

# Experts' Sensemaking During the 2003 SARS Crisis

Iva Seto, PhDc

Dr. David Johnstone

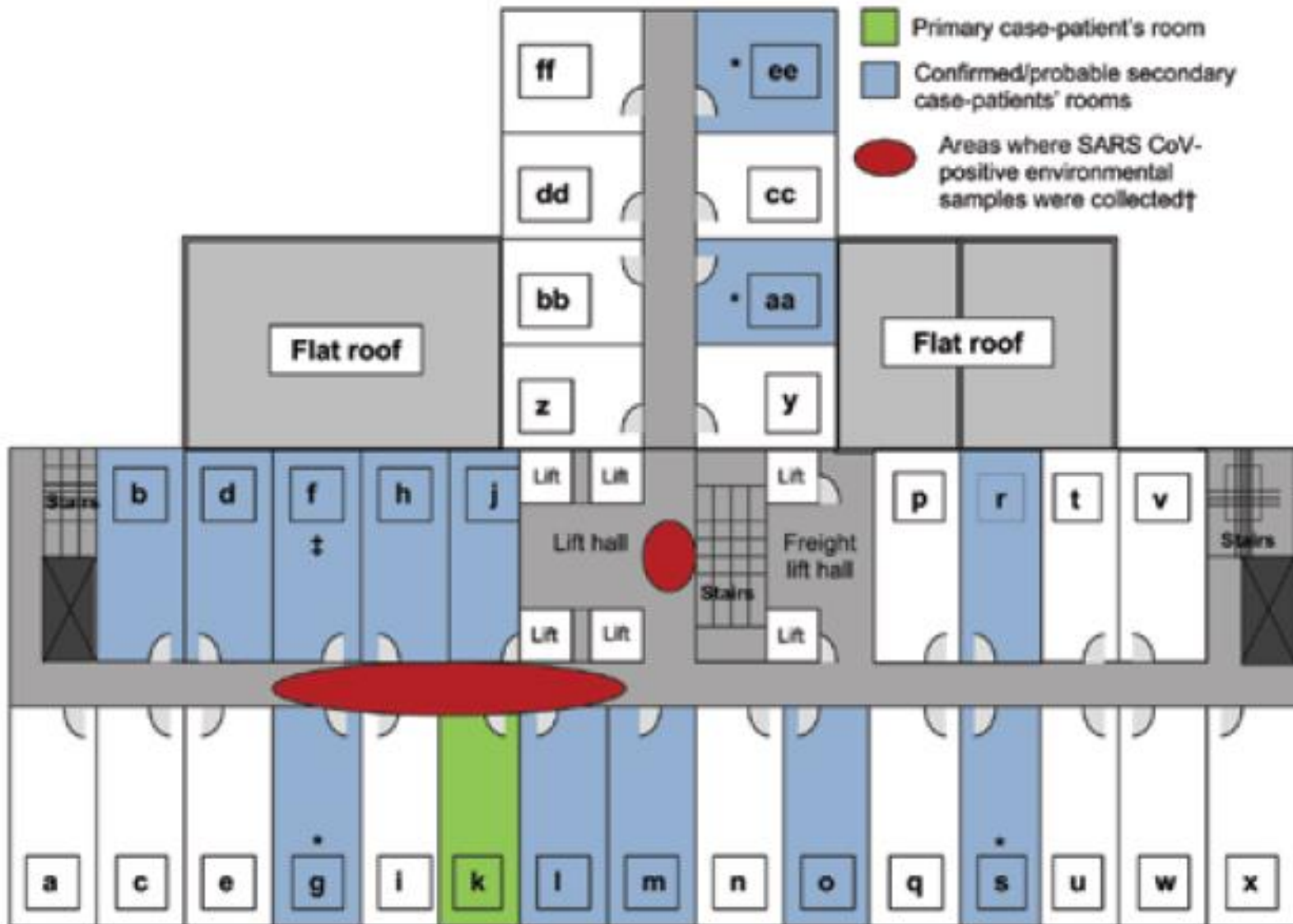
Dr. Jennifer Campbell-Meier

*ISCRAM 2018: Resilience to cope with the unexpected*

# Agenda

- Introduction
- Methods
- Concepts
- Results: Newspapers
- Preliminary results: Interviews
- Conclusions
- Questions

# Metropole Hotel, Hong Kong: Feb 21, 2003



# Public Health Crises

Different from other types of crises (Bissell & Kirsch, 2013):

- Infectious diseases crisis response - **long duration**
  - incubate, can amplify in community
  - potential to spread around the world with the speed of air travel
- Earthquakes, tsunamis, wildfires response (**acute within minutes to a few days**)

# Severe Acute Respiratory Syndrome (SARS)

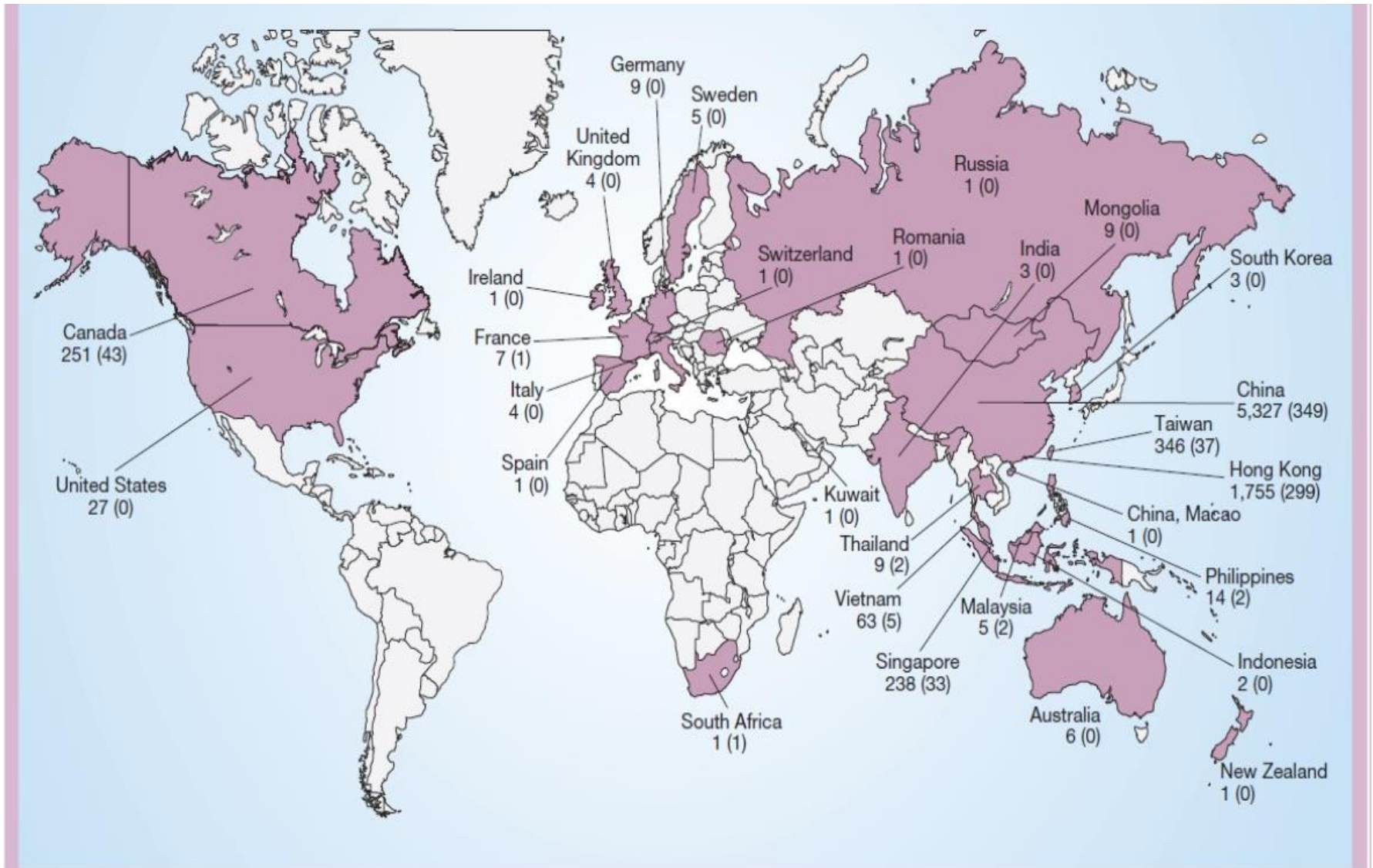
First probable case was Nov 16, 2002 in China.

Worldwide cases: 8096

Worldwide deaths: 774

WHO declared crisis over on July 5, 2003.

# Cases (deaths) by Country



# Emerging disease – facing the unknown

- Index case arrived Toronto Feb 23, 2003.
- Emergency declared March 26, 2003.
- Decision-makers need answers to these questions as they affect crisis response :
  - What is the cause of SARS?
  - How is SARS transmitted?
  - What is the incubation period?
- Who answers these questions?

# Experts

- Public health officers
- Infectious disease specialists
- Infection prevention and control experts
- Personal protective equipment (PPE) experts
- Medical microbiologists
- etc



# Research goal

- To explore the social sensemaking processes among experts (scientists, doctors, and other professionals) that are working together to provide advice to decision-makers in public health crisis response

# Methods

## Why newspapers?

- Following social sensemaking of SARS in real-time, over time, from a Canadian perspective
- Two major Canadian newspapers: The Globe and Mail, Toronto Star – searched and retrieved articles relevant to SARS from mid-March to early July 2003.

# Methods cont'd

3199 articles retrieved



Include	Exclude
Full articles	Articles that are not relevant to SARS, or only mention SARS, but it is not the main topic
Primary topic of SARS	
Canadian response (or relevant to)	Political, societal, or economic impact of SARS
Letters to editor that are written by experts (doctors, epidemiologists, etc)	Drug therapy for SARS

**399** Articles

Total of 722 pages single spaced

# Data analysis

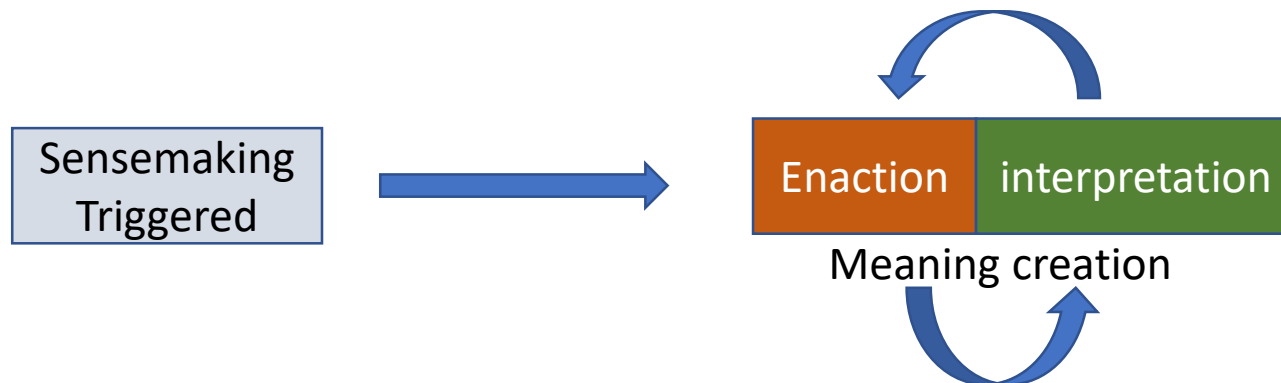
## Constructivist Grounded Theory Method (Charmaz, 2014)

Three stages:

- Initial coding, focused coding, and theoretical coding
- Reducing data to **key concepts and processes**

# Concepts

- Sensemaking (Weick, 1995) is a meaning creation process.
- Triggered when current experience (cues) does not match expectations (frames).
- Meaning creation has two parts (Weick, 1995):
  - Enaction – taking action based on some initial assumptions about the situation.
  - Interpretation – information generated by the action is processed.



# Concepts cont'd

## **FRAMES**

A socially constructed set of assumptions, knowledge and expectations (Cornelissen & Werner, 2014)

## **CUES**

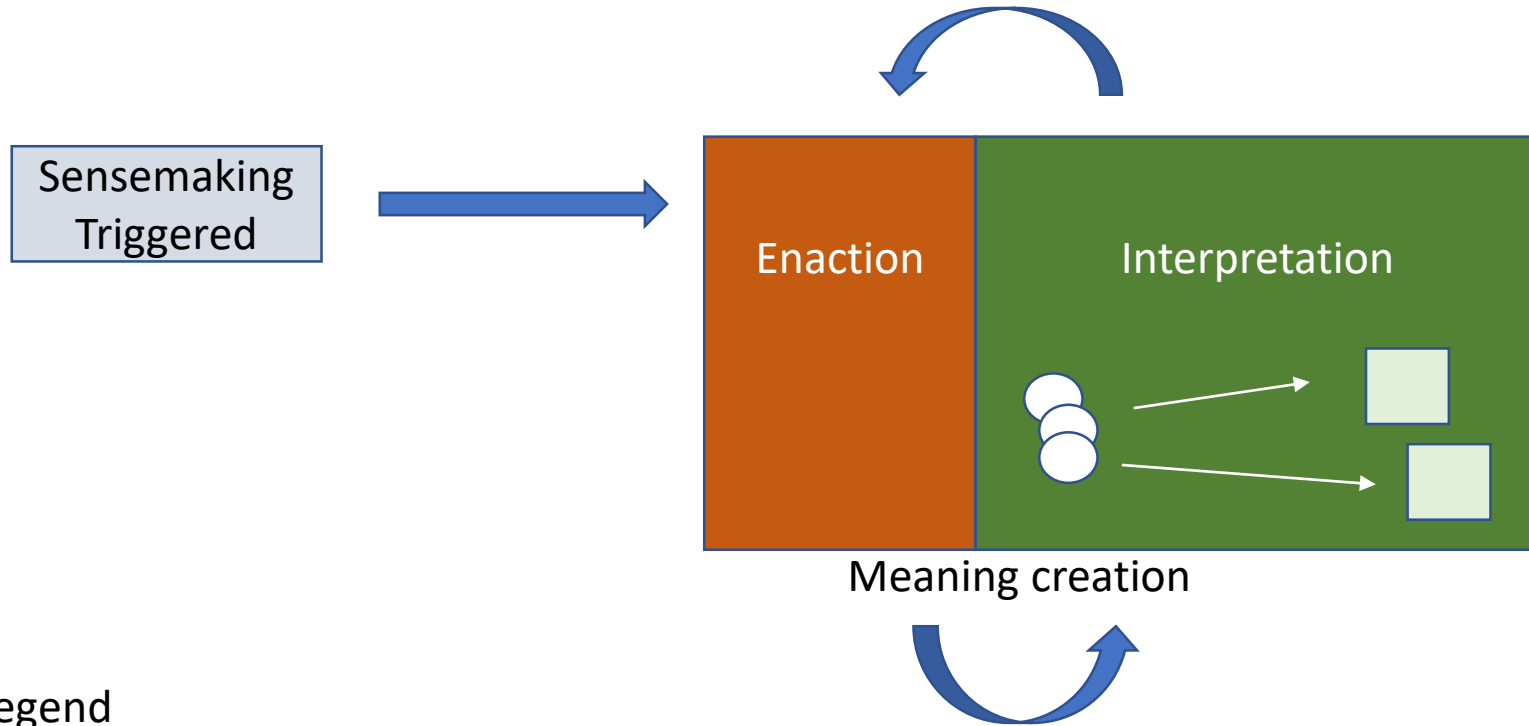
Cues are units of meaningful information that are drawn from the environment, and can be in any medium, such as words, visuals, sensation, etc (Weick, 1995).

e.g. SARS: PPE, building SARS frame

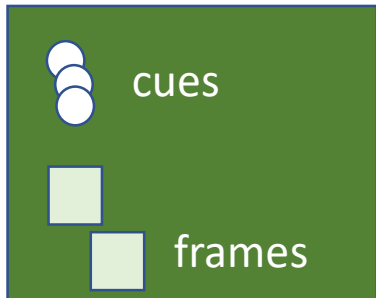
e.g. "Terrorist": commitment to frame (Cornelissen, Mantere & Vaara, 2014)

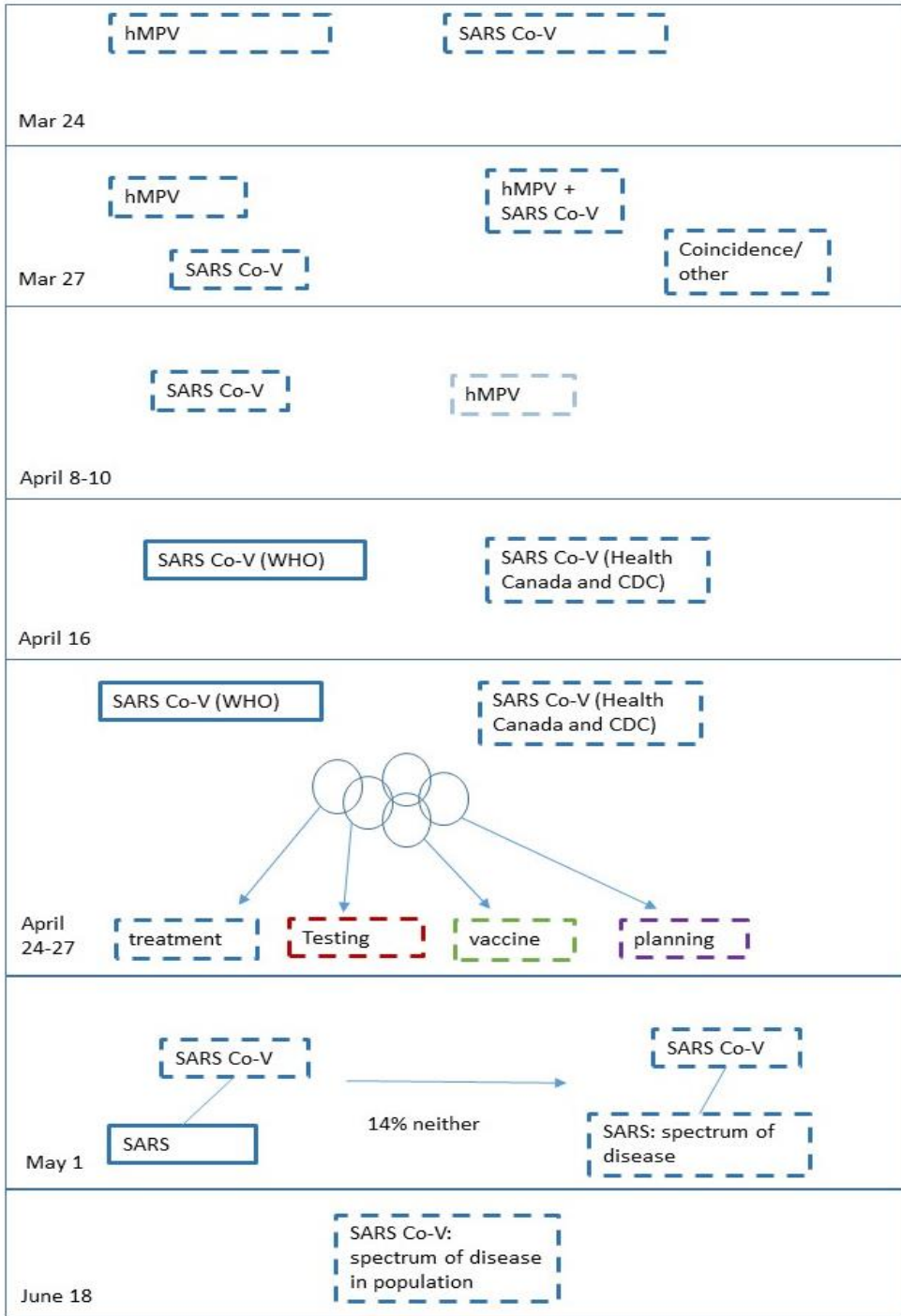
Sensemaking is a process of matching cues to frames (Weick, 1995).

# Social Sensemaking Process



## Legend





# Investigating the cause of SARS



hMPV

SARS Co-V

Mar 24

hMPV

hMPV +  
SARS Co-V

Mar 27

SARS Co-V

Coincidence  
/ other

SARS Co-V

hMPV

April 8-10

SARS Co-V  
(WHO)

SARS Co-V (Health  
Canada and CDC)

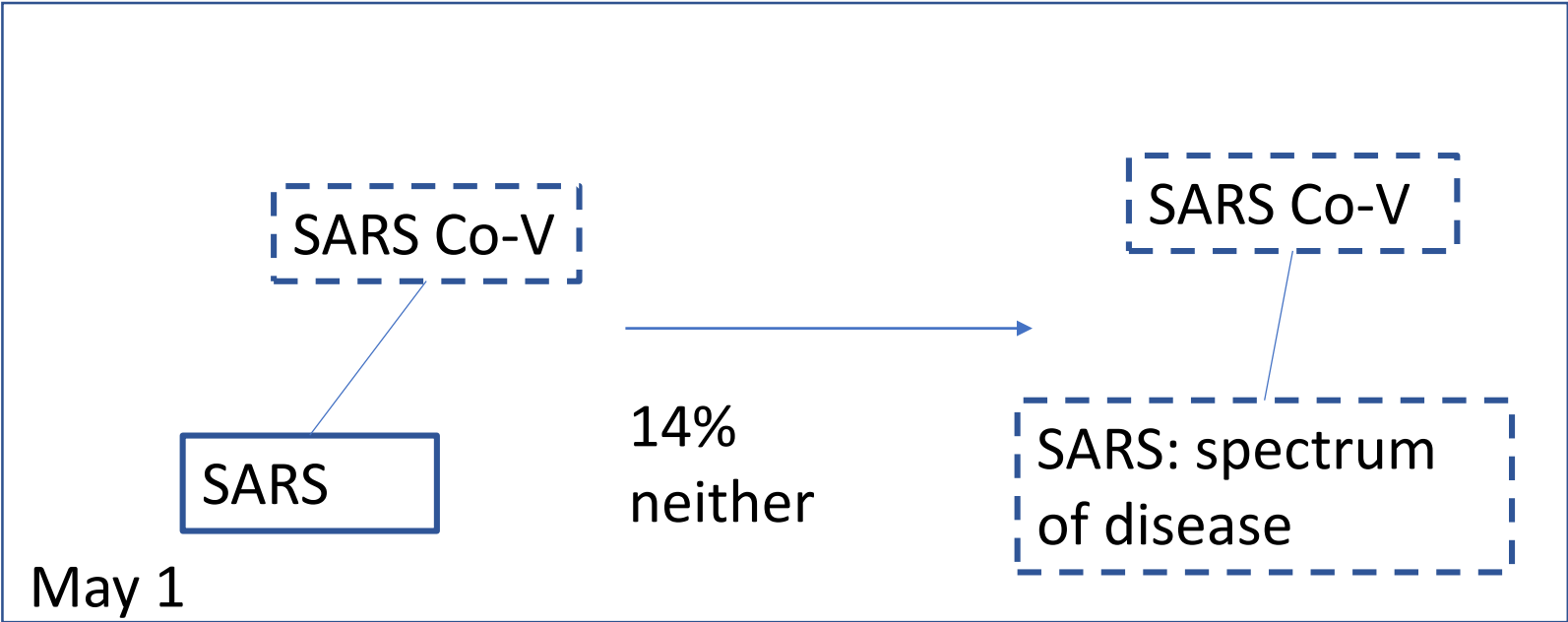
April 16

SARS Co-V  
(WHO)

SARS Co-V (Health  
Canada and CDC)

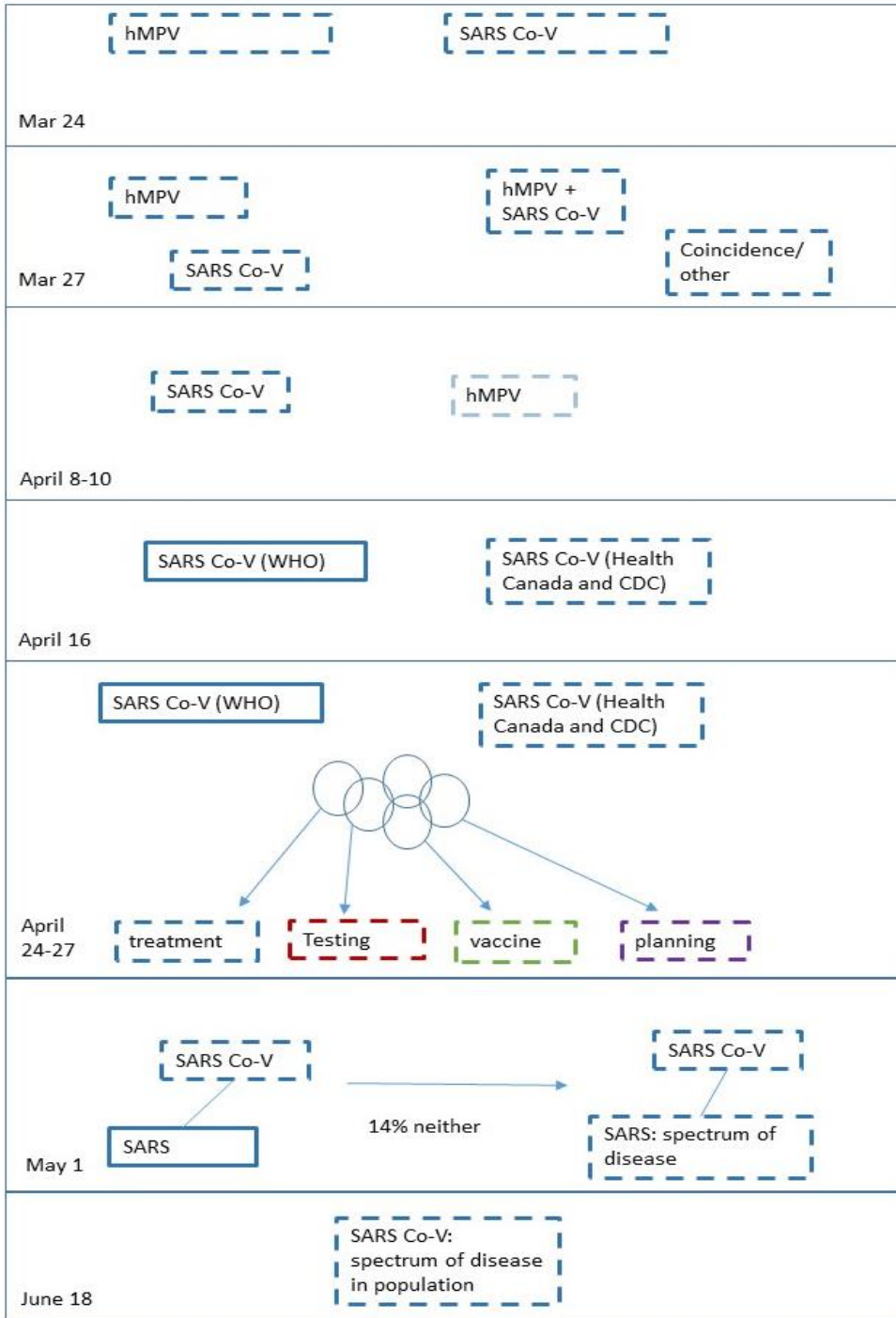
April  
24-27





June 18

SARS Co-V: spectrum  
of disease in  
population



# Evolution of the SARS frame in long duration crisis sensemaking



# Newspapers to Interviews

- Newspaper findings show the evolution of the SARS frame in the three months of crisis response.
- Gained knowledge and experience through cycles of sensemaking
- But does not show the process of sensemaking
- How do the scientist advisors engage in sensemaking and provide guidance in crisis response, when there are so many unknowns and uncertainty?

 Preliminary results

# Interviews

- Participants were serving on a scientific advisory committee, advising the government on the SARS crisis in Toronto.
- Experts in:
  - infection prevention and control
  - infectious disease specialists
  - public health
  - other types of experts consulted as needed

# Coping with the unexpected

... the joint beliefs ‘I have capacity’ and ‘capacity makes a difference’, should reduce defensive perception and allow people to see more. As they see more, there is a greater probability that they will see some place where their intervention can make a difference (Weick, 1988, p. 311).

# Experts coping with the unexpected

## I (we) have capacity

- Plague in Africa
- Treating patients early days of HIV
- Decades of managing outbreaks
- Trained disaster response teams

## Capacity makes a difference

- “No outbreak, no epidemic lasts forever, we’ll get through this.”
- Among experts, there was overwhelming consensus to invest resources to fight spread of outbreak

# Preliminary conclusions

- There is a **difference** between long duration and acute crisis sensemaking. There may be implications for public health crisis response management.
- The joint beliefs '**I have capacity**' and '**capacity makes a difference**' can impact sensemaking.

## References

- Bissell, R., & Kirsch, T. (2013). Pandemic Scenario. In R. Bissell (Ed.), *Preparedness and Response for Catastrophic Disasters*. Boca Raton, FL: CRC Press.
- Braden, C. R., Dowell, S. F., Jernigan, D. B., & Hughes, J. M. (2013). Progress in global surveillance and response capacity 10 years after severe acute respiratory syndrome. *Emerg Infect Dis*, 19(6), 864-869.
- Charmaz, K. (2014). *Constructing Grounded Theory*. 2<sup>nd</sup> Ed. London, UK.: Sage Publications.
- Cornelissen, J. P., Mantere, S., & Vaara, E. (2014). The contraction of meaning: The combined effect of communication, emotions, and materiality on sensemaking in the Stockwell shooting. *Journal of Management Studies*, 51(5), 699-736.
- Cornelissen, J. P., & Werner, M. D. (2014). Putting framing in perspective: A review of framing and frame analysis across the management and organizational literature. *The Academy of Management Annals*, 8(1), 181-235.
- Morens, D. M., Folkers, G. K., & Fauci, A. S. (2004). The challenge of emerging and re-emerging infectious diseases. *Nature*, 430(6996), 242-249.
- Weick, K. E. (1988). Enacted sensemaking in crisis situations. *Journal of Management Studies*, 25(4), 305-317.
- Weick, K. E. (1995). *Sensemaking in Organizations*. London, UK.: Sage Publications.

# Questions?

**Iva Seto**

PhD Candidate

[Iva.seto@vuw.ac.nz](mailto:Iva.seto@vuw.ac.nz)

