



Communicating Decision-making Information from Disease Forecasts & Analytics

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Lessons from the pandemic

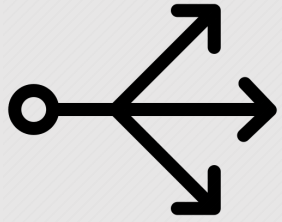
- Risk and uncertainty communication became complex
- *2018 CDC EIS report on communicating during an outbreak*

Factors influencing risk perception	
More acceptable risks are those perceived as	Less acceptable risks are those perceived as
Being voluntary or involving choice	Being imposed on the affected population or not allowing choice
Being under a person's control	Being controlled by others
Having clear benefits	Having intangible or deferred benefits
Naturally occurring	Human-made
Generated by a trusted source	Generated by an untrusted source
Being familiar	Being or seeming new or exotic
Affecting adults primarily	Affecting children primarily

Uncertainty can lead to misinformation

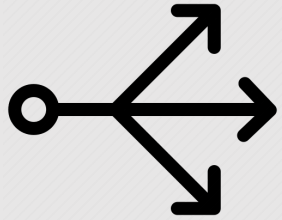


So how can we be transparent about options?

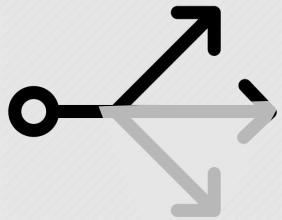


- Sharing multiple possible outcomes can help maintain trust
 - (Kelp et al 2022, Kreps and Kriner 2020)

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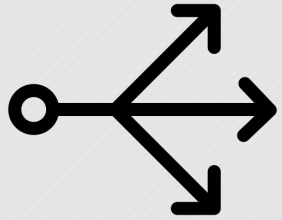


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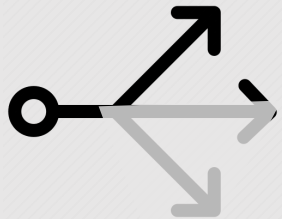


- Rank likelihood of options so people don't hinge on unlikely preliminary evidence

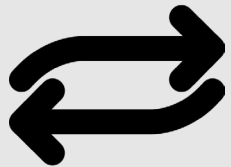
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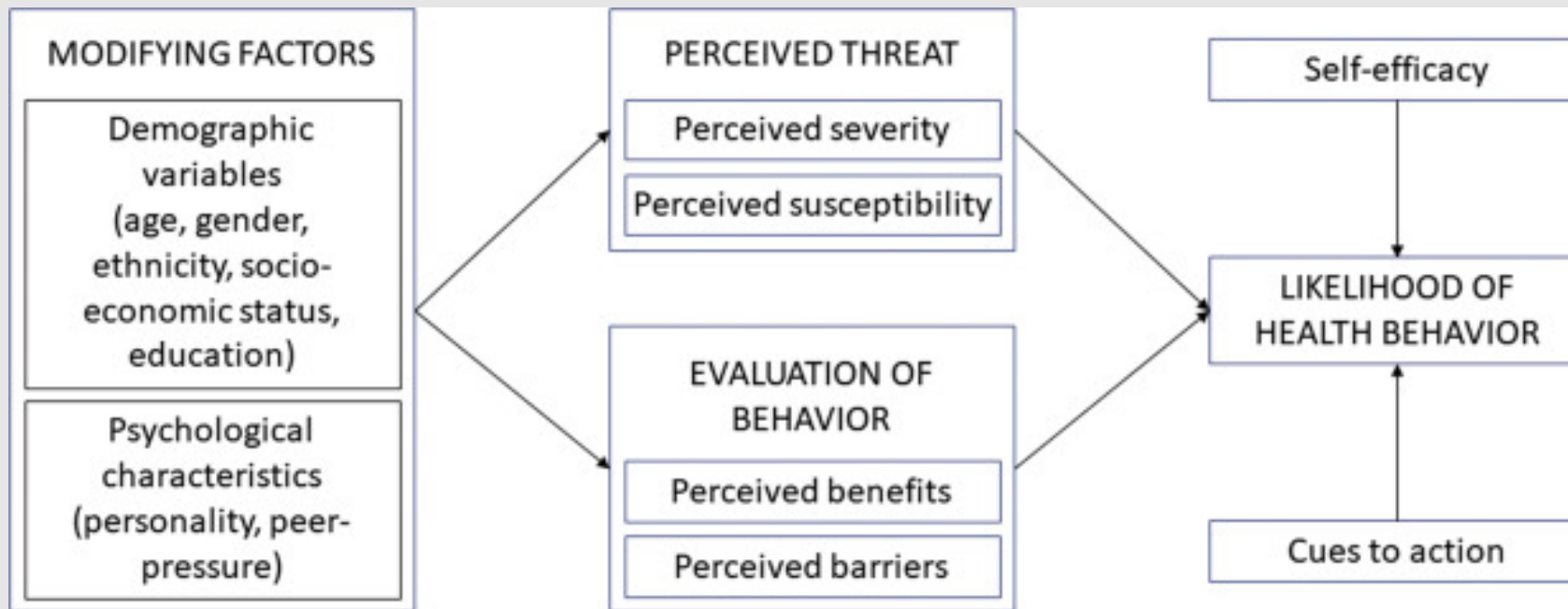
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- Explain type of uncertainty – technical, scientific, consensus? – and normalize the uncertainty
 - (Gustafson and Rice 2019; Han et al 2021)

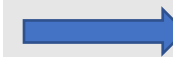
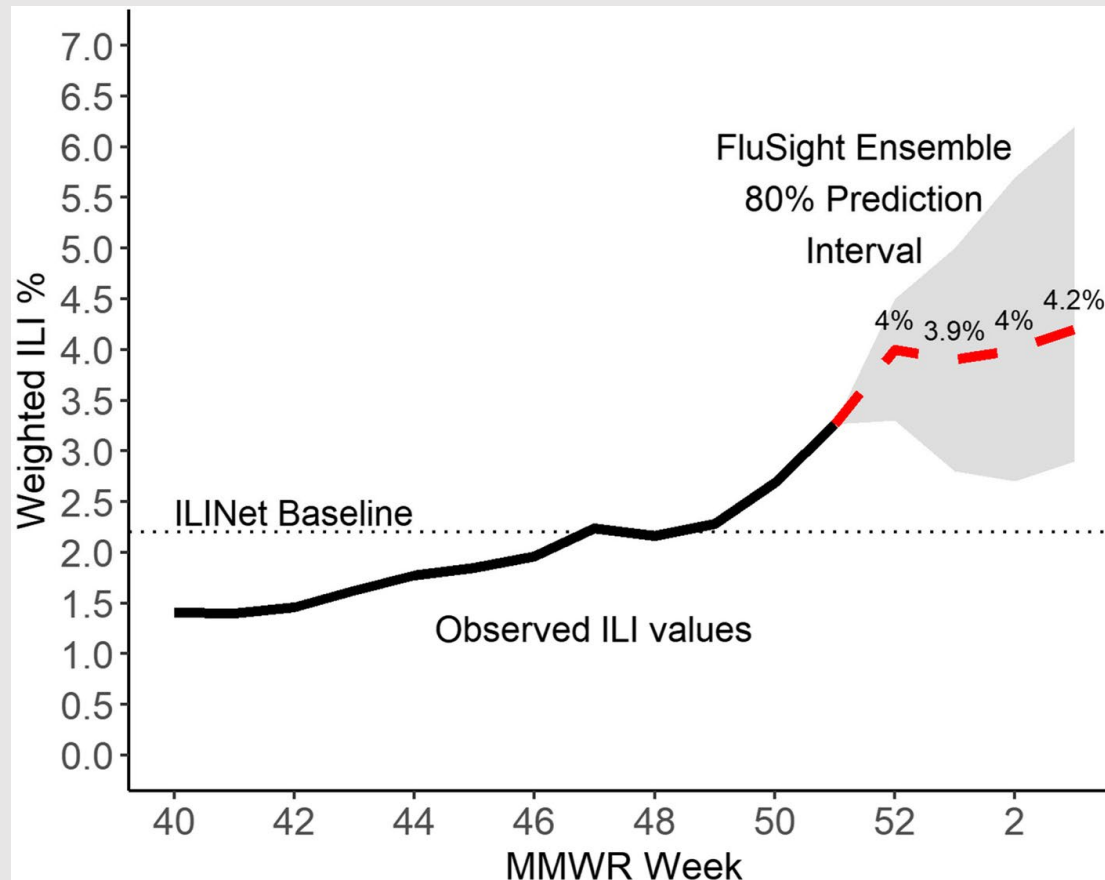
Transforming analytics to decision-making: Focus on health behaviors

The Health Belief Model



Tools for communicating disease forecasts and outbreak analytics

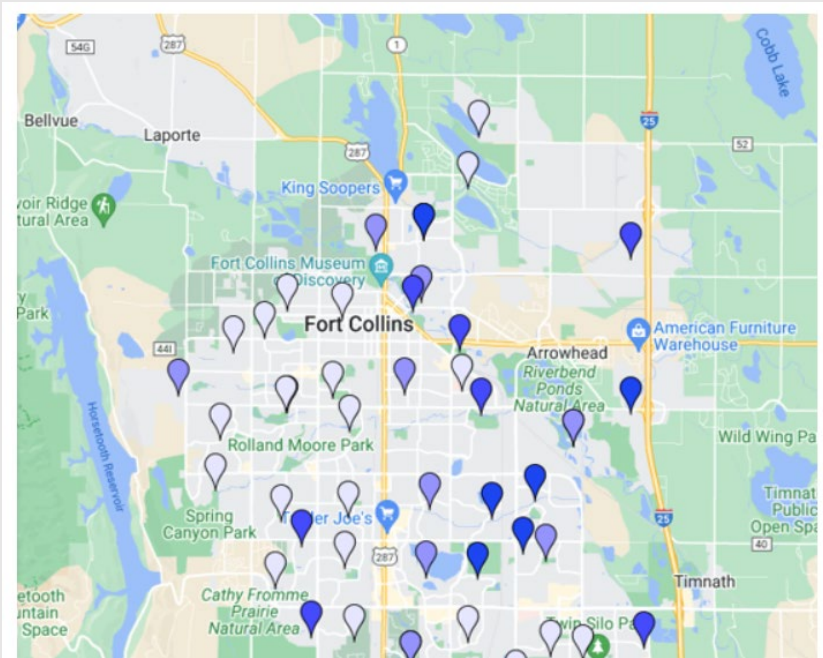
- Ranges of outcomes



Provide guidance on what behaviors people should do based on these range of outcomes.

Tools for communicating disease forecasts and outbreak analytics

- Maps



West Nile Virus-positive mosquito pools. Courtesy of Greg Ebel and Shelby Cagle.



Provide guidance on what behaviors people should do based their proximity to risk.

Tips for communicating disease forecasts and outbreak analytics: Technical considerations



- Include time-stamped version numbers on analytics



- Make data visual



- Describe the weaknesses of forecasts, and how much it is/isn't generalizable to different populations and locations

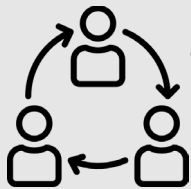
Tips for communicating disease forecasts and outbreak analytics: Inclusivity considerations



- Provide nontechnical interpretation and digestible data --
- but don't dumb down



- Consider accessibility across abilities and cultures

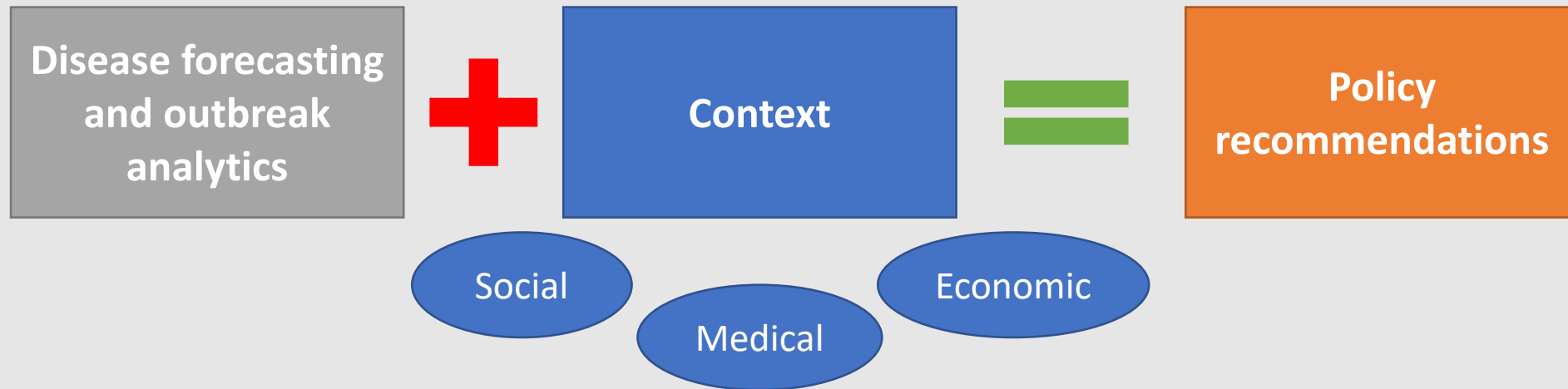


- Utilize inclusive approaches, inviting audience input

Pollett S, Johansson MA, et al. Recommended reporting items for epidemic forecasting and prediction research: The EPIFORGE 2020 guidelines. PLoS Med. 2021 Oct 19;18(10):e1003793.

<https://blogs.cdc.gov/publichealthmatters/2018/07/literacy-tips/>

Communication for policymakers and legislative staff



Communication for policymakers and legislative staff

- Health Policy Analysis
 - Define the context
 - State the problem
 - Search for evidence
 - Consider different policy approaches
 - Project the outcomes
 - Apply evaluative criteria
 - Weigh the outcomes
 - Make the decision

Communication for policymakers and legislative staff

