



Building an Informatics-Savvy Public Health Infrastructure

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Nebraska Health Disparities & Health Equity Minority Health Conference

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Association of State and Territorial Health Officials | astho.org

VISION

State and territorial health agencies advancing health equity and optimal health for all.

MISSION

To support, equip, and advocate for state and territorial health officials in their work of advancing the public's health and well-being.

OVERVIEW

- Background
- What is Informatics-Savvy?
 - Workshop activity
- Data Collection & Public Health Reporting
 - Workshop activity
- Resources

BACKGROUND

ASTHO's **Center for Population Health Strategies (CPHS)**, a 3 pillar approach to improve population health

- Develop strong and effective leaders
- Improve public health through capacity building/technical assistance
- Advocate for resources/policies

Data Analytics & Public Health Informatics

- Provide support on informatics and analytics to state/territorial health agencies
- Work with our partners to offer resources and guides



<p>ASTHO Priority 1: Develop Strong and Effective S/THOs</p> <ul style="list-style-type: none"> • <i>Public Health Informatics Systems Evaluation:</i> Build S/THOs understanding and advancement of national efforts on interoperability, electronic data exchange, and implementation of informatics strategic plans • <i>Data and Surveillance Strategy and Optimization:</i> Support S/THOs in evaluating their agency's capacity to drive public health decisions and actions through data and surveillance systems
<p>ASTHO Priority 2: Improve Public Health Through Capacity Building, TA, and Thought Leadership</p> <ul style="list-style-type: none"> • <i>Data and Surveillance Strategy and Optimization:</i> Assess needs, capabilities and readiness. Provide implementation guidance on integrating public health information systems with other data systems • <i>Public Health Informatics Infrastructure Development:</i> Provide consultation, templates, and TA to S/THAs in building data linkage processes and engaging in bidirectional data and information exchange • <i>Population Health Monitoring and Tracking:</i> Provide TA to align clinical and public health decision support tools for disease management. Build capacity for interoperable electronic disease registries
<p>ASTHO Priority 3: Advocate for Resources and Policies that Improve the Public's Health and Well-being</p> <ul style="list-style-type: none"> • <i>Public Health Informatics Systems Evaluation:</i> Build state health officials engagement on national & state-level informatics policies



What is Informatics-Savvy?

Workshop activity



*WHAT DOES IT MEAN TO BE
"INFORMATICS-SAVVY?"*

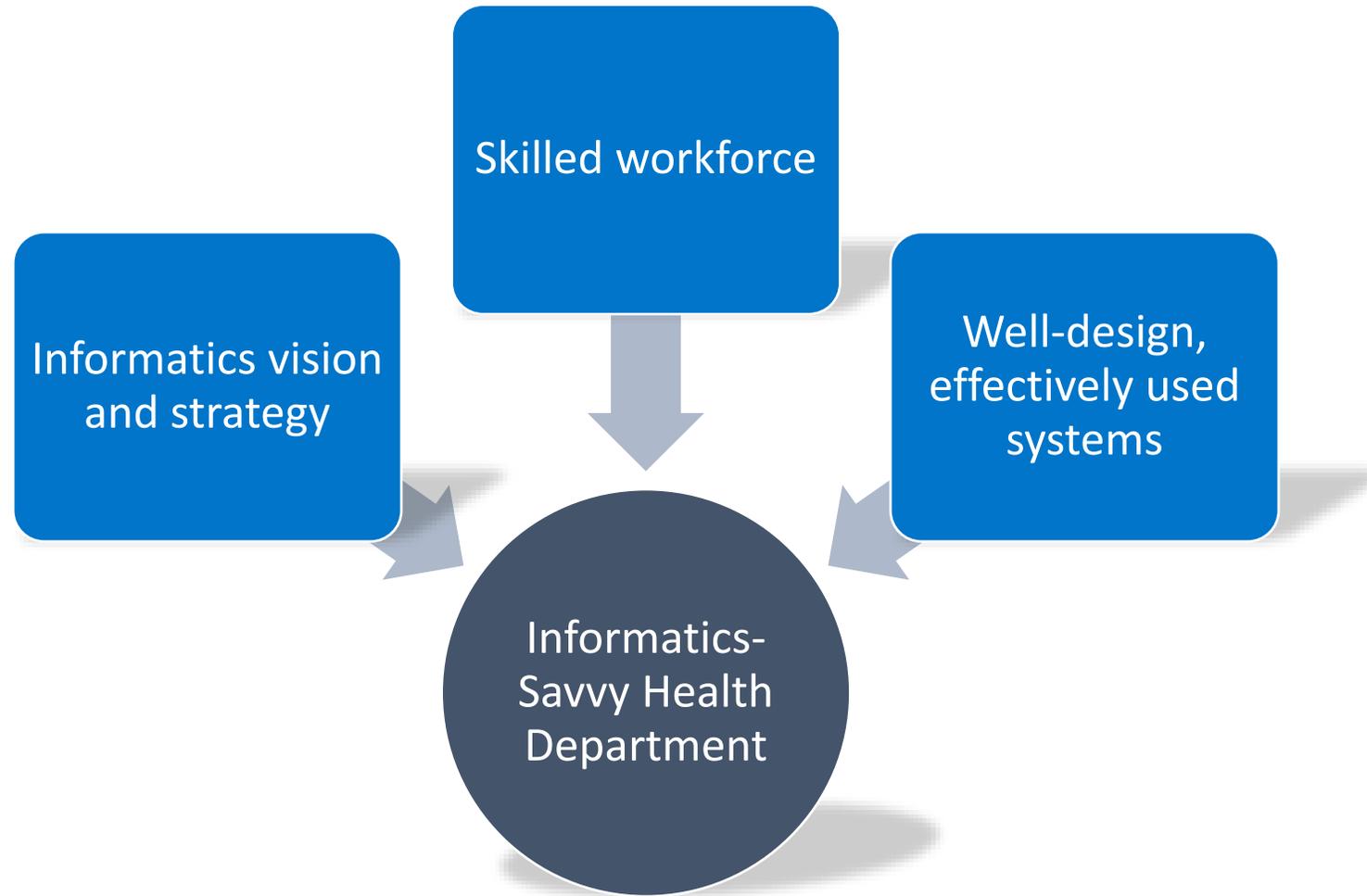


*AND WHAT EXACTLY IS
INFORMATICS?*

An applied
science and
discipline

Public health informatics is the science that supports effective use of information and information technology to improve population health outcomes.

Defining Informatics-Savvy



Defining Informatics-Savvy, Cont'd.

Informatics Vision & Governance

- How the agency uses information and IT
- Organizational approach to interoperability
- Effective relationship with community partners and IT
- Policies to ensure confidentiality, security and data integration

Skilled Workforce

- Strategies to improve informatics knowledge and skills
- Informatics unit with agency-wide responsibilities
- Program managers with knowledge and skills in informatics principles, methods and tools

Well-designed & effectively used systems

- Information systems effectively meet the information needs, workflows and practices of staff and programs
- Interoperable systems
- Sound project management principles guide IT projects

Why be informatics-savvy?



Building an Informatics-Savvy Health Department: A Self-Assessment Tool

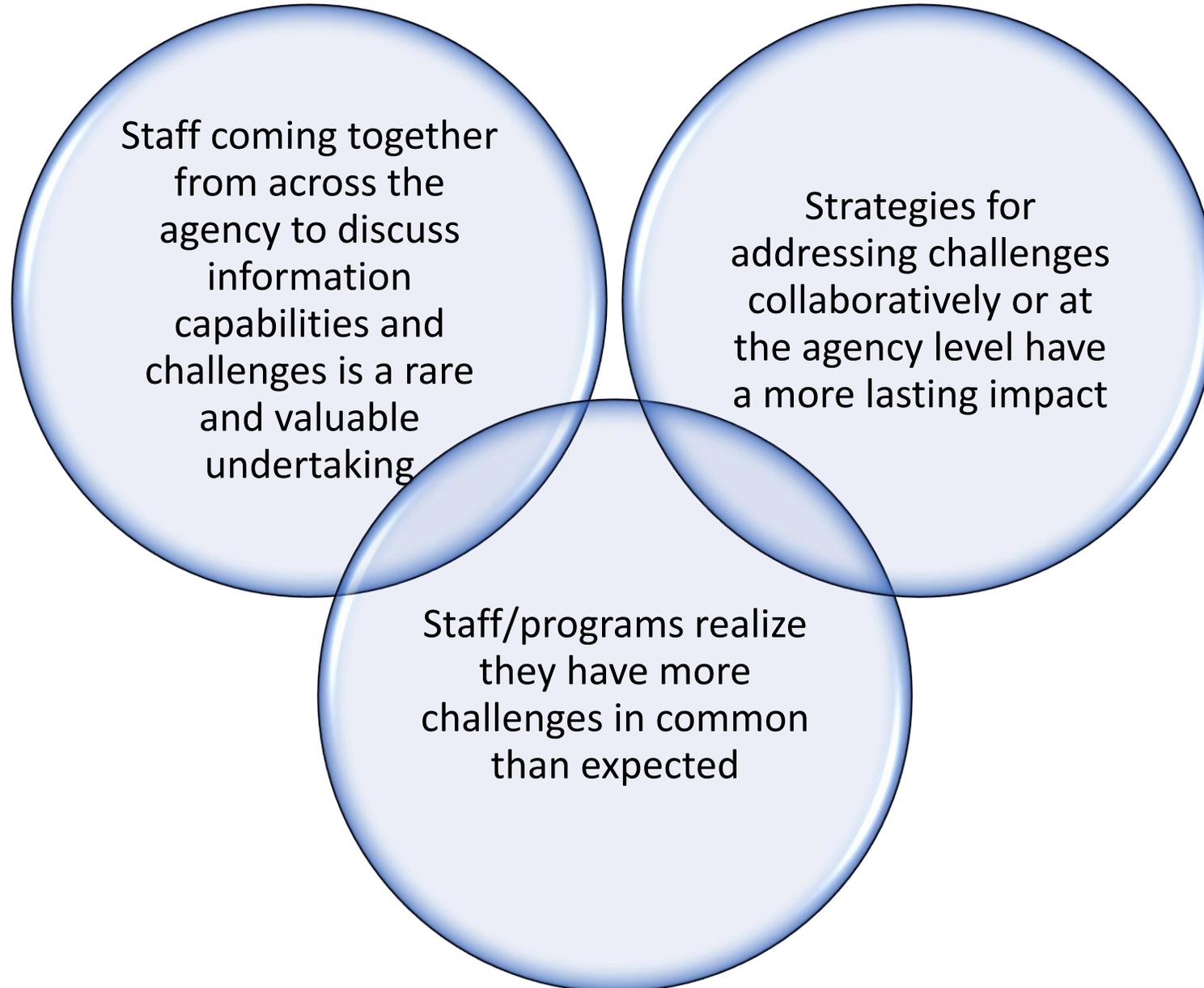
February 2019

- Effective use of information and information technology increasingly seen as critical for health departments
- Pressing external drivers
 - Meaningful Use, population health initiatives, demand for more current information
- Pressing internal factors
 - Shrinking budgets and workforces, challenges getting information out of systems for decision making, aging information systems, health department accreditation, central IT absorbing IT staff (and informatics knowledge)
- Informatics now seen as a core science within public health to help meet these demands

CMM Response Categories

<i>CMM Level Name</i>	<i>General Description</i>
0 - Absent	No capability is evident; “starting from scratch.”
1 - Initial	No organized, systematic efforts to build informatics capacity, only ad hoc efforts and isolated, individual heroics.
2 - Managed	Some organized efforts begun or completed, but not systematically documented or institutionalized.
3 - Defined	Systematic, ongoing efforts underway, but no overall method to measure progress or to ensure coordination.
4 - Measured	Systematic, ongoing efforts underway to measure progress and ensure coordination.
5 - Optimized	Systematic, ongoing efforts underway with quality improvement activities to align results with guiding vision, strategies and performance metrics.

Lessons Learned from Health Agencies





Data Collection & Public Health Reporting

Workshop Activity



WHAT ARE THE MOST COMMON SOURCES OF SDOH DATA?



WHAT TOOLS OR SYSTEMS ARE IN PLACE TO HELP ADVANCE DATA COLLECTION AND REPORTING ON SDOH DATA?



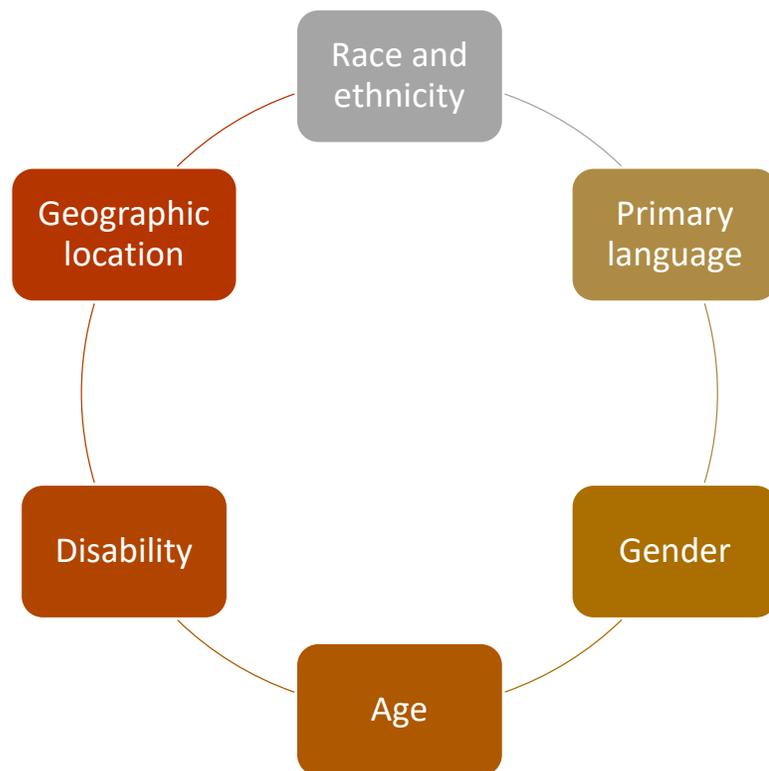
WHAT ARE THE BIGGEST CHALLENGES IN ACCESSING, COLLECTING, STORING, AND ANALYZING THIS DATA (E.G., LACK OF ACCESS TO SDOH DATA SOURCES, LACK OF STANDARDIZATION)?



WHAT ARE SOME SOLUTIONS TO ADDRESS THESE CHALLENGES?

NEBRASKA'S HEALTH DISPARITIES DATA COLLECTION RECOMMENDATIONS

- Nebraska DHHS has developed recommendations for a minimum core data set of health disparities data



Disability

Option 1:

- Are you deaf or do you have serious difficulty hearing? (1) Yes (2) No
- Are you blind or do you have serious difficulty seeing even when wearing glasses? (1) Yes (2) No
- Because of a physical, mental, or emotional condition, does this person have serious difficulty concentrating, remembering, or making decisions? (1) Yes (2) No
- Does this person have serious difficulty walking or climbing stairs? (1) Yes (2) No
- Does this person have difficulty dressing or bathing? (1) Yes (2) No
- Because of a physical, mental, or emotional condition, does this person have difficulty doing errands alone such as visiting a doctor's office or shopping? (1) Yes (2) No

Option 2:

- Are you limited in any way in any activities because of physical, mental, or emotional problems?
- Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone? Include occasional use or use in certain circumstances.

Option 3:

- Are you limited in any way in any activities because of physical, mental, or emotional problems?

Geographic location

- Which county (state) do you live in?
(If state is recorded, use full word as 2-letter abbreviations are often misused.)
- What is the 5-digit zip code of your home address? _____

Disparities Demographic Data Recommendations

Division of Public Health
 Department of Health & Human Services
 November 2016

Race/Ethnicity

- Are you Hispanic or Latino? (1) Yes (2) No
- What is your race? (please select all that apply)
 - White
 - Black or African American
 - American Indian or Alaska Native
 - Asian
 - Native Hawaiian or other Pacific Islander
 - Some Other Race (Please specify: _____)

Primary Language

- How well do you speak English? (5 years old or older)
 - Very well
 - Well
 - Not well
 - Not at all

Optional details to add if collection of specific language spoken at home is desired:

- Do you speak a language other than English at home? (5 years old or older) (1) Yes (2) No
- What is this language? (5 years old or older)
 - Spanish
 - Other Language (Identify: _____)

Gender

What is your gender? 1. Male 2. Female

Age

Option 1: (Preferred): What is your birthdate? ___/___/___ (mm/dd/yyyy)

Option 2: What is your birthdate? ___/___ (mm/ yyyy)

Option 3: Current age in completed years. Should only be used for surveys; year of survey must be recorded.

Option 4: Selection of age range categories based on program's needs. Must be recorded along with survey year.

Partners and stakeholders should reference this in their data collection efforts to advance standard & uniform reporting that can be compared across the state

STATE-LEVEL SOCIAL DETERMINANTS OF HEALTH DATA

- **State public health agencies have access to many data sources, but may still need data sharing agreements or formal partnerships to gain access to additional SDOH data**
- **Challenges**
 - Training
 - Resources (i.e., templates, datasets, open-source platforms)
 - Lack of standards in SDOH
 - Legal (i.e., data sharing and use agreements, HIPAA compliance)

Data

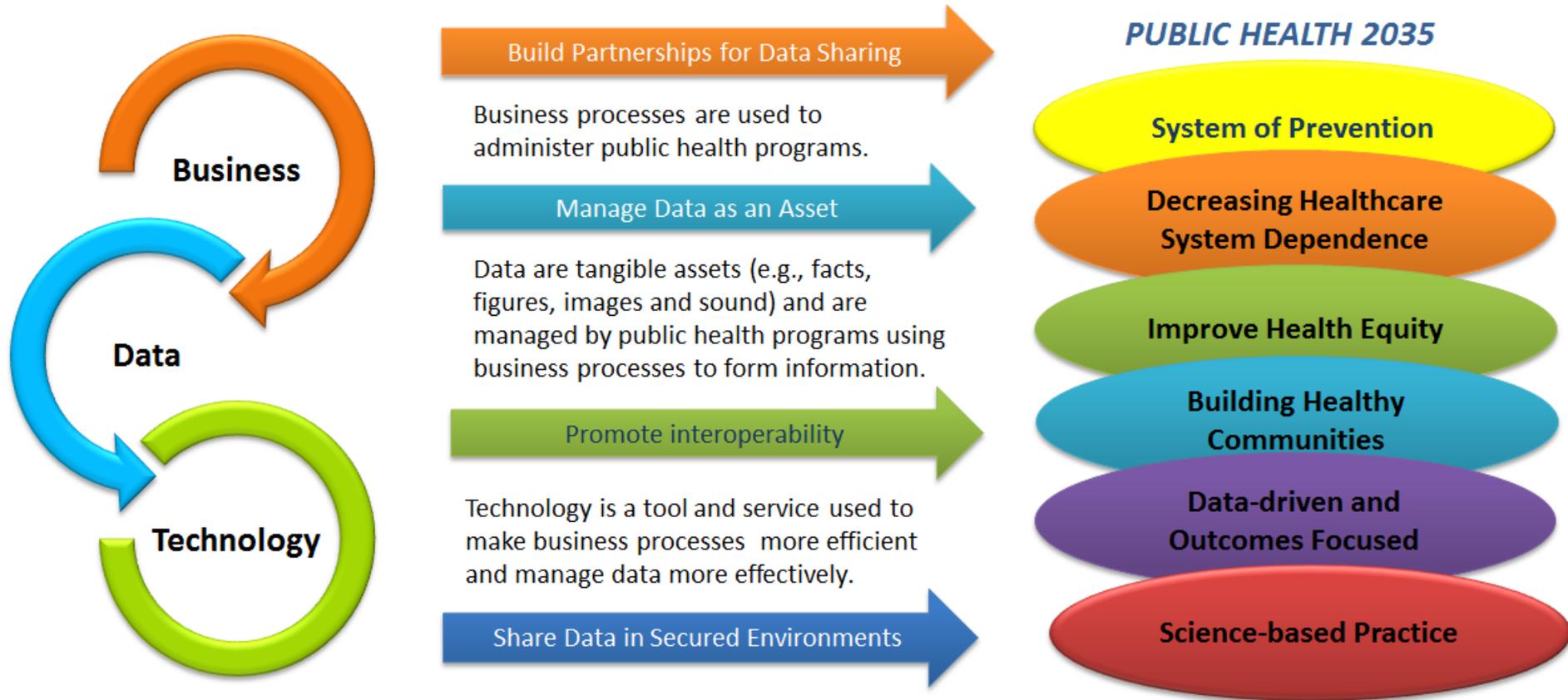
- Demographics
- Poverty gradient (rural & urban)
- Education (on-time graduation)
- Unemployment rate
- Air quality index
- Walkability index
- Social vulnerability index

Sources

- Environmental Protection Agency
- Bureau of Labor Statistics
- American Housing Survey
- Behavioral Risk Factor Surveillance System
- Census Bureau
- Demographics USA
- Census of Governments
- Medicaid Data
- Emergency Department Data
- Electronic Health Records
- Electronic Lab Reports
- Electronic Case Reporting
- Health Information Exchanges

DATA SHARING: *California State Example*

ECOSYSTEM OF DATA SHARING STRATEGY



INFORMATICS-SAVVY TOOLS FOR POPULATION HEALTH MANAGEMENT

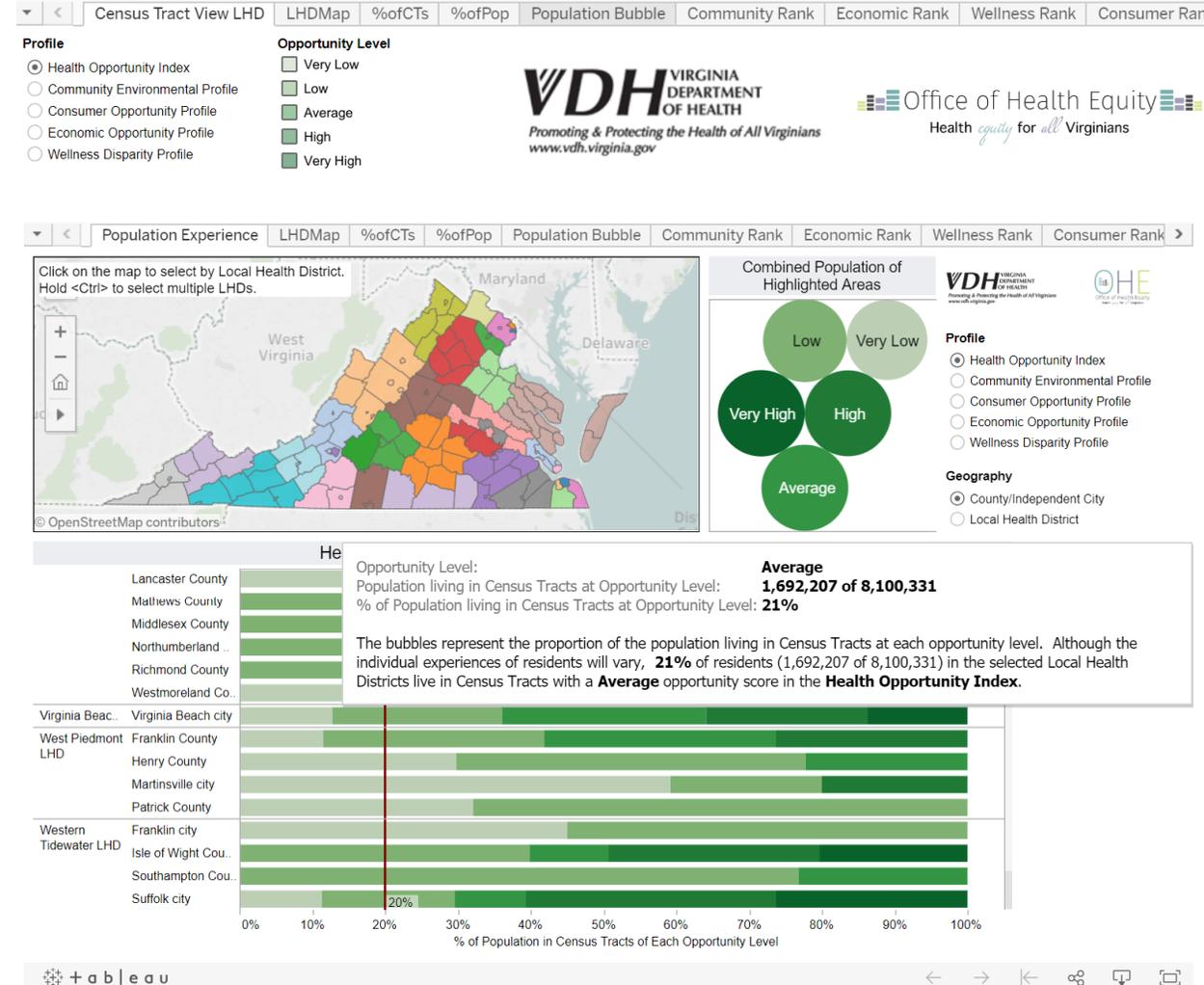
- States use informatics and analytics tools on SDOH data to make decisions for population health management and disseminate information to partners, lawmakers, and the public
- Tools
 - Health Opportunity Index
 - ESRI's ArcGIS (geographic and regional information)
 - Dashboards (Tableau, R-Shiny, Power BI, OASIS)
 - Health Level 7 (HL7) Admission, Discharge, Transfer (ADT) messaging for patient demographic and visit information

Solutions

- Prioritizing health equity (i.e., programming, planning)
- Measures and standard data practices
- Policies (laws and regulations)
- Organizational infrastructure
- Align with State and Community Health Improvement Plans
- Align with State Health Assessments and Accreditation

HEALTH OPPORTUNITY INDEX: Virginia State Example

- **VA's Health Opportunity Index (HOI) has 13 indicators based on 3 criteria**
 - Influence on health as expressed in the literature
 - Input from Local Health Districts and other stakeholders
 - Availability of data of consistent quality at the Census Tract level for all Census Tracts in Virginia
- **VA develops profile information** (community environment, economic opportunity, consumer opportunity, and wellness disparity)
- **VA's use of the data**
 - Show that place matters
 - Identify impact of SDOH on statewide health landscape
 - Identify HOI indicators most influential on local health
 - Identify areas and populations vulnerable to adverse health outcomes
 - Build cross-sector collaboration to promote health equity





Resources

To communicate what Public Health Informatics is...

FrameWorks Communications Toolkit: Public Health Informatics

<https://frameworksinstitute.org/toolkits/informatics/>



The Big Picture

New to framing? These materials offer a succinct overview of how to talk about public health informatics.



Quickstart Guide to Framing

Take a quick tour of communications themes to avoid, compared with alternatives to advance.



FAQs

Stay on message in the face of difficult questions.



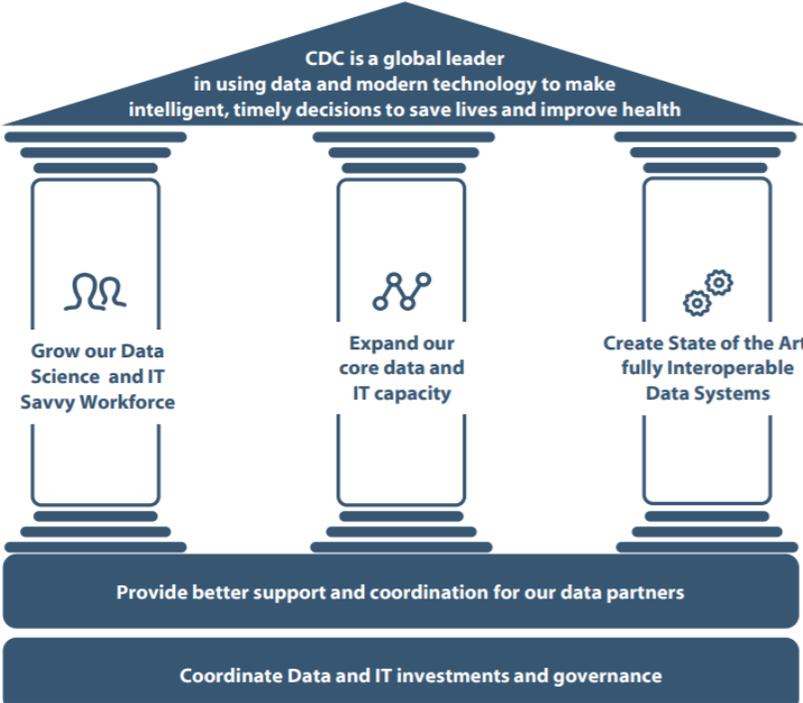
Talking Points, Examples, and Elevator Speeches

Use these key messages to help build the public health field's understanding of and support for informatics.

To develop a surveillance strategy that aligns with national efforts...

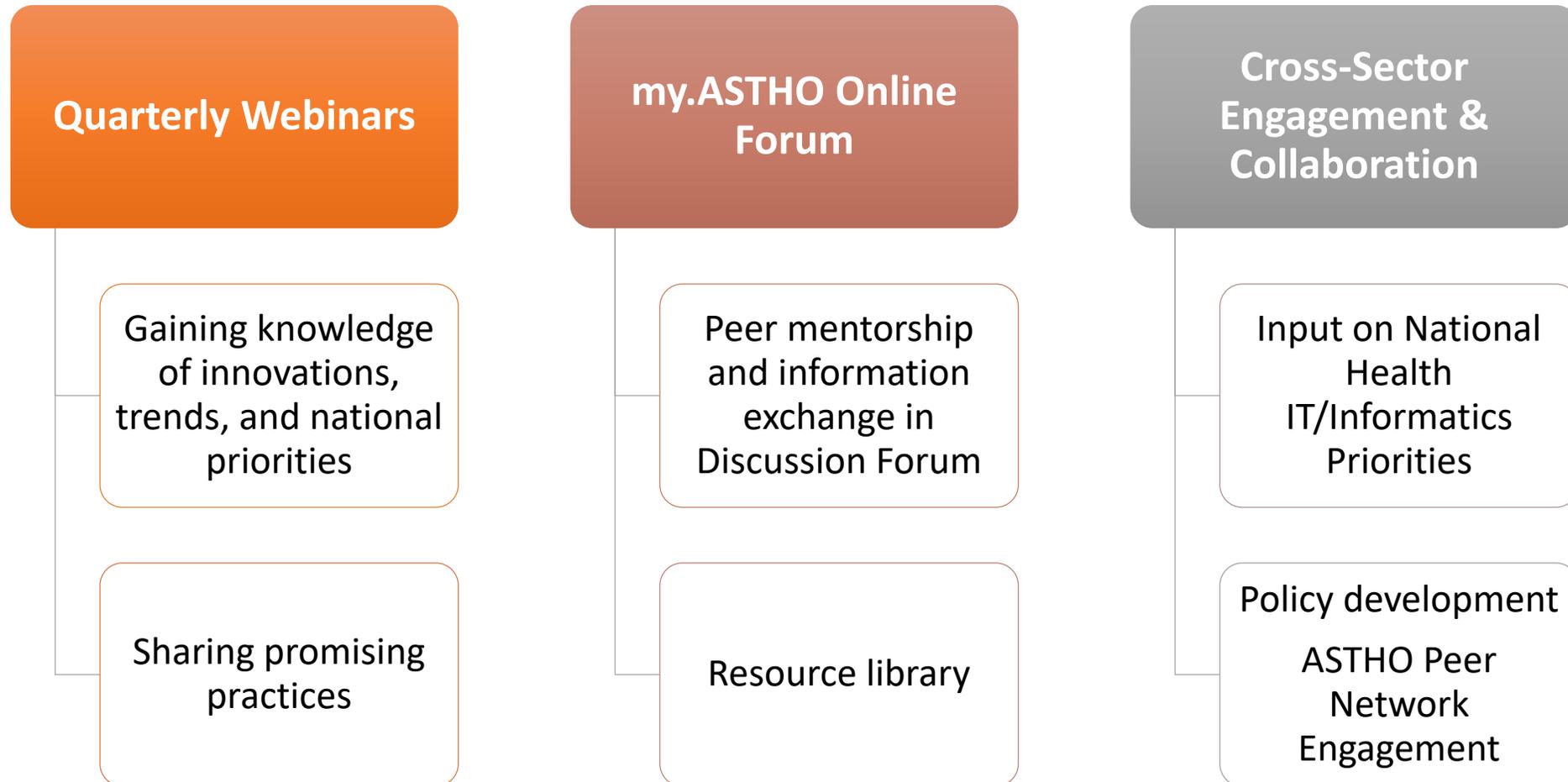
CDC Public Health Surveillance Strategy

<https://www.cdc.gov/surveillance/index.html>



To connect with peers and share promising practices...

ASTHO Informatics Directors Peer Network (IDPN)



IDPN 2018-19 Strategy



- **Strategic Planning**

- State development and implementation of health IT/informatics strategic plans

- **Public Health Surveillance Capacity**

- Informatics-savvy health departments
- Leadership development
- Building resources
- Workforce capacity and development

- **Policies and Processes**

- Policy and process development
- ASTHO Population Health and Informatics Policy Committee engagement, priorities, and policy statements

- **Peer Exchange**

- Online forum for peer exchange and mentorship
- External engagement with partners

- **ASTHO Technical Assistance**

- ASTHO TA to states/territories in public health informatics
- Quarterly webinars
- National convenings or conferences
- Learning Community opportunities