



UAA College of Health
UNIVERSITY of ALASKA ANCHORAGE

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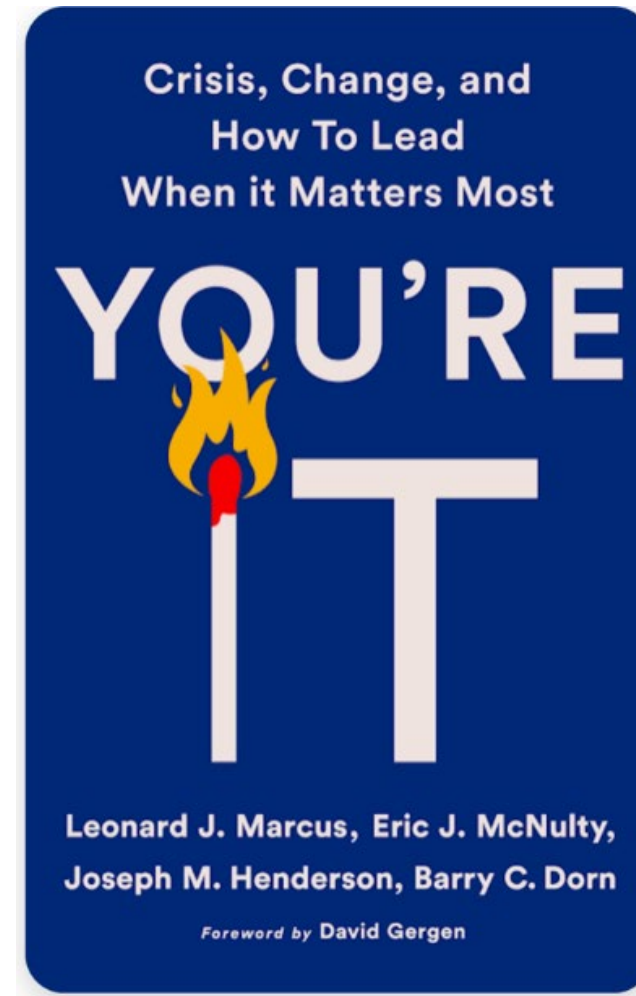
Defining Information Needs, Gaps, and Blind Spots

NASEM Workshop:
*Data and Situational Awareness for Medical and Public
Health Preparedness and Response*

Webinar 1, July 16, 2026:
Behavioral Decision-Making

Information Needs

- From *You're It* (L Marcus, et al):
 - What is happening?
 - What are you going to do about it?



What is Happening?

- Foundational data needs
- *Note to self:*



2019 nCoV

Four critical data points:

1. How transmissible (R_0)?
2. How severe/deadly is infection? (Greater severity justifies more aggressive prevention)
3. Who is susceptible? (If everyone, even a 1-2% mortality could be devastating, as in the case of the 1918 pandemic)
4. Who is infectious and when? (Asymptomatic infection, if transmissible, and infectiousness before onset major challenges to containment and prevention)

What Are You Going to Do About It?

More Information Needs

- Containment:
 - Feasibility
 - Risks and benefits
- Control:
 - Optimal infection control measures in healthcare environments, for first responders, home care providers, etc.
 - Community interventions
 - Assessment of risks and benefits even more pressing
- Defining *Thresholds*:
 - Doing what, when, where, for whom, for how long?

Technical Blind Spots

- Clinical surveillance:
 - Miss subclinical infections
 - May require laboratory testing, challenging in absence of POC tests
 - Requires transmission of data at a time with many competing priorities
- Syndromic surveillance:
 - May provide earlier alert of significant increase in cases
 - Data transmission can be automated
 - Sensitivity and specificity may be limited
- Genomic surveillance
 - Requires specimens, reagents, laboratory facilities and expertise



New York Times

New Ways of Seeing: Wastewater Surveillance

- Captures asymptomatic and pre-symptomatic infections
- Independent of health care seeking behavior and diagnostic testing access
- Efficient pooled sample for community or institution surveillance
- Feasible for results to be available within hours to days
- Genetic subtyping possible
- Limitations: certain populations missed
 - Persons not on sewage systems not included
 - Infants in disposable diapers



New Ways of Seeing: Social Media Surveillance

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Reddit Chatter Signaled Virus Surge in World Cup Host City

— Situation demonstrated the capabilities of a public health effort focused on the games

by [Rachael Robertson](#), Enterprise & Investigative Writer, MedPage Today

June 18, 2026 · 3 min read

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Characteristics of Needed Data

- Accurate
- Actionable
- Available
- Dependable
- Sustainable
- Sensitive to the “unknown unknowns”
- Rapidly interpretable and credible for decision making in the face of fear and fatigue:
 - Scientific community
 - Policy makers and elected officials
 - The public

Jagger Rule for Data Collection and Analysis for Decision-Making

You can't always get what you want,

But if you try sometime you just might find

You get what you need [for decision making]

But it is imperative to be ready to pivot as the situation evolves and new data become available



Igamsiqanaghalek

St. Lawrence Island Yup'ik

Quyanaq
North Slope Inupiaq

Quyana
Yup'ik/Cup'ik

Ha'w'aa
Haida

Spasciba
Russian/Alutiiq

Tsin'ee
Tanacross

Qagaasakung
Aleut (Unangax)

Mahsi'
Gwitch'in/Han

TSIN'AEN
AHTNA

THANK YOU

Ana-ba-see
Koyukon

Tsen'ii
Upper Tanana

Maasee'
Tanana

Chin'an
Dena'ina (Tanaina)

Doy'ksin
Tysm'sen

Quyanaqpuk
Inupiaq Nome

DOGEDINH
DEG HIT'AN

Baasee'
Ruby Athabaskan

GUNALCHE'ESH
TLINGIT

Awa'ahda
Eyak