Canadian Food Inspection Agency / Agence canadienne d'inspection des aliments

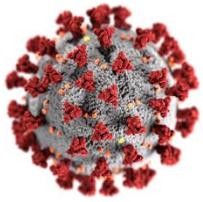# Rapid Qualitative Risk Assessment:
SARS-CoV-2 and Animals

Dr. Sharon Calvin

May 1, 2020

CAHI Webinar

Canada

Emerging Disease

Risk Questions

Short Timeline

High Uncertainty

→ Rapid Qualitative Risk Assessment

- Decisions have to be made, and they have to be made quickly

- Provide some risk-based thinking, while acknowledging there isn't time or data for a full risk assessment

Dealing with Uncertainty

1. Many minds

Collective experience leading to better 'educated guesses'

Emergency Collective Expert Appraisal Group

- Public and animal health departments (F/P/T), veterinary associations, academia
- Agree on risk question(s) and discuss state of knowledge
- Collectively estimate qualitative probability and impact
  - Modified Delphi approach: Estimate-Talk-Estimate

Dealing with Uncertainty

2. Clearly state…

Uncertainty, variability and assumptions

- Qualitative estimate can have a range based on variability
  - Describe sources of variability (i.e., risk factors)
- State uncertainty separately: low, moderate, high
  - Describe sources of uncertainty
- List assumptions, including context
  - E.g., current pandemic situation

Dealing with Uncertainty

3. Qualitative

Descriptive terms with narrative

Negligible
Very low
Low
Moderate
High

- Avoid giving the impression that this is more precise than it is

- Consistent with World Organisation for Animal Health (OIE)
  - Handbook on Import Risk Analysis for Animals and Animal Products, volume 1, 2010 edition
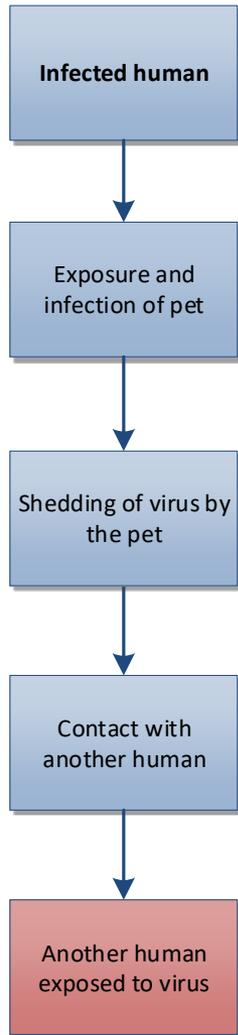
Dealing with Uncertainty

4. Iterative

Ongoing process, not a single final product
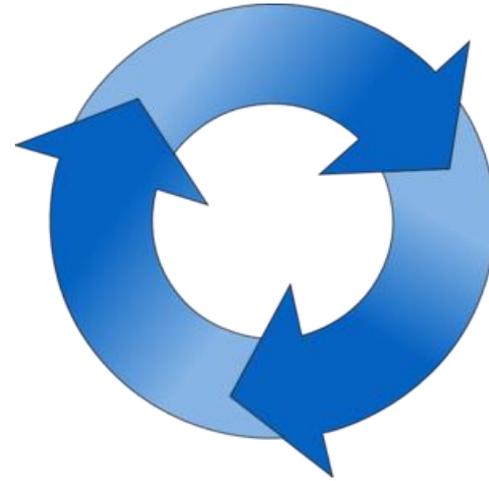
- Recognition that the group is making estimates with little information, *but will keep looking at it*
  - Group meets at least every 2 weeks to review new information and repeat assessment process if required

Scenario Tree

Infected human

↓

Exposure and infection of pet

↓

Shedding of virus by the pet

↓

Contact with another human

↓

Another human exposed to virus

- Avoid unstructured combinations of probabilities
- Probabilities associated with each step
- For example:

It doesn't just matter whether an animal can be infected, but also whether they shed enough and will have enough contact with other people to pass it on

Process
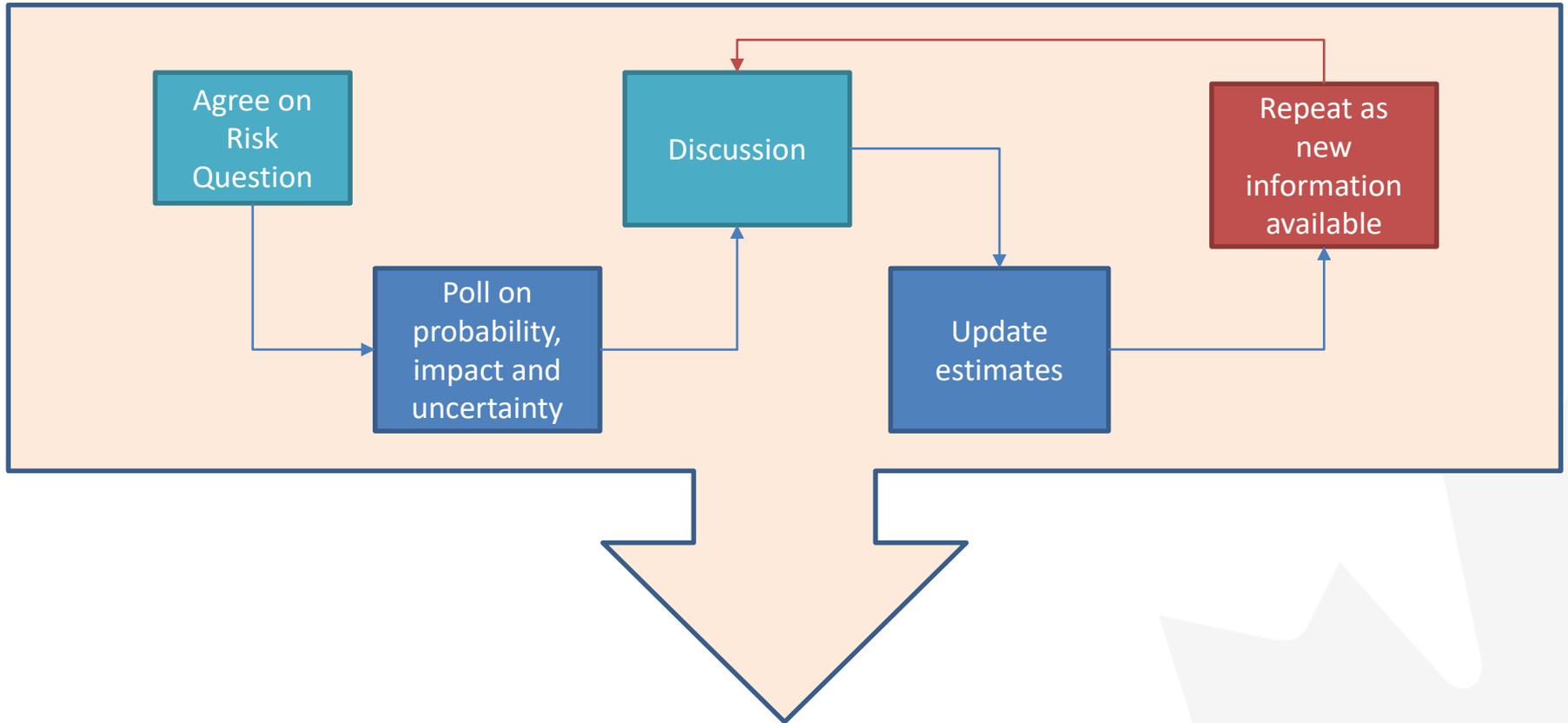
Continuous feed to risk management working groups: e.g., guidance, testing