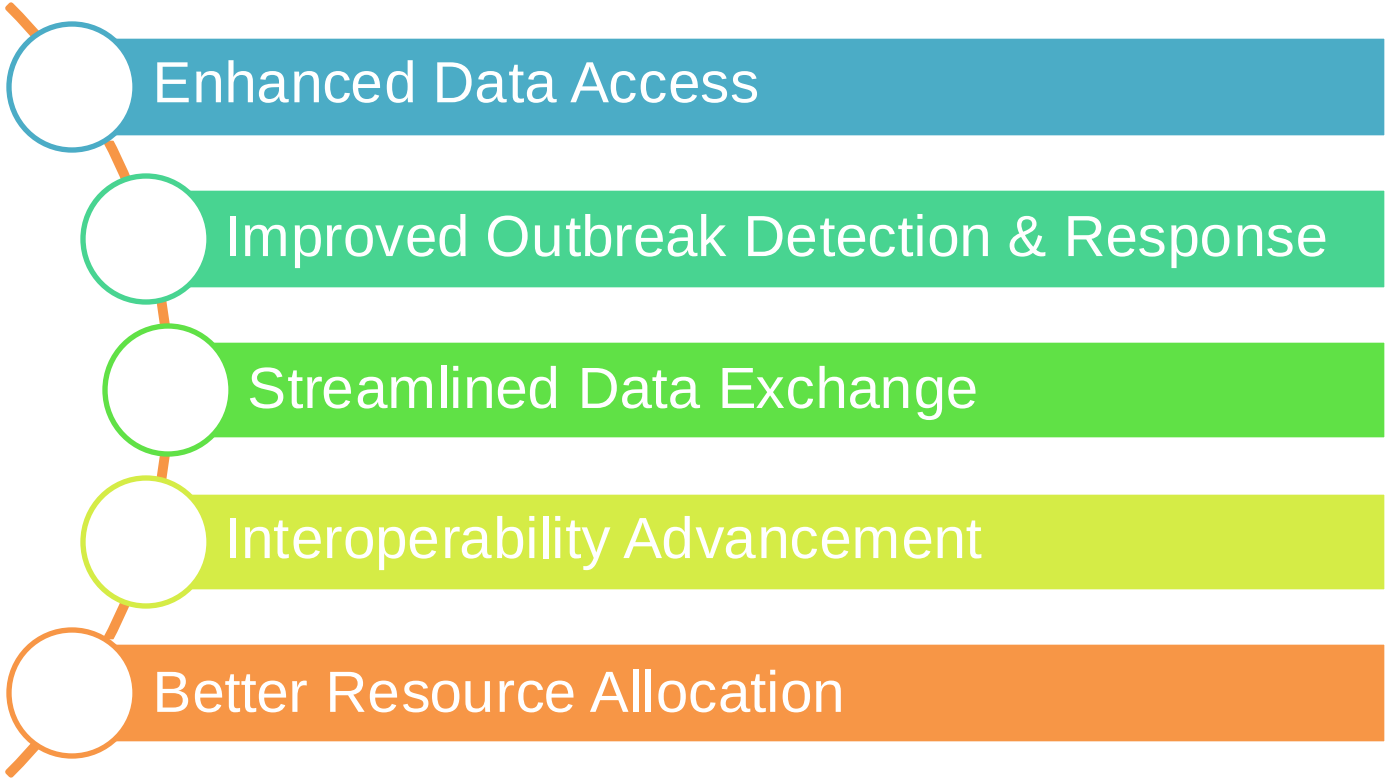
Initial end-to-end design: Case data exchange transformation

- Conduct case service design with CDC programs and STLTs
- Validate that routing eCR data directly to the CDC will help with rapid detection of PH threats

Capabilities building: Increase productivity across PH ecosystem

- Develop enterprise AI/ML Ops platform
- Develop enterprise vocab service

Why STLTs Are Interested in TEFCA Participation



Technical Support for Implementation Centers

National Partners selected to build four implementation centers

- ASTHO (Association of State and Territorial Health Officials)
- NNPHI (National Network of Public Health Institutes)
- PHAB (Public Health Accreditation Board)

$255 million dedicated to driving public health data modernization

- Three implementation centers to provide support to state, local and territorial jurisdictions
- One implementation center to provide tribal support

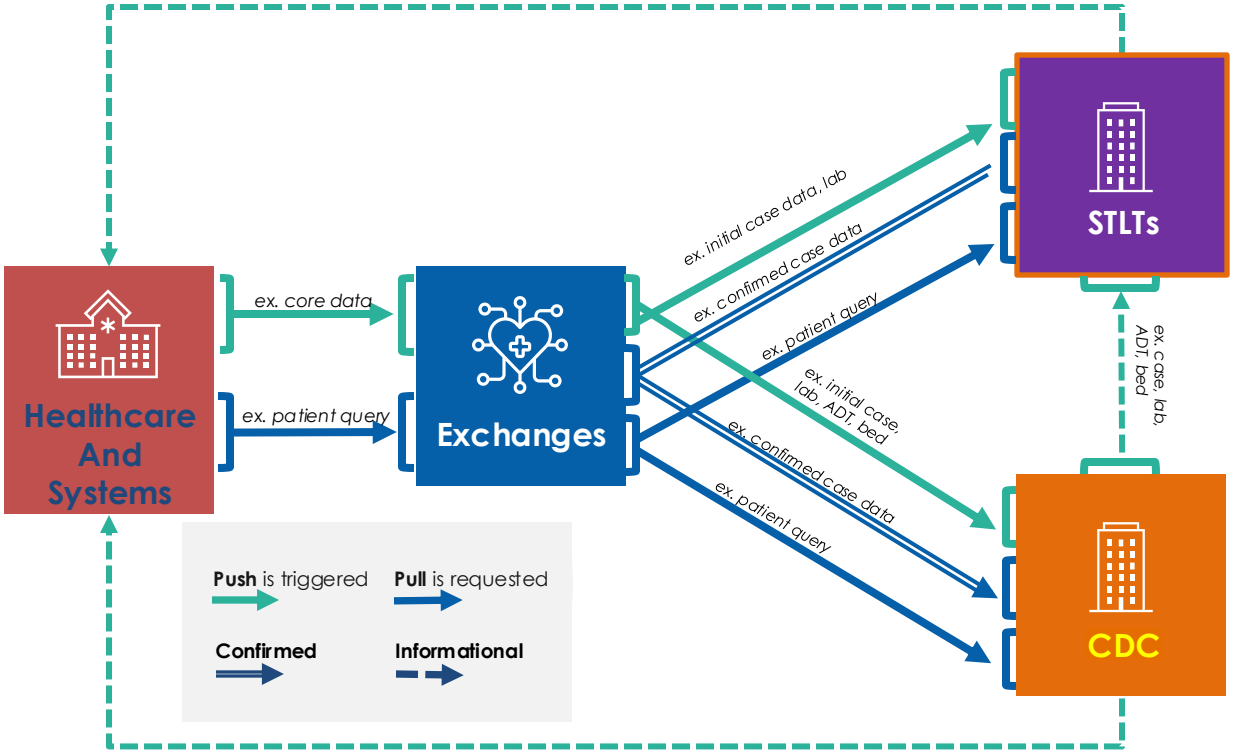
This funding is layered on top of public health infrastructure

...and capacity grants and data modernization funding

Hypothesized Future State Architecture

Key features:

- ✓ Reduce point to point connections across
- ✓ PH and with Healthcare and partners
- ✓ Aligned / connected to Health IT
- ✓ Enhanced automation
- ✓ Near real time data exchange
- ✓ Increased linkage capabilities
- ✓ Higher completeness
- ✓ Sustainable



Event Importance

- Closing Remarks

THANK YOU!

History of Health Data Interoperability Policy

2009

HITECH Act. Established Meaningful Use Program, moved Healthcare to a digital medium.

2016

21st Century Cures Act. Focused on interoperability for healthcare, patient access, usability and clinician burden reduction

2019

Data Modernization Initiative. Effort to modernize core data and surveillance infrastructure across the federal, tribal, and state public health landscape

2020

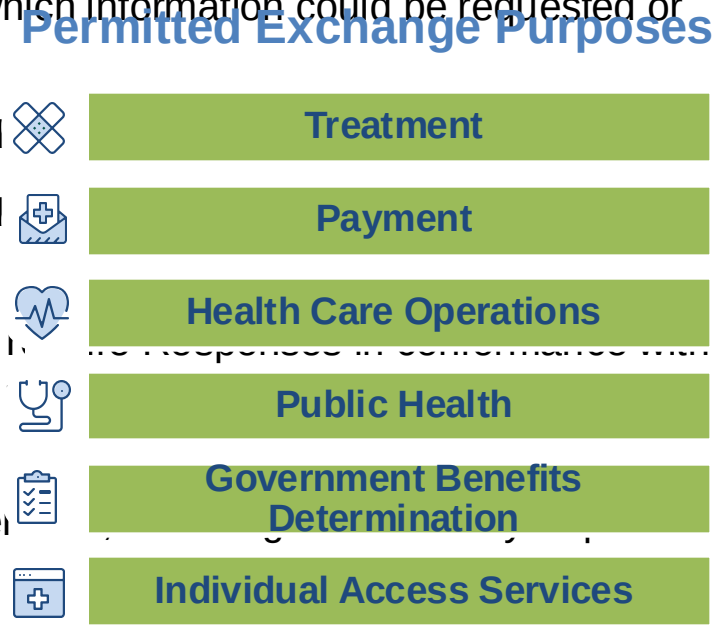
The COVID-19 Pandemic. All systems, processes and people were tested, and opportunities for public health were clarified

2023

Policymaking. Introduced a national framework (TEFCA), a CDC Data Office (OPHDST), a Public Health Data Strategy, and investments in content, terminology and exchange standards

Exchange Purposes (1 of 2)

- The Exchange Purpose identifies the reason for which information could be requested or shared through QHIN-to-QHIN exchange.
- Only these six Exchange Purposes are authorized
- A forthcoming SOP will specify that Treatment and require Responses.
- Eventually, the other four Exchange Purposes will forthcoming implementation guides. These will be stakeholders to prepare.
- Additional Exchange Purposes may be added ove Responses.



Exchange Purposes (2 of 2)

- **“Treatment,” “Payment,” and “Health Care Operations”** generally have the same meaning as they have under the HIPAA Privacy Rule and apply to all TEFCA Information, regardless of whether the parties to exchange are HIPAA Covered Entities or Business Associates.
- The **Public Health** Exchange Purpose includes Requests for, Uses of, and Disclosures of information by Public Health Authorities that are consistent with the HIPAA Privacy Rule and other Applicable Law.
- The **Government Benefits Determination** Exchange Purpose supports governmental agencies that need information to determine whether a person qualifies for non-health government benefits in a manner that is consistent with the HIPAA Privacy Rule and other Applicable Law.
- The Common Agreement anticipates the use of consumer-facing applications that would assist Individuals in obtaining access to their health information. This Exchange Purpose is called **Individual Access Services**.

The Pains of Public Health