

Public Health Informatics 101

West Virginia Local Health Officer Training

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Session Objectives

1. Define public health informatics and its role in improving population health outcomes at the local level;
2. Explore commonly used public health informatics tools, processes, and data standards;
3. Describe the policy landscape of public health informatics, particularly for local health departments (LHDs)

What to Expect During Today's Session

Introduction to NACCHO

What is Public Health Informatics?

- Software, systems, and tools
- Data standards and interoperability

Public Health Informatics at LHDs

- Findings from 2024 Informatics Assessment
- Accreditation, Strategic Planning, and Community Engagement

Public Health Informatics & Policy

- Current Policy Landscape
- NACCHO's Recommendations for next Administration

Next Steps for Your LHD

- DMI & National Initiatives
- Training Opportunities
- NACCHO's Informatics Portfolio

Questions & Discussion

- Use Case (if time permits)



Introduction to NACCHO

About NACCHO

- NACCHO is comprised of nearly **3,300 local health departments (LHDs)** across the United States. Our mission is to serve as a **leader, partner, catalyst,** and **voice** with local health departments.

- ✓ | Advocacy
- ✓ | Partnerships
- ✓ | Funding
- ✓ | Training and Education
- ✓ | Networking
- ✓ | Resources, tools, and technical assistance



What is Public Health Informatics?



Poll

How do you define public health informatics?

What is public health informatics?

Interdisciplinary

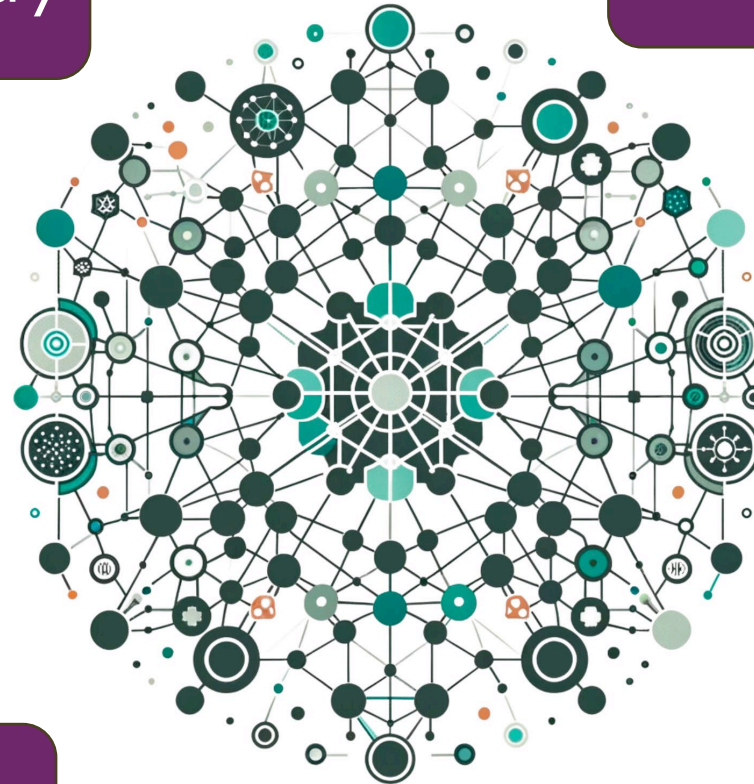
Information

Systematic
Application

Essential Services
of Public Health

Technology

Computer
Science



Underpinning Principles



Population Health



Prevention



Causal Chain

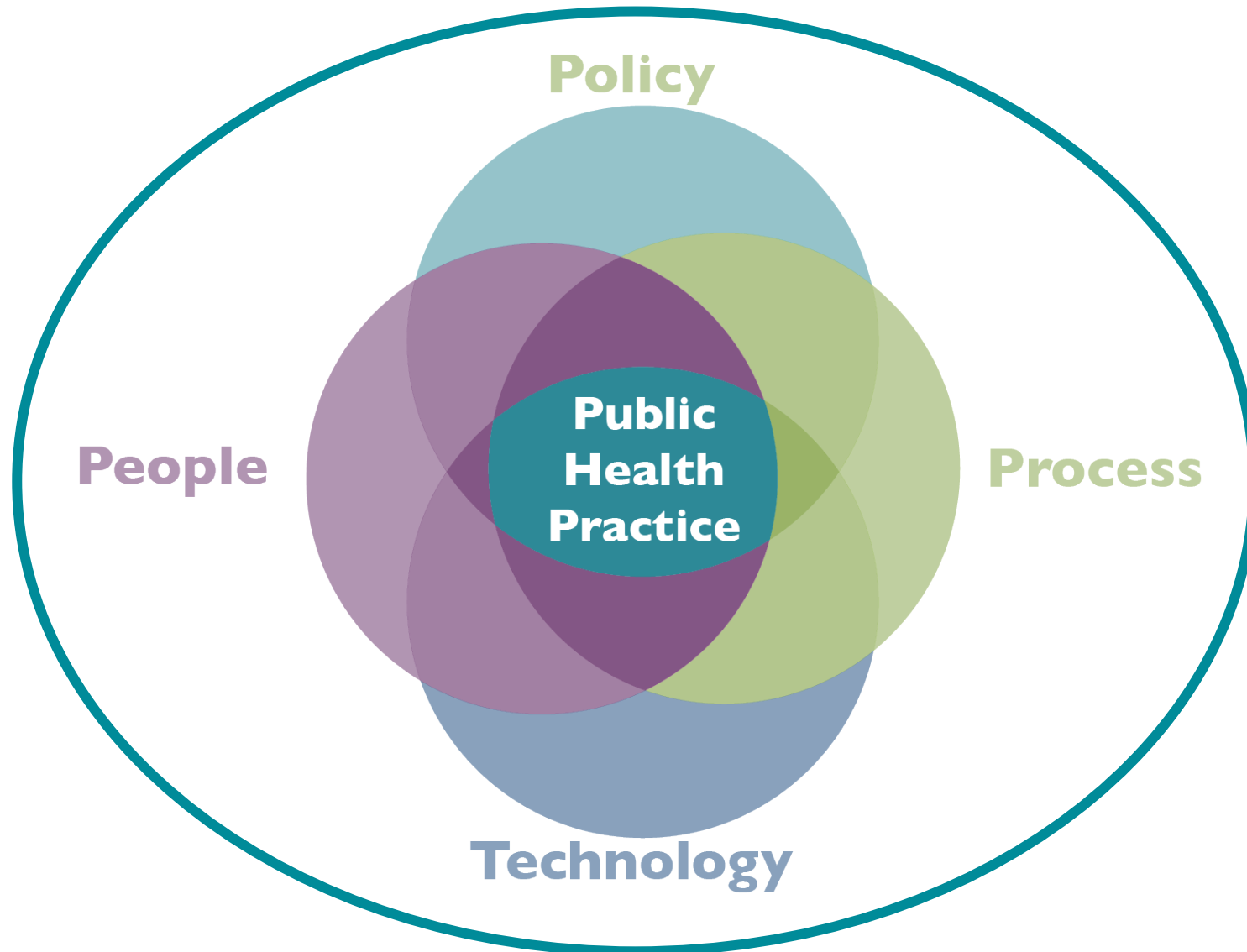


Context



Human-Centered
Design

Practice of Public Health Informatics



Who are Public Health Informaticists?

Those with the title

- Chief Public Health Information Officer
- Public Health Information Scientists
- Data Scientists

Those without the title

- Epidemiologists
- Program Coordinators
- Public Health Officers

The Core of Information Systems





Poll

What information systems are in use at your LHD?

Tools in Public Health Informatics

- **National**

- Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE)
- System for Enteric Disease Response, Investigation, and Coordination (SEDRIC)
- Behavioral Risk Factor Surveillance System (BRFSS)

- **State**

- West Virginia Electronic Disease Surveillance System (WVEDSS)
- West Virginia Statewide Immunization Information System (WVSIIS)
- Commercial Off the Shelf (MAVEN, Salesforce, AWS)

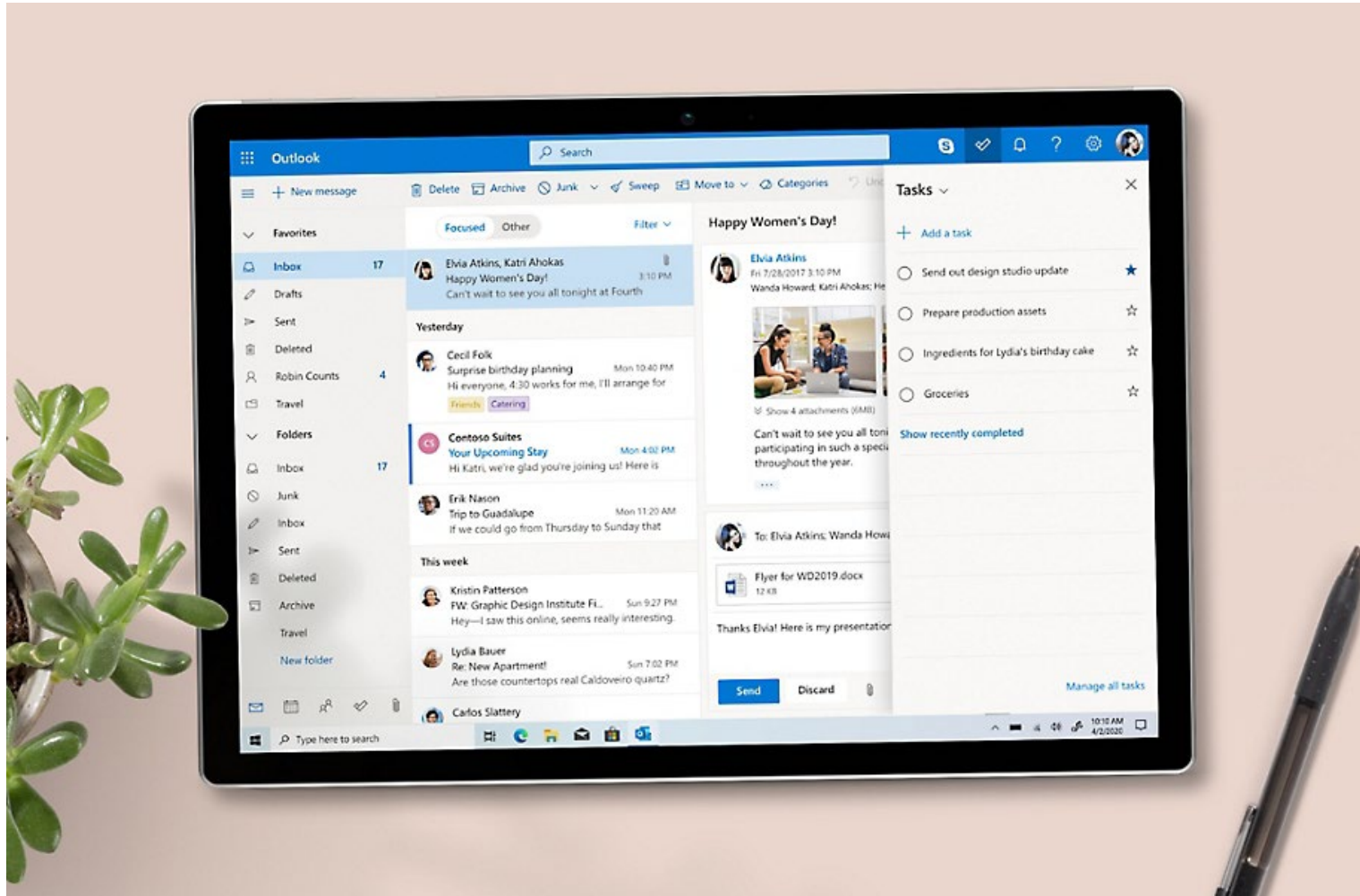
- **Local**

- REDCap
- Home grown, i.e. Microsoft Access/Excel

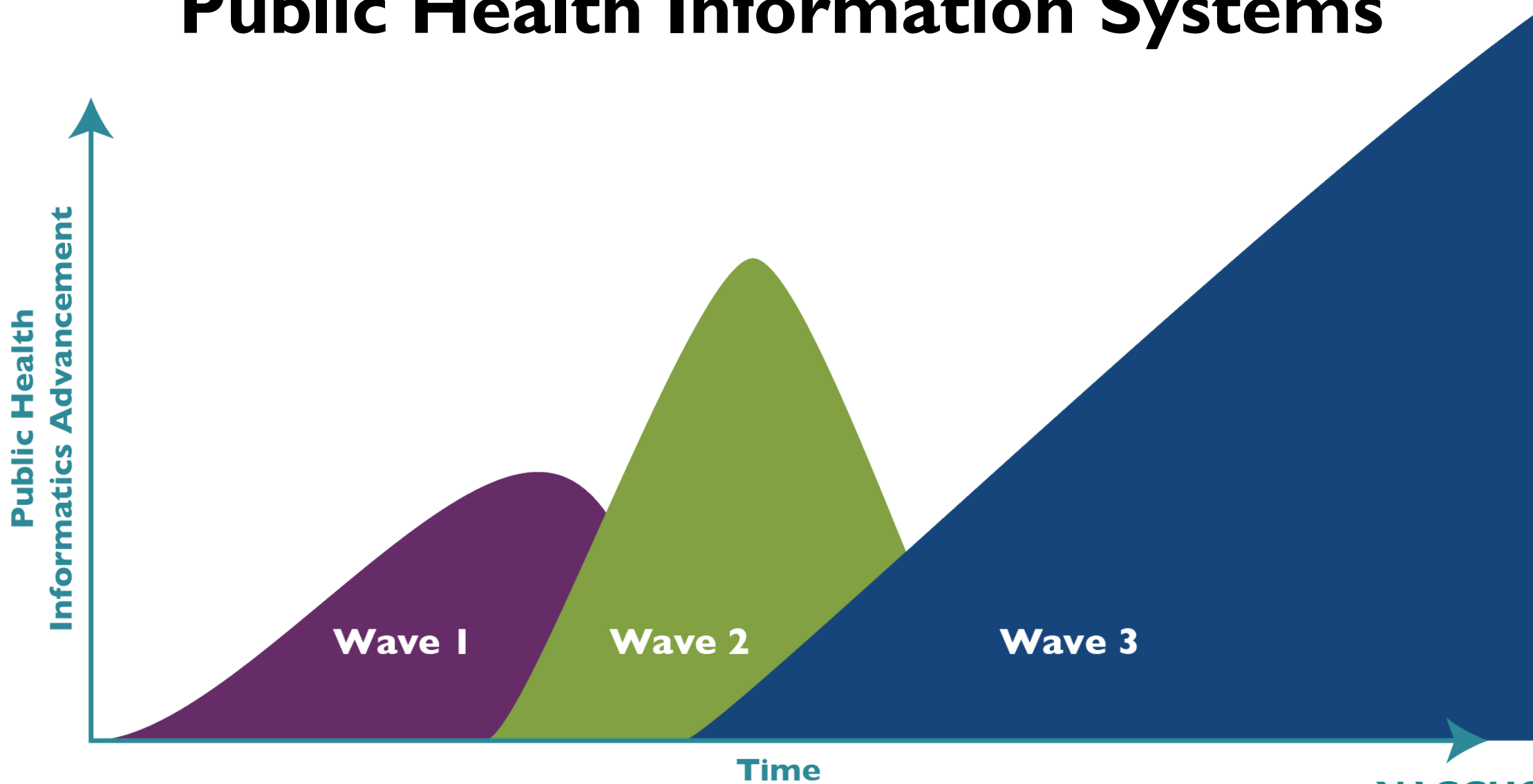
- **Hyper-local**

- Microsoft Outlook

Let's Apply It - Microsoft Outlook



Evolution of Public Health Information Systems



Process in Public Health Informatics

Data

Information

Knowledge

Wisdom





Poll

Are you familiar with any Public Health Informatics Standards?

Standards in Public Health Informatics





Public Health Informatics at LHDs

NACCHO's 2024 Informatics Profile

- Gathers a nationally representative snapshot of informatics at LHDs
- Conducted in January & February 2024
- Covers topics including:
 - Data modernization
 - Interoperability of data systems
 - Informatics workforce
 - Artificial Intelligence (AI)
 - Data and systems for outbreak response



2024 Informatics Profile- Key Findings

- While many LHDs have data modernization efforts in place, supplemental funding for these activities has been limited.
- Most LHDs do not have a dedicated informatics team or department; epidemiologists or IT staff tend to take on Informatics projects.
- LHD use of AI is limited by reliability, security and cybersecurity concerns.
- LHDs often receive data directly from state or regional health departments, and interoperability with other agencies can be challenging.

2024 Informatics Profile

- LHDs are making strides in informatics, despite minimal funding and many competing priorities in their jurisdictions.
- The work continues!
 - NACCHO is here to help build capacity.



Scan the QR Code to view the complete 2024 Profile Report



Poll

How are the principles of public health informatics in practice at your LHD?

Informatics' Impact on Accreditation



- All domains now have an informatics component
- Reviewers look specifically for informatics capabilities

Impact on Strategic Planning & Business Process Analysis



STRATEGIC PLANNING



BUSINESS PROCESS ANALYSIS/
QUALITY IMPROVEMENT

Community Engagement & Informatics

- Data = Power
- Sharing = Collective Wisdom





Public Health Informatics & Policy

Current Policy Landscape



Health Insurance Portability and Accountability Act (HIPAA)



Health Information Technology for Economic and Clinical Health Act (HITECH)



Affordable Care Act (ACA)



Food and Drug Administration Safety and Innovation Act (FDASIA)



Medicare Access and CHIP Reauthorization Act, Merit-Based Incentive Payment System (MIPS,) and Alternative Payment Model (APMs)



21st Century Cures Act

NACCHO's Recommendations for the next President and 119th Congress

Public Health is Local!

- Strengthen and modernize the governmental public health system by improving the public health workforce, infrastructure, and data modernization





Next Steps for your LHD

National Initiatives

- CDC's Data Modernization Initiative
 - Chronic Disease Surveillance Modernization
- CDC FHIR Community of Practice
- JPHIT

TOGETHER, WE ARE FOCUSED ON THE
DATA · PEOPLE · POLICIES
WE NEED TO *MOVE THE COUNTRY FORWARD*



Online Training Opportunities

- CDC Train Public Health 101 Series
 - [Introduction to Public Health Informatics](#)
- Public Health Informatics Institute (PHII)
 - [Data Modernization Initiative Planning Toolkit](#)
 - [Self-Assessment Tools](#)
 - [Data Governance for Public Health](#)
- HL7
 - [HL7 Training and Education](#)
- Johns Hopkins University - Coursera
 - [The Data Science of Health Informatics](#)
 - [Infectious Disease Models for Decision Makers](#)
 - [Executive Data Science Specialization](#)
- Altarum
 - [Public Health Interoperability Training Catalog](#)



NACCHO's Informatics Portfolio

- Portfolio supports capacity building efforts in Informatics across LHDs nationwide.
 - ePublic Health & Informatics Workgroup
 - Public Health FHIR Implementation Collaborative: Pilot Sites
 - Forecasting and Outbreak Analytics Learning Collaborative
 - PHI*Con Conference
 - Cybersecurity
 - State-to-Local Data Sharing
 - ASPR Data Readiness

How to Get Involved with NACCHO



Join a NACCHO Workgroup



Engage with Government Affairs & Advocacy Work



Sign Up for Newsletters and Share on Virtual Communities



Attend a Conference

Prep Summit (April 29- May 2, 2025 in San Antonio, TX)

NACCHO360 & PHI*Con (July 14-18, 2025 in Anaheim, CA)

Sign Up for the Monthly LHO Engagement Call

- 4th Thursday of the Month at 3 PM ET
- LHOs, or designated senior deputy, are welcome to attend to engage with and provide feedback directly to decision-makers from CDC, FDA, and other federal agencies.
- Topics covered include:
 - Data modernization
 - Public Health Infrastructure Plan
 - H5NI
 - Injury and Violence



Any Questions?

Discussion

- What are your informatics goals for your LHD?
- What Public Health Informatics tools and resources is your LHD currently using?
 - Are there others that you wish your department was able to access?
- What strengths does your LHD have regarding public health informatics?
 - What are the largest barriers and challenges you face?
 - What strengths or challenges are unique to West Virginia?

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Use Case- REDCap (if time allows)



- Are you familiar with REDCap?
- Does your LHD have it's own instance of REDCap?
- What barriers or challenges do you perceive to REDCap?
- How can REDCap assist with business analysis?
- How can REDCap assist with core public health functions?
- Has your LHD had successful use of REDCap?