

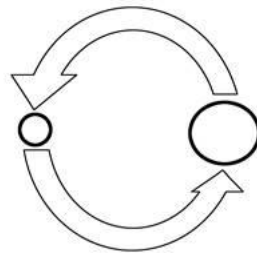
# Welcome

- Stay on mute while listening.
- Interrupt me anytime you have a question or write your question in the chat box and Lewe will facilitate.
- If you want to be on our newsletter mailing list:
  - Email: [briankeogh@me.com](mailto:briankeogh@me.com) or [lewis@hainescentreaustralia.com.au](mailto:lewis@hainescentreaustralia.com.au)
  - or jot your email down in the chat box
- We will be starting shortly

# COVID-19 and Systems Thinking

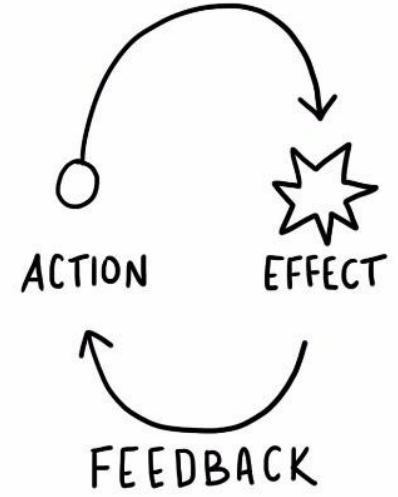
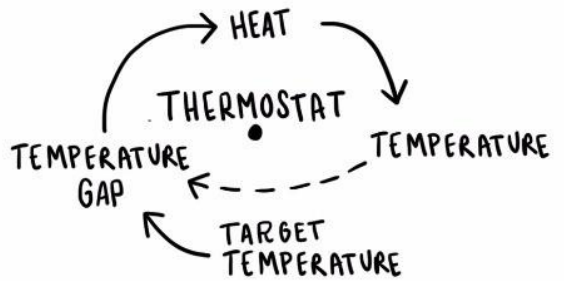
## Concepts: Feedback loops

FEEDBACK LOOP

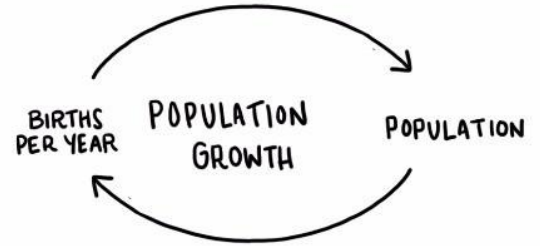


# FEEDBACK LOOPS

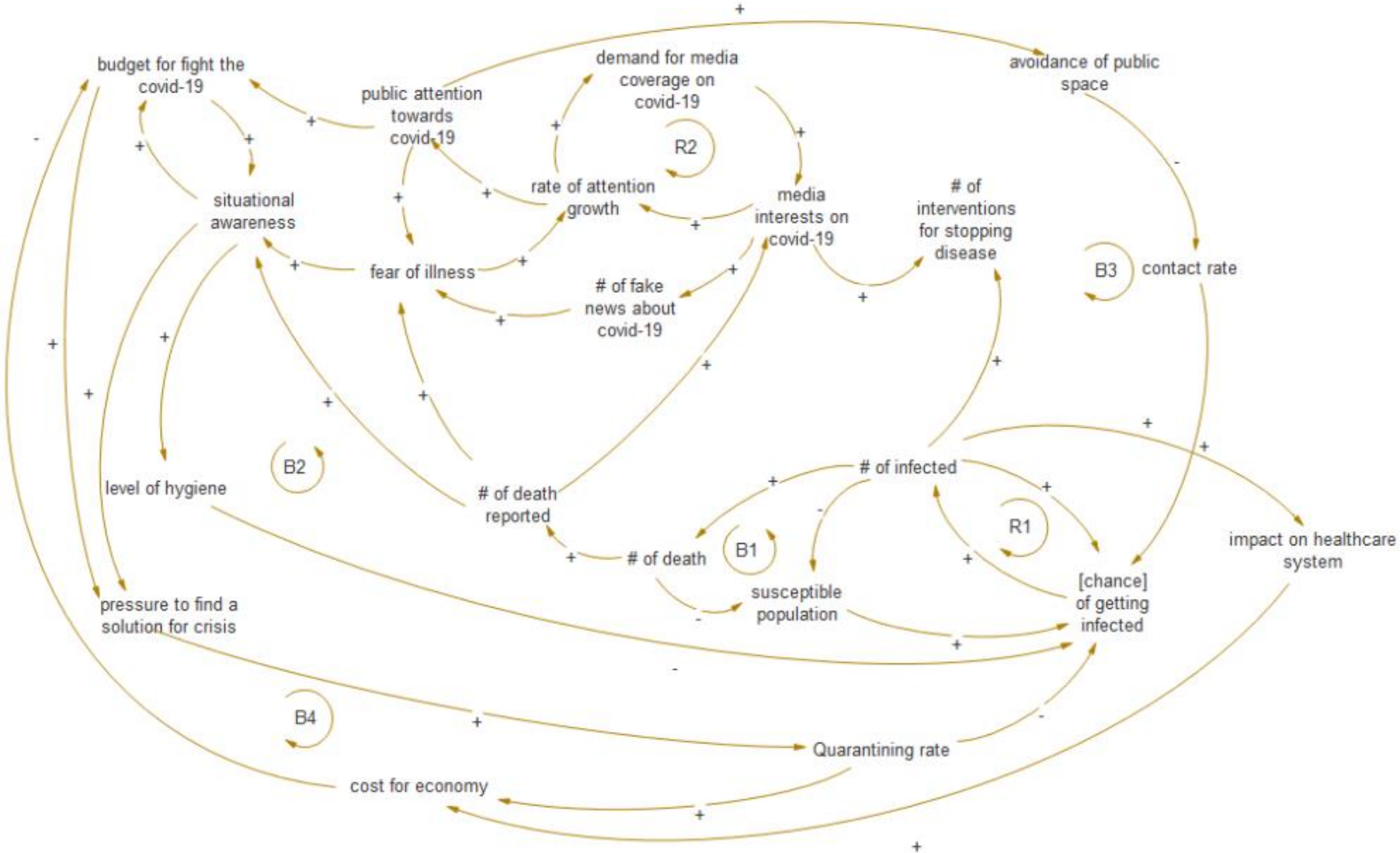
- = +  
BALANCING  
PRODUCES STABILITY  
SELF-CORRECTING



+ = -  
REINFORCING  
LEADS TO INSTABILITY  
EXPONENTIAL GROWTH

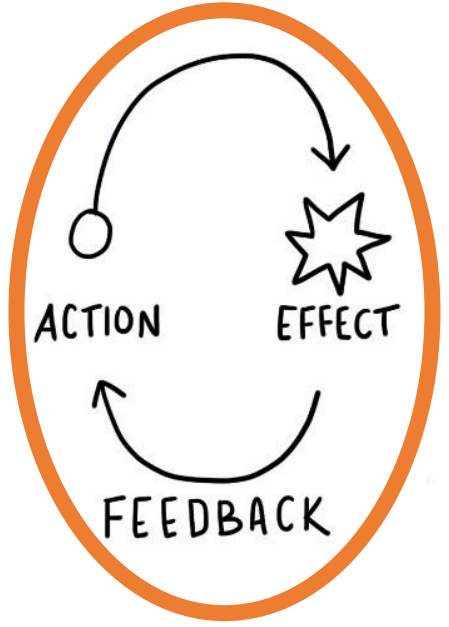
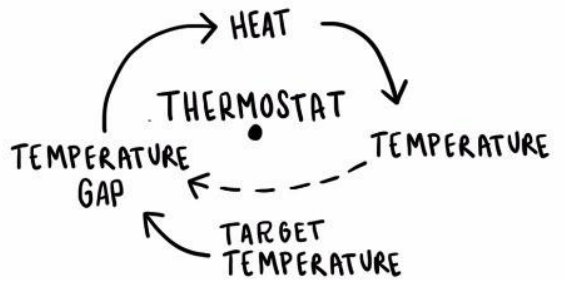


# Causal loops vs feedback loop

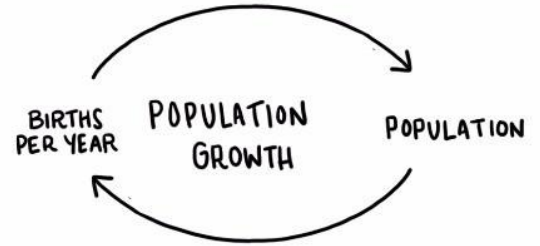


# FEEDBACK LOOPS

- = +  
BALANCING  
PRODUCES STABILITY  
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+ = -  
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# Evaluating Feedback Loops

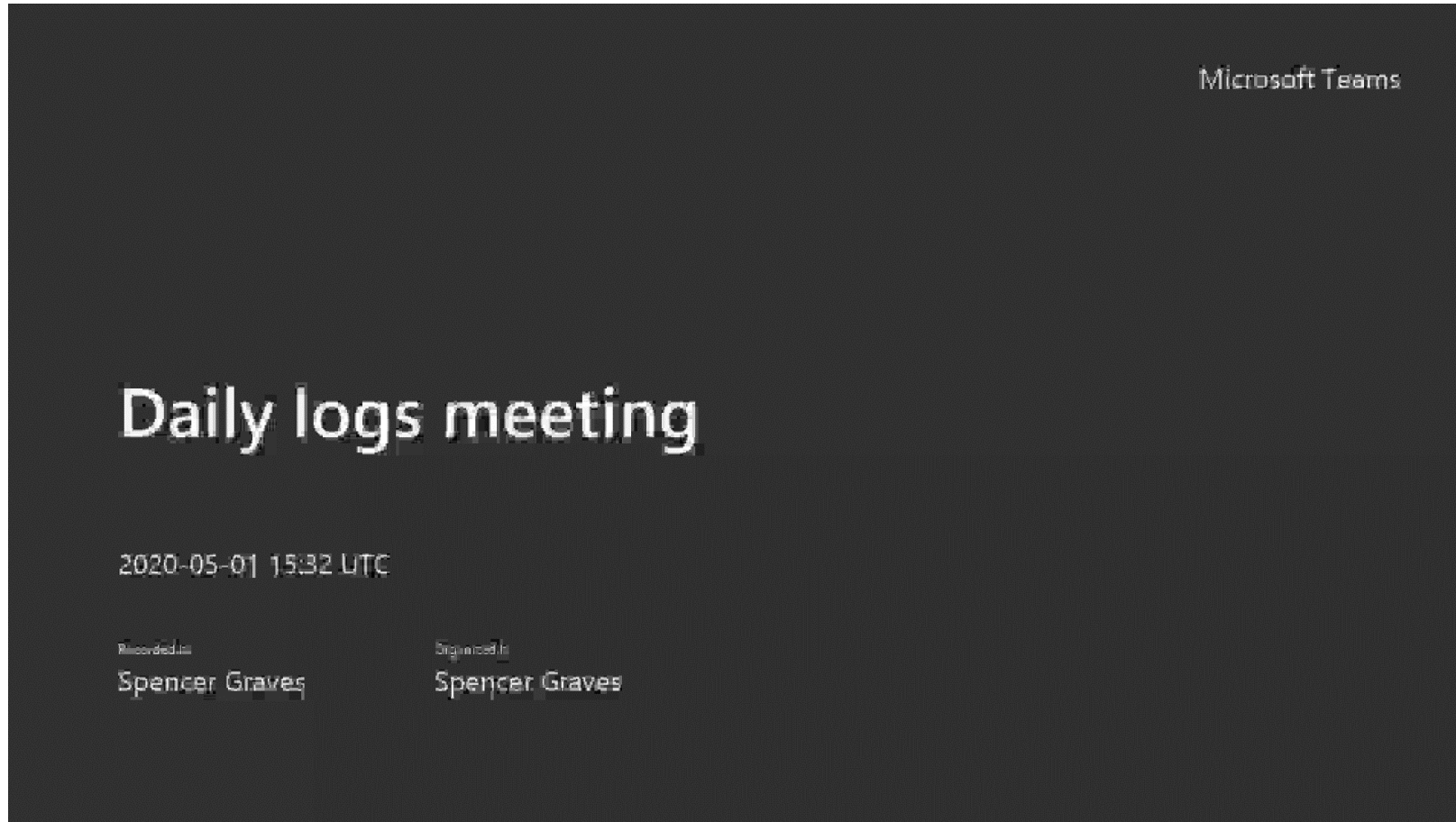
- Loop closed
- Relevance
- Credibility
- Timeliness
- Frequently sufficient
- Specificity



# COVID 19 Closing Feedback Loops

- Context: go to 11:45
- <https://d.docs.live.net/b9fb78a0bd9093bf/Document/Workshops-Presentations/COVID19%20systems%20thinking%20series/Operational%20Period%20Briefing%20April%206%5eJ%202020%20927%20MST.mp3>
- The consequences: go to 13:15
- <https://d.docs.live.net/b9fb78a0bd9093bf/Document/Workshops-Presentations/COVID19%20systems%20thinking%20series/Operational%20Period%20Briefing%20April%2030%5eJ%202020.mp3>

# Feedback Loops: frequency, specificity, timeliness



# Consequences

## GENERAL MESSAGE (ICS 213)

1. Incident Name (Optional):		
2. To (Name and Position):		
3. From (Name and Position):		
4. Subject:	5. Date:	6. Time:
7. Message:		
8. Approved by: Name: _____ Signature: _____ Position/Title: _____		
9. Reply:		
10. Replied by: Name: _____ Position/Title: _____ Signature: _____		
ICS 213	Date/Time: _____	



# Feedback Loops: Timeliness

- Context
- 12:30-13:35
- <https://d.docs.live.net/b9fb78a0bd9093bf/Document/Workshops-Presentations/COVID19%20systems%20thinking%20series/Operational%20Period%20Briefing%205-6-20.mp3>

# Consequences





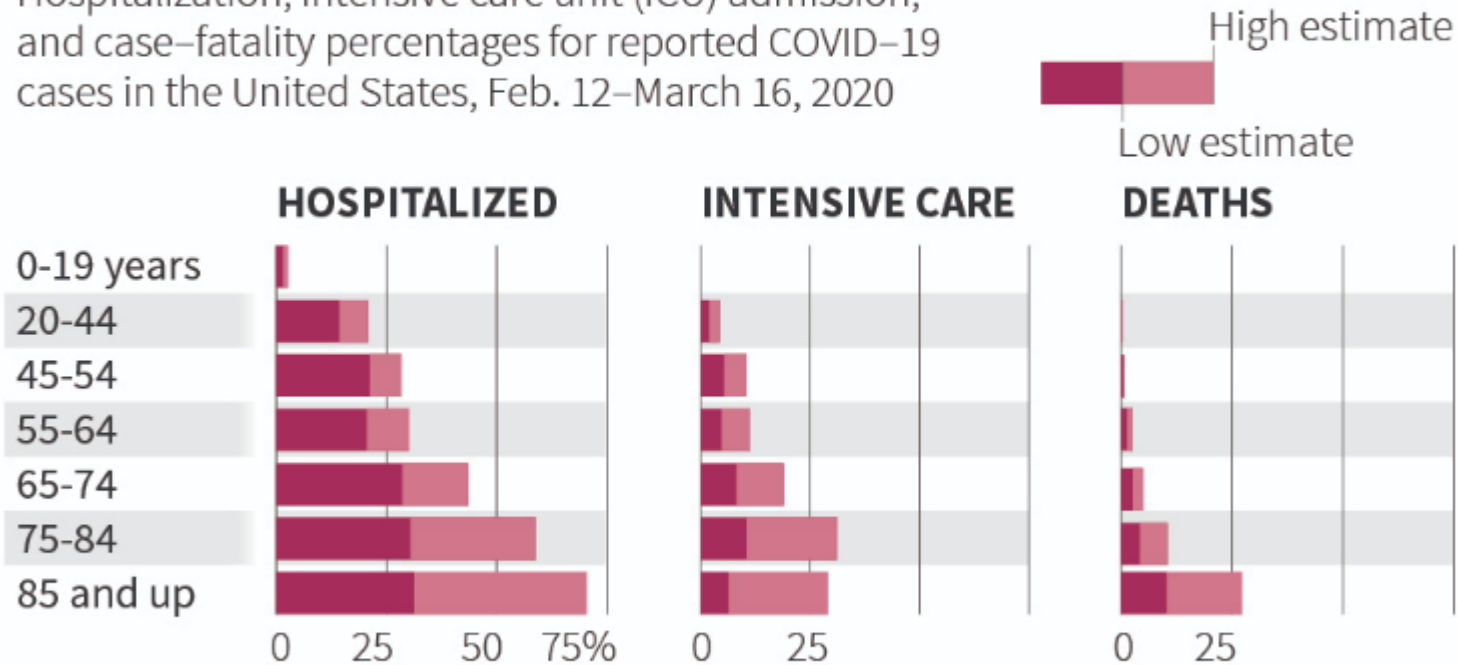
# Feedback Loops: Credibility



# Consequences

## Severity by age group in the U.S.

Hospitalization, intensive care unit (ICU) admission, and case-fatality percentages for reported COVID-19 cases in the United States, Feb. 12–March 16, 2020



Source: Centers for Disease Control and Prevention

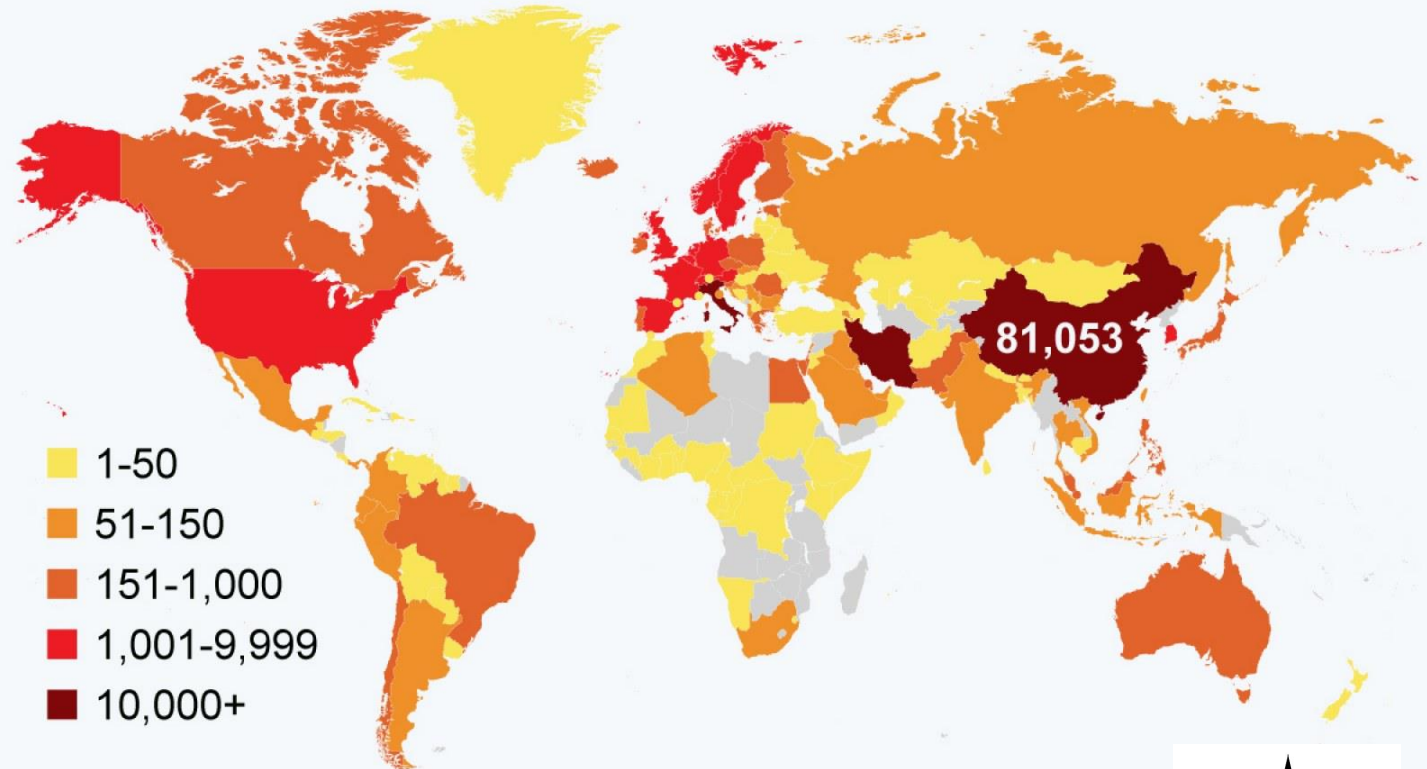
Staff, 19/03/2020



# Feedback loops: Relevance

## Almost 183,000 Cases of COVID-19 Confirmed Worldwide

Locations by number of confirmed COVID-19 cases\*



Hong Kong and Macau included in China figure

\* As of March 17, 2020 at 6 a.m. EST

Source: Johns Hopkins University



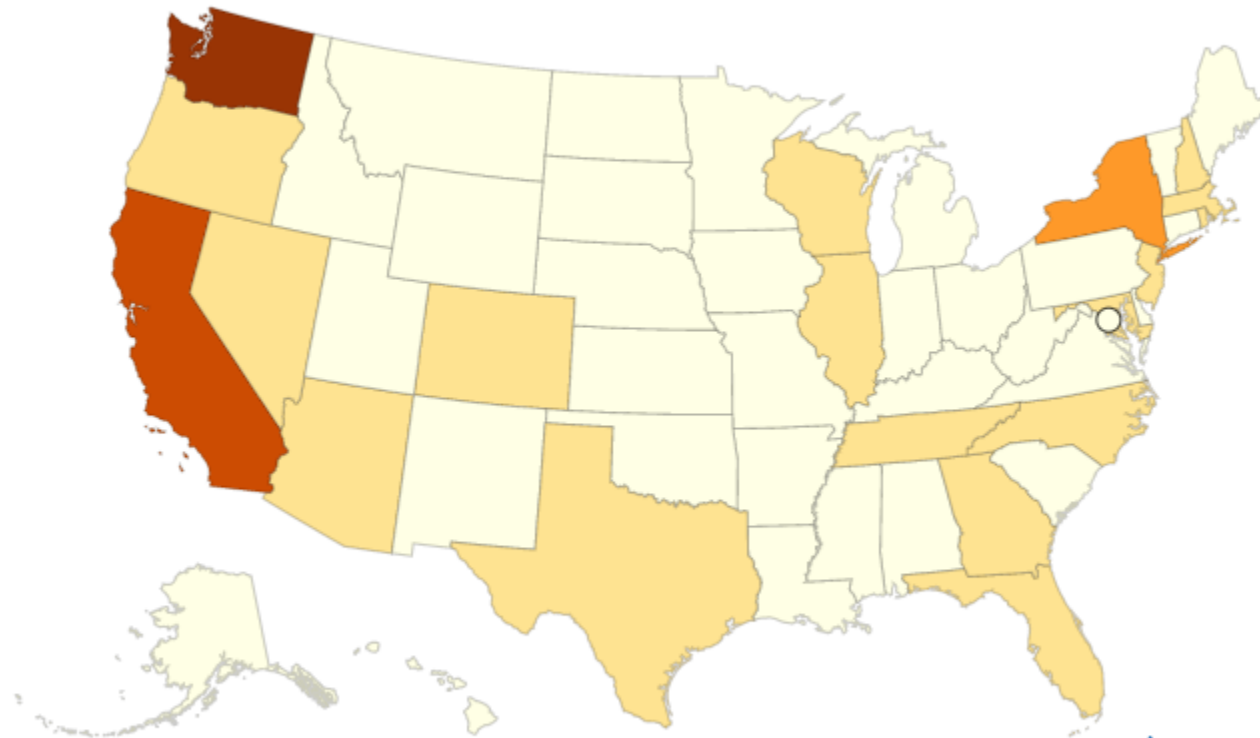
**Newsweek**



**statista**

# Consequences: Don't test = no cases

States Reporting Cases of COVID-19 to CDC\*



## Reported Cases

- None
- 1 to 5
- 11 to 20
- 21 to 50
- 51 to 100

Territories

AS

GU

MH

FM

MP

PW

PR

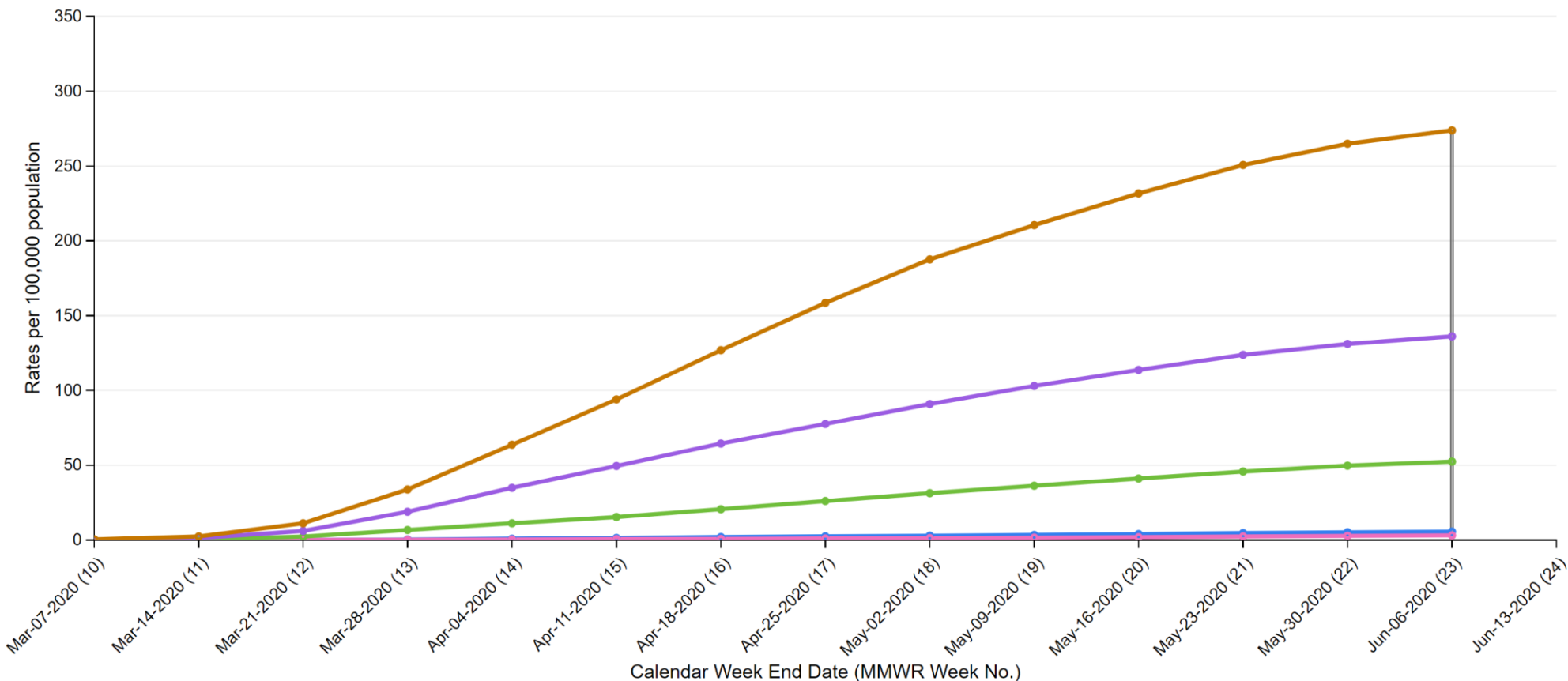
VI



# Hospitalization Rates



COVID-NET :: Entire Network :: 2020 :: Cumulative Rate  
 Alt key + Click and drag to create rectangle to zoom/Double Clicks to reset zoom



### Age Selection

- Overall
- All Age Groups
- 0-4 yr
- 5-17 yr
- 18-49 yr
- 18-29 yr
- 30-39 yr
- 40-49 yr
- 50-64 yr
- 65+ yr
- 65-74 yr
- 75-84 yr
- 85+

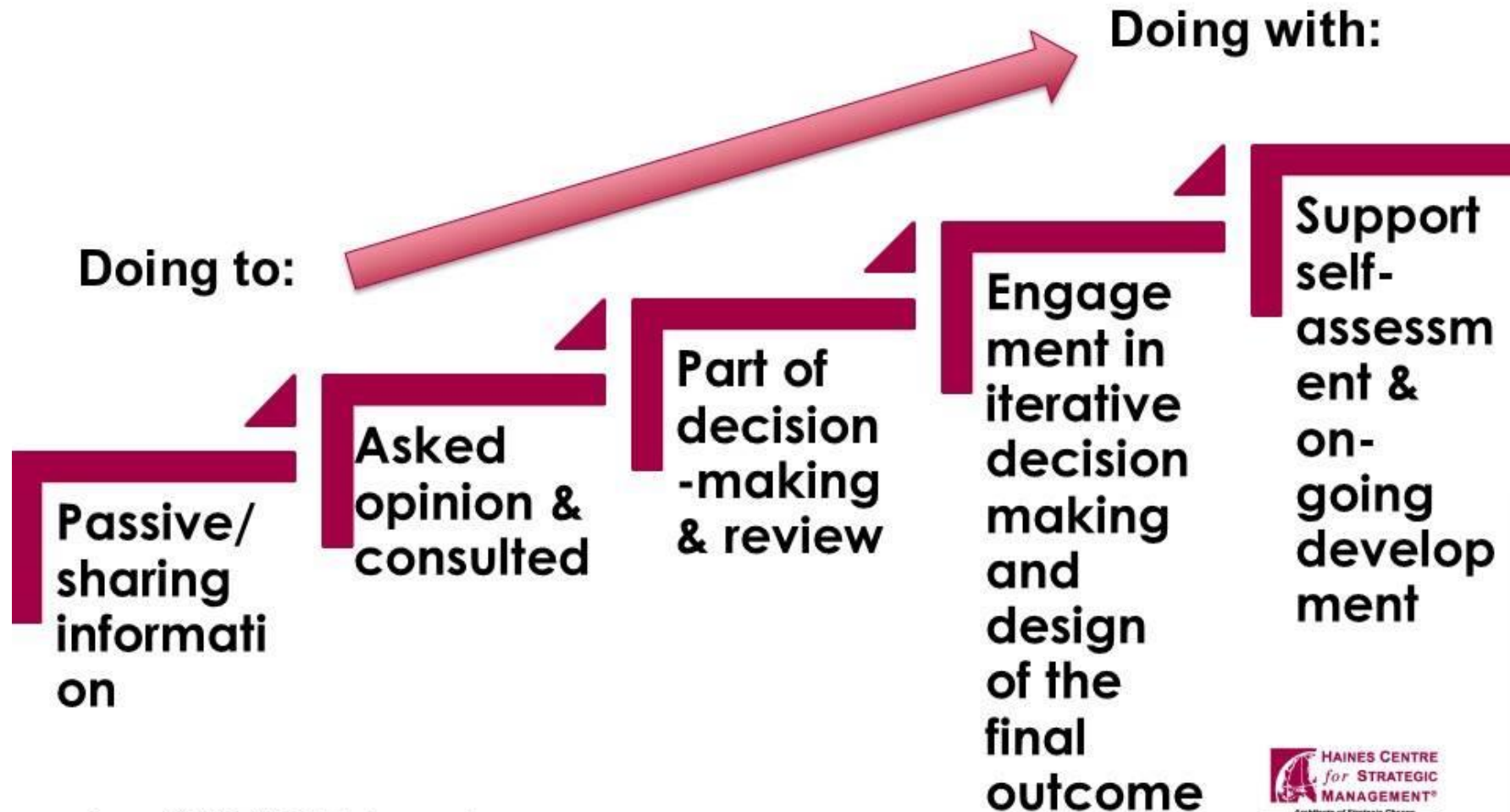
# What does real time evaluation mean?

- Anyone can write a report after the fact.
- Do you have the self-confidence and skills to provide real time recommendations? Within minutes of observing a potential problem?
- Failure to act = inefficiencies & lost lives.
- Failure to act or provide bogus recommendation = no trust, not used.
- First recommendation is all important: keep it simple and be sure it can and will be implemented.
- Need to have developed trust with leadership. Too often we know our clients but don't have a genuine relationship with them. If you want your evaluation to have purpose and impact you **MUST** build this relationship.
- Systems thinking based recommendations make sense to people so they are more likely to act on them.

# Drive through testing and vaccinations



# Doing to through to doing with



# Thank you

- Ralph Renger, PhD
- Website: [justevaluation.com](http://justevaluation.com)
- Email: [ralph@justevaluation.com](mailto:ralph@justevaluation.com)

