# Surveillance and Early Detection: Role of Laboratory Data

SESSION VI PART A - IDENTIFYING SHORT-TERM STRATEGIES TO ENHANCE LABORATORY CAPABILITIES, CAPACITIES, AND COORDINATION: SURVEILLANCE AND EARLY DETECTION

Future of the Nation's Laboratory Systems for Health Emergency Response: *A Workshop*
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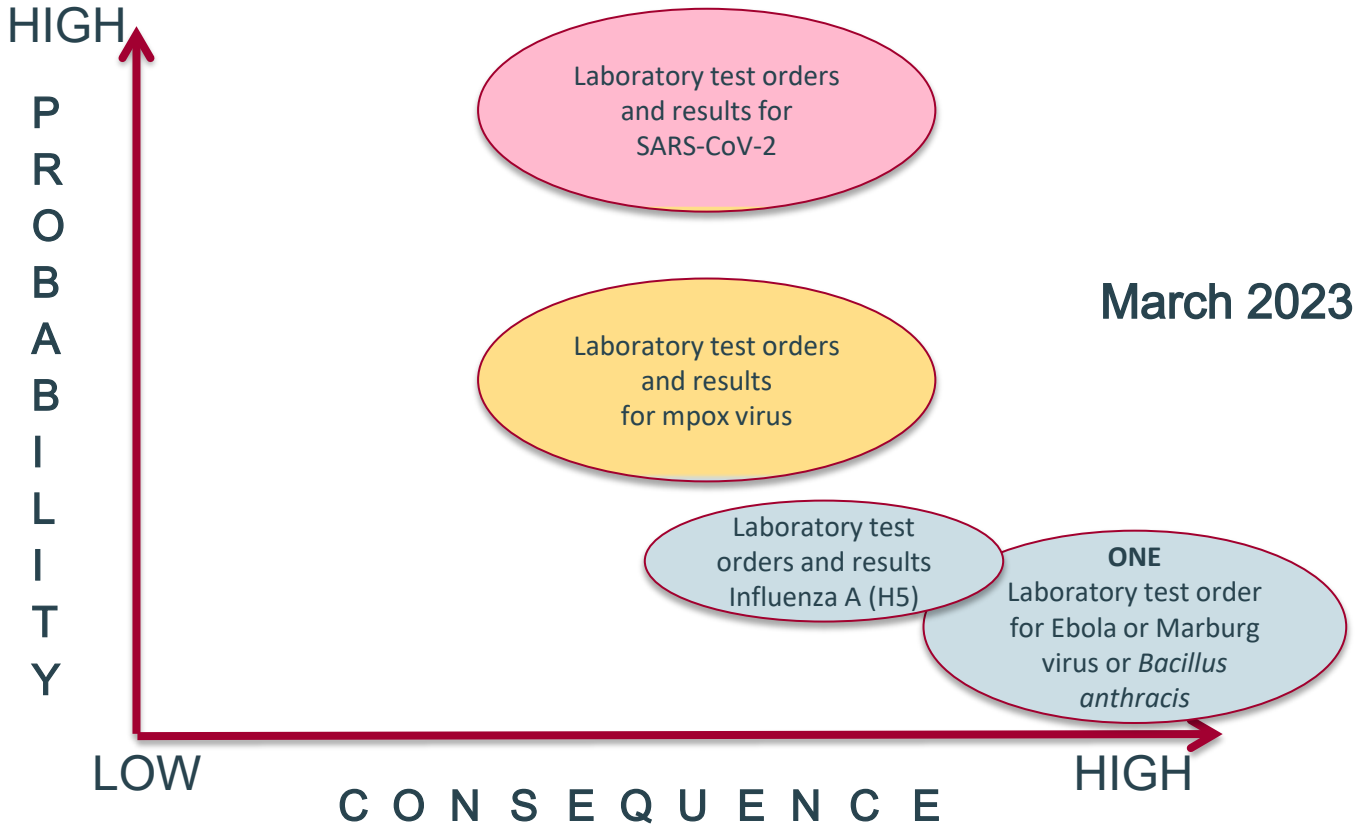
# Consider these scenarios for human laboratory specimens

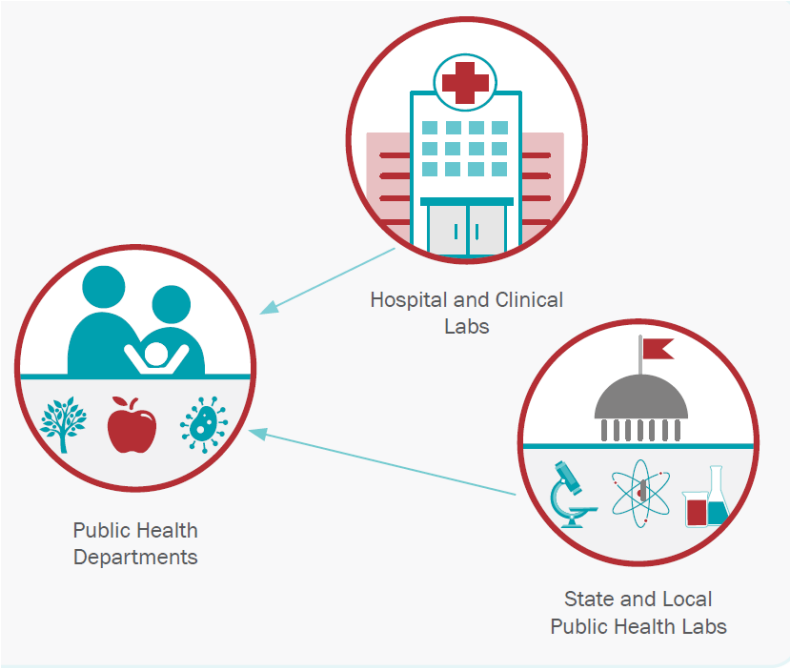


# Clinical Laboratory Testing Data

- Critical for public health surveillance and early detection
- Rich source of information on ***orders*** and ***results***
  - Clinical suspicion
  - Volume of testing
    - Who is being tested: age groups, sex at birth
    - Where: outpatient, urgent care, emergency department, inpatient, nursing home, dialysis centers, correctional facilities, homeless health care sites, travelers
    - Where: zip code, county, state, region
  - Test results
    - Percent positivity
  - Trends over time

# Laboratory Testing Data Flows

- By law, laboratories must report certain conditions discovered during testing to state and local public health departments
- Data sharing from laboratories and state and local public health departments to CDC is generally ***voluntary***
  - Exceptions
    - COVID-19 and mpox laboratory data
    - Public Health Laboratories that receive funding and participate in CDC programs




https://www.aphl.org/aboutAPHL/publications/Documents/INFO-2020-ELR.pdf
https://www.cdc.gov/poxvirus/mpox/response/2022/2022-lab-test.html
https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/previous-testing-in-us.html#anchor_1598476993

# Short term strategies for public health

- Increase coordination among public health partners
  - Routine public health practice and emergency responses
- Data sharing with appropriate public health data authorities, agreements, and safeguards
  - Data standardization and harmonization for improved interoperability
  - Linkage of laboratory data with case and vaccine data
  - Specimens vs. unique individuals
  - Longitudinal data (serial and other laboratory testing)
- Co-ordination of pathogen-agnostic testing
- Implementation of CDC's Public Health Data Strategy




# Four major Public Health Data Goals enable the core public health missions


## Public Health Data Goals

### 1 Strengthen the core of public health data

Ensure Core Data Sources[1] are more complete, timely, rapidly exchanged, and available to support the integrated ability to detect, monitor, investigate, and respond to public health threats

### 2 Accelerate access to analytic and automated solutions to support public health investigations and advance health equity

Make tools available so STLTs and other public health decision-makers can better use public health data to address health disparities

### 3 Visualize and share actionable insights to inform public health action

Serve as a trusted source for near real-time visualizations and offer situational awareness for the public and decision-makers to understand risks, make decisions, and direct resources

### 4 Advance more open and interoperable public health data

Enable exchange of interoperable data so that healthcare, STLTs, federal agency partners, and CDC programs can access and use data they need, when they need it

1. Case (including electronic case reporting [eCR]), lab (including electronic lab reporting [ELR], Electronic Test Orders and Results [ETOR]), emergency department (including National Syndromic Surveillance Program [NSSP] emergency department data), vital statistics, immunization, healthcare capacity (including National Healthcare Safety Network [NHSN] data)

# Thank You!

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