# National Public Health Data Trends

# -John Lumpkin, MD, FAAN

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# Current case reporting process

## Provider

- Provider identifies cases to report
- Pen and paper forms filled in for case reporting
- Mail form to LHD
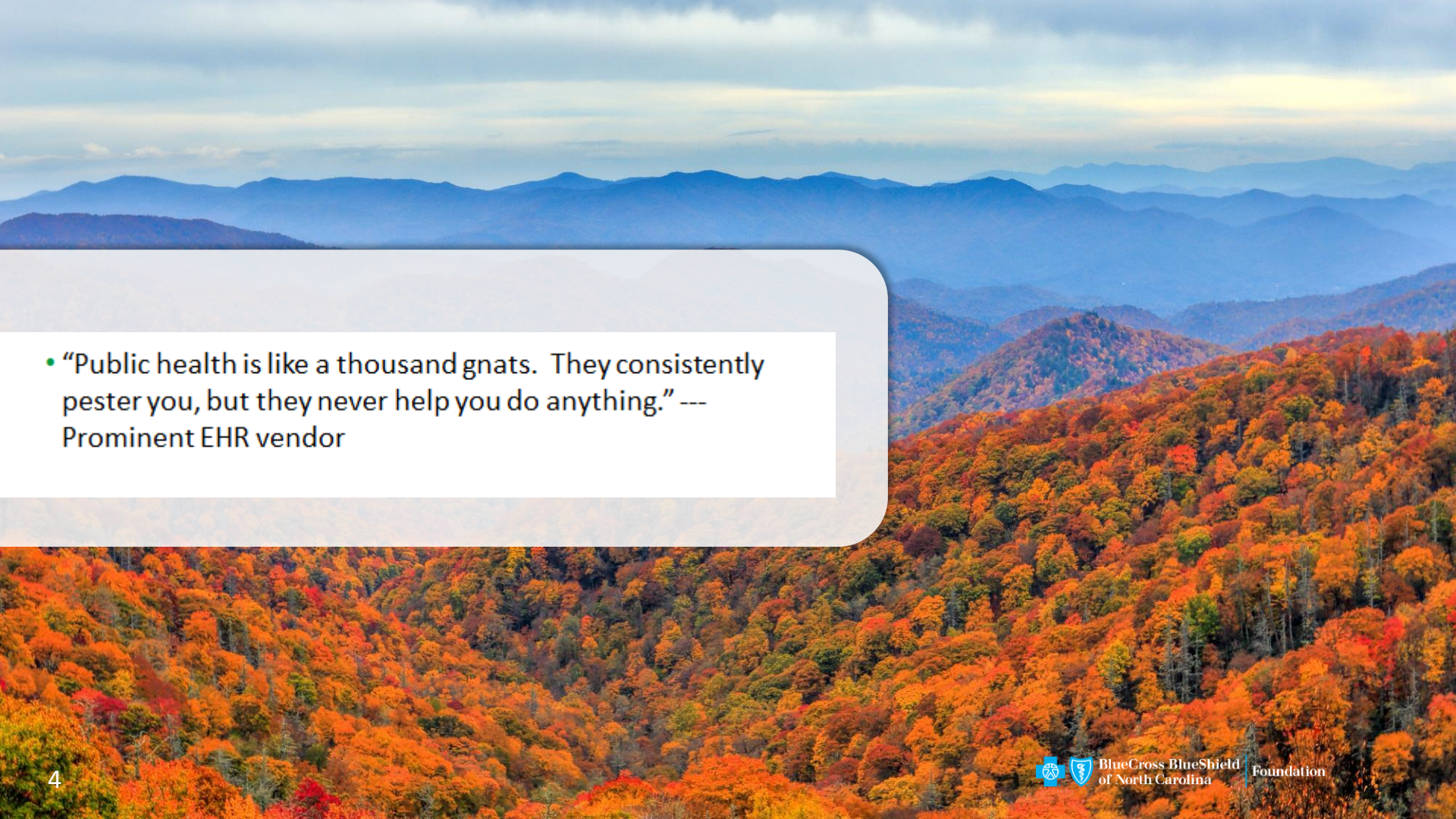
## Local Public Health

- Receive form
- Manually create or update NC EDSS case
- Existing NC EDSS Workflow includes new/updated case

## State

- Deduplicate
- Analyze data
- Report to CDC

eCR gives us a glimpse of the future of public health data systems

- "Public health is like a thousand gnats.  They consistently pester you, but they never help you do anything." --- Prominent EHR vendor

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digital bridge

Sharing data to improve clinical care and public health. digitalbridge.us

# Health Care

Allscripts

OCHIN

APHL

astho

CDC
CENTERS FOR DISEASE
CONTROL AND PREVENTION

Cerner

de Beaumont
FOUNDATION

Robert Wood Johnson Foundation

CSTE
COUNCIL OF STATE AND
TERRITORIAL EPIDEMIOLOGISTS

eClinicalWorks

Epic

HealthPartners
Park Nicollet

KAISER PERMANENTE

American
Cancer
Society

MEDITECH

NACCHO
National Association of County & City Health Officials
The National Connection for Local Public Health

Connecting America for Better Health
The Office of the National Coordinator for
Health Information Technology

Intermountain
Healthcare

AMA
AMERICAN MEDICAL
ASSOCIATION

SHIEC
Strategic
Health
Information
Exchange
Collaborative

Deloitte.

Public Health
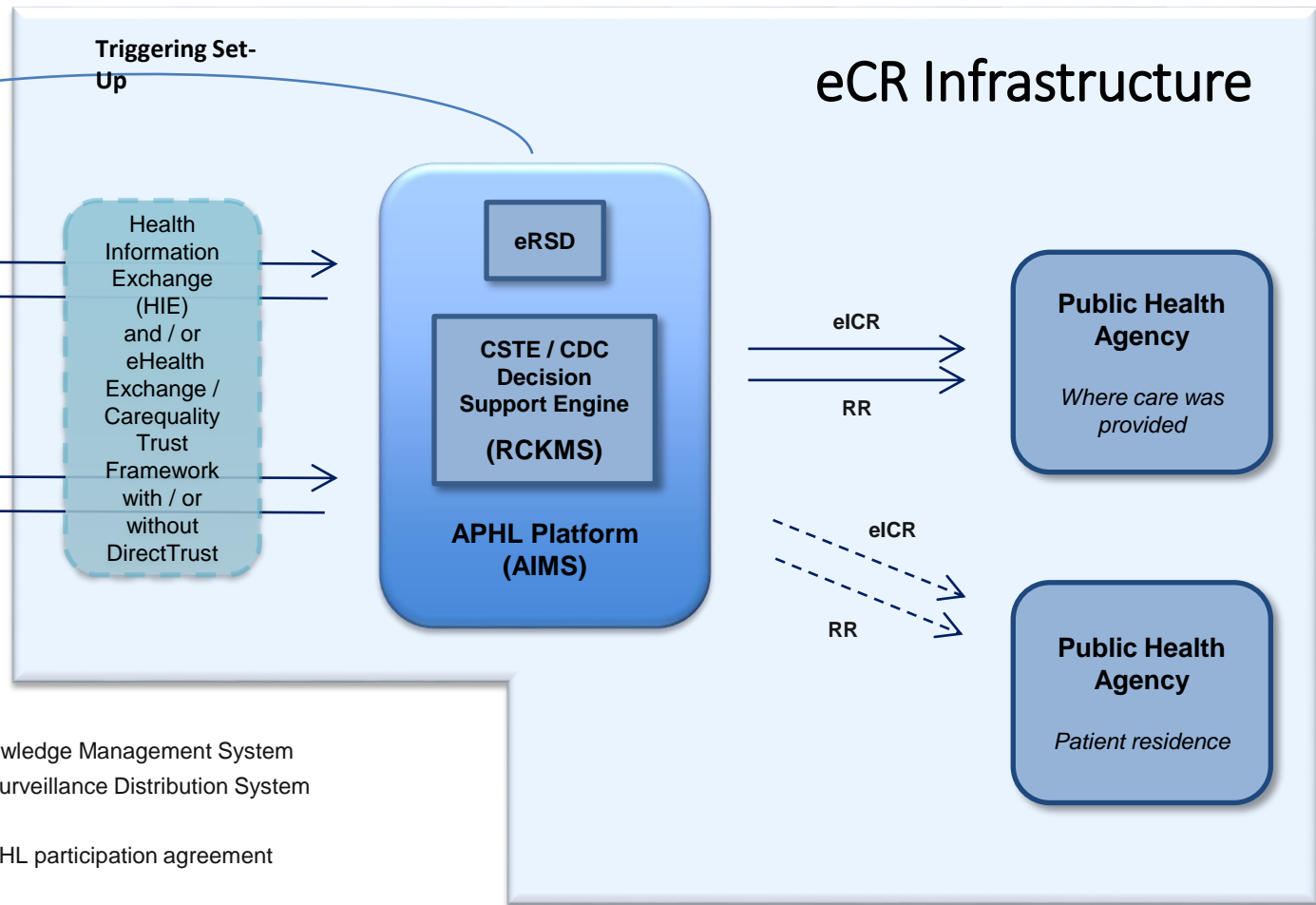Informatics Institute

BlueCross BlueShield
of North Carolina

NAACCR

CDC Foundation
Together our impact is greater

HIMSS

the
sequoia
project

Secretariat

ILLINOIS PUBLIC HEALTH
INSTITUTE

# digital bridge

# eCR Infrastructure

**Triggering Set-Up**

Provider (EHR)

eCR Now FHIR App

**eICR**

**RR**

Health Information Exchange (HIE) and / or eHealth Exchange / Carequality Trust Framework with / or without DirectTrust

Provider (EHR)

**eICR**

**RR**

**eRSD**

**CSTE / CDC Decision Support Engine (RCKMS)**

**APHL Platform (AIMS)**

**eICR**

**RR**

**Public Health Agency**

*Where care was provided*

**eICR**

**RR**

**Public Health Agency**

*Patient residence*

**Terms**

RCKMS - Reportable Conditon Knowledge Management System

eRSD – Electronic Reporting and Surveillance Distribution System

**Possible Policy Agreements**

eHealth Exchange, Carequality, APHL participation agreement

**HL7 Standards**

eICR - Electronic Initial Case Report CDA v1.1

RR - Reportability Response CDA v1.0

# HOW DOES ELECTRONIC CASE REPORTING (eCR) WORK?
## *An example of the eCR process*

Patient is diagnosed with a reportable condition, such as COVID-19

Healthcare provider enters patient's information into the electronic health record (EHR)

Data in the EHR automatically triggers a case report that is validated and sent to the appropriate public health agencies if it meets reportability criteria

The public health agency receives the case report in real time and a response about reportability is sent back to the provider

State or local health department reaches out to patient for contact tracing, services, or other public health action
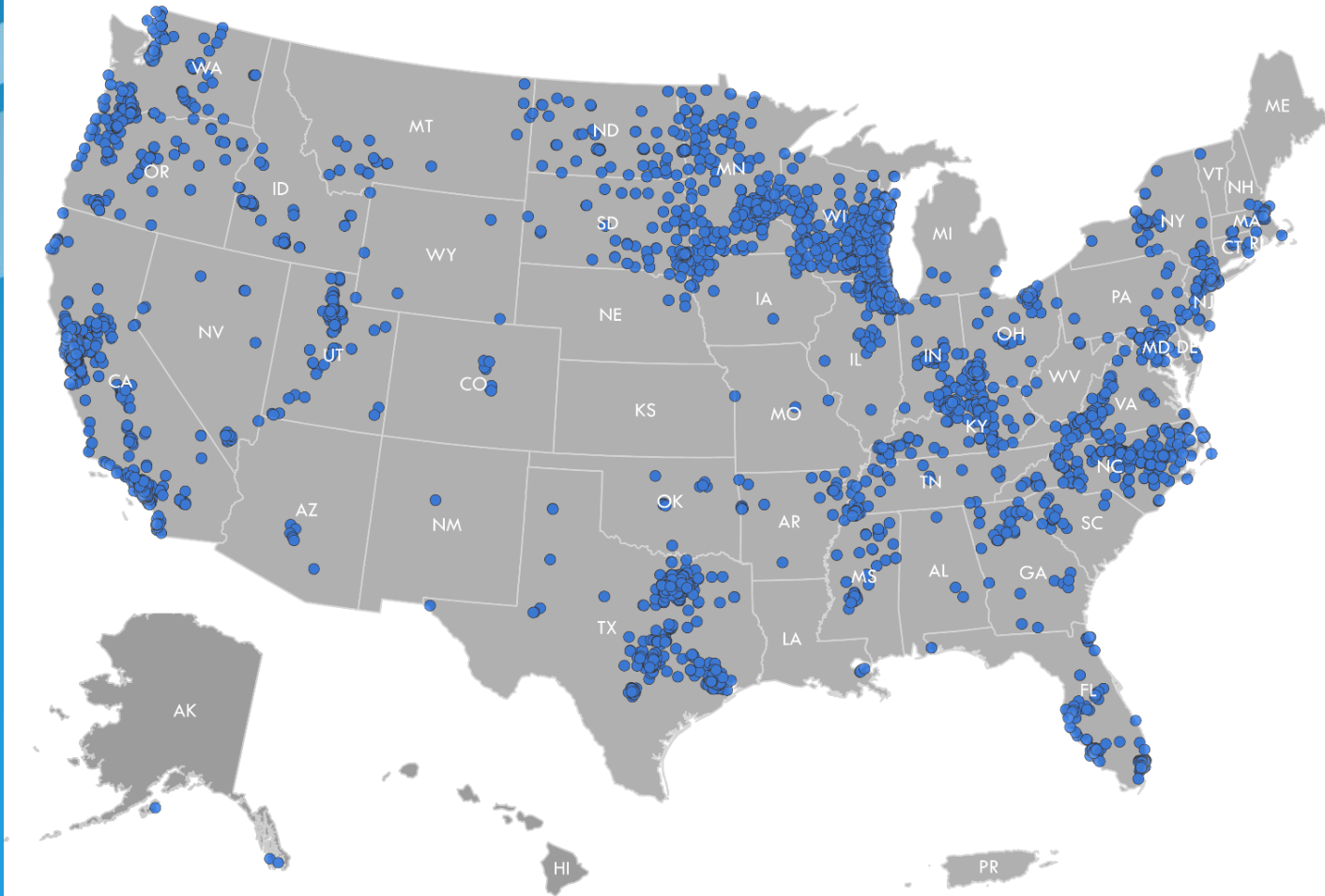
**cdc.gov/eCR**

# The future is here, it is just not evenly distributed

- William Gibson

Healthcare Facility Location

As of 4 February 2021

# What is the problem we are trying to solve?

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

**Outdated skills:**
The public health workforce needs training to use today's technologies more effectively

**Heavy burdens for Providers:**
Providers in healthcare and at health departments are burdened with sending data to many places in many ways

**Older technologies:**

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

**Public health is not a part of the 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.

# Our Ultimate Goal

To move from siloed and brittle public health data systems to connected, resilient, adaptable, and sustainable **'response-ready'** systems that can help us solve problems before they happen and reduce the harm caused by the problems that do happen.

# DMI Priorities
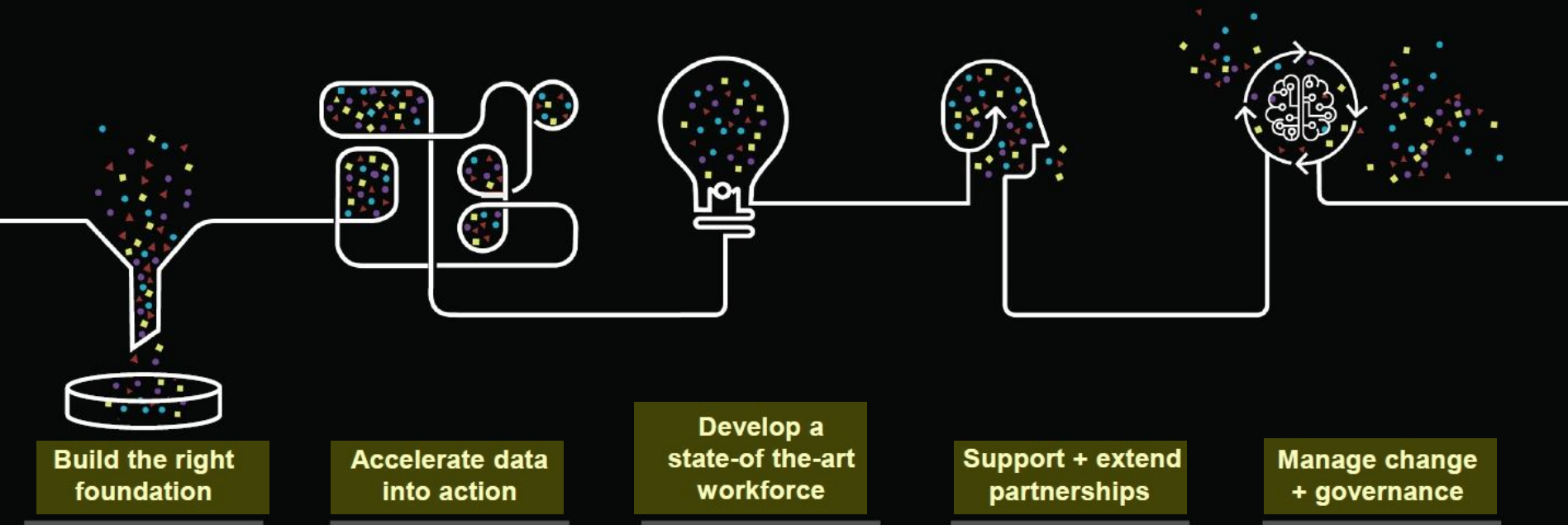
**Build the right foundation**

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

**Accelerate data into action**

Create faster, more integrated use of data to have more real-time situational awareness 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
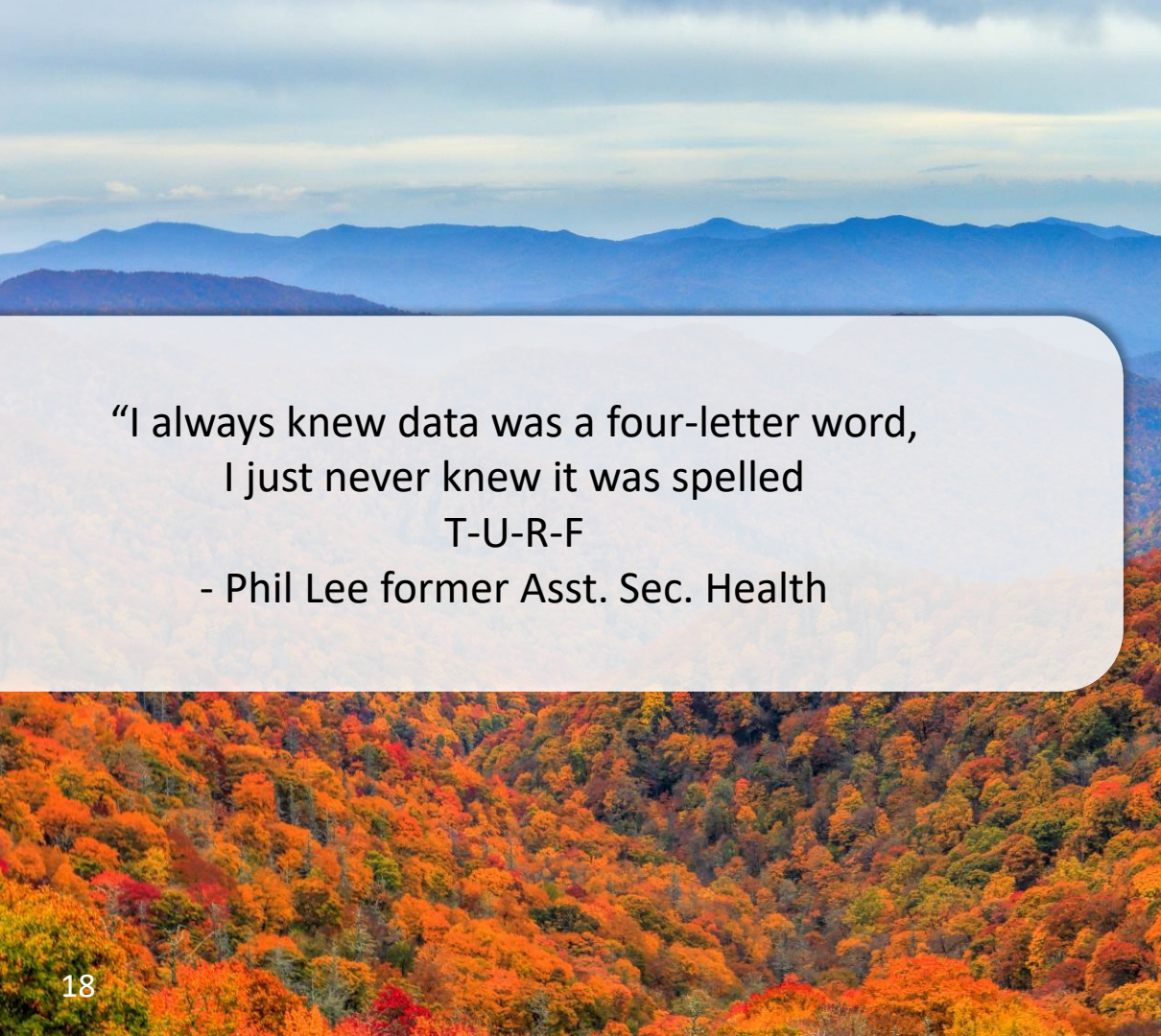
**Support + extend partnerships**

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

**Manage change + governance**

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

# National Funding

- CARES ACT
- American Rescue Plan
  - Public Health Workforce
  - Data modernization
- Consolidated Appropriations Act of 2021

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"I always knew data was a four-letter word,
I just never knew it was spelled
T-U-R-F
- Phil Lee former Asst. Sec. Health
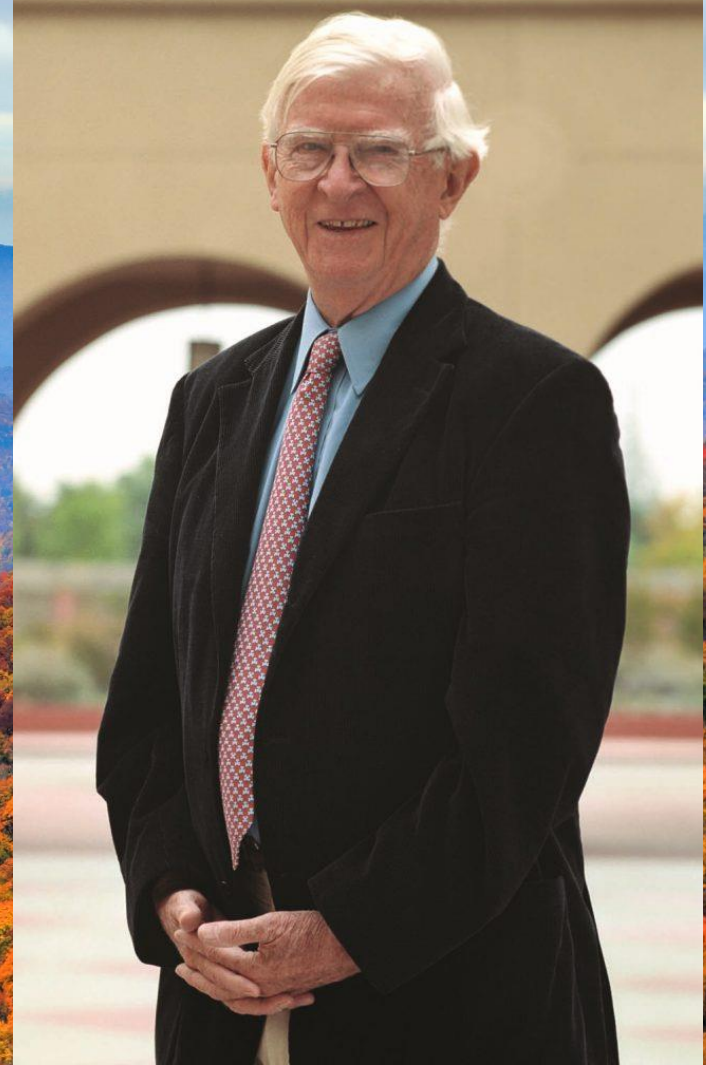
# Charting a Course for an Equity-Centered Data System:

*Recommendations from the National Commission to Transform Public Health Data Systems*

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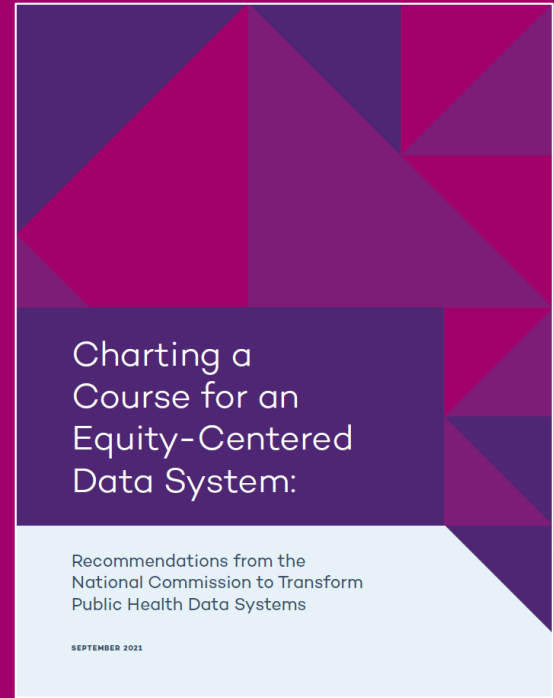
SEPTEMBER 2021

**National Commission to Transform Public Health Data Systems**

**October 2021**

# Commission Mission

- Established by the Robert Wood Johnson Foundation

- Led by Dr. Gail Christopher of the National Collaborative for Health Equity

- 16-member Commission with experts representing multiple sectors – healthcare, community advocacy, government, business, public health, and others

- Charged with reimagining how data are collected, shared, and used and identifying the investments needed to modernize our public health data infrastructure and improve health equity

**National Commission to Transform Public Health Data Systems**

# Relevant Recommendations

**STATE GOVERNMENT**

- Offer guidance on interpretation of racial/ethnic variation in health-relevant data to counter longstanding acceptance of the idea that these variations reflect biological differences rather than systemic, cultural, behavioral, and social factors.
- Ensure that state policies for public health data collection, sharing (including balancing privacy and transparency), and analysis are equity driven and explicitly call out the influence and consequences of structural racism and other inequities on health.
- Partner with local health departments and departments that provide public health data (e.g., social services data) to consider new models of collaboration to improve efficiency and timeliness of decision-making and action at both state and local levels.

**National Commission to Transform Public Health Data Systems**

# Recommendations

**LOCAL GOVERNMENT**

- Regularly connect public health data to local communications (i.e., what is happening in the community and how it relates to overall community well-being, or the impact of inequity).
- Ensure the local voice is represented not only in public health data (e.g., from whom data are collected), but in positions of authority responsible for making sense of the data and informing decisions.
- Explore data-sharing collaborations across government and civil society (e.g., nonprofits, businesses) that can more consistently generate public health data to support equity considerations and advance innovative public-private collaborations on data and analysis.

**PUBLIC HEALTH**

- Lead multisector collaboration around public health data sharing to improve the timeliness and quality of data to strengthen local decision-making.
- Strengthen capacity, diversity, and ongoing training of the public health workforce to monitor and address health equity, both in the field of public health and through novel collaborations with business, academia, or other sectors that influence health.
- Advocate for and prioritize modernization efforts and data sharing within and across the public health system to ensure that local data can inform emerging public health concerns at the regional, state, and national levels in real time.

# Recommendations

**FEDERAL GOVERNMENT**

- Develop minimum standards about data collection, disaggregation, presentation, and access, in federally funded data collection efforts, with an orientation to "freeing federal data" or promoting greater access.
- Federal funding for data infrastructure should be prioritized to systems that are standards-based and interoperable.

**BUSINESSES**

- Work with government partners and other organizations to develop standards through which public health data generated by the private sector can be used and communicated.

**HEALTHCARE SYSTEMS**

- Collect social determinants of health data at every consumer encounter, using standardized questions and ICD-10 codes that allow data aggregation within communities.
- Overcome historic silos and build partnerships and legal solutions to facilitate sharing of relevant healthcare data with public health departments in a timely and efficient manner, allowing data linkages and disaggregation of subgroups and geographic regions.

# Broader Recommendations

- Build the public health data system needed to shift the narrative to one that is just, positively oriented, and equity based (e.g., from deficit to strengths, from oppressive to restorative)

- Develop methods for interpreting public health data that are inclusive of community input, paying attention to messaging and narrative

- Invest in community relevant and nationally significant metrics on factors that influence outcomes

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**National Commission to Transform Public Health Data Systems**

The transformed public health data system must first and foremost meet the needs of those on the frontlines of Public Health,
**local public health agencies**