



To support disease control management

spatial dispersion
spread infection versus disease
comparison suspicion vs lab diagnostics
difference by production systems
species differences
fmd virus isolation
functioning of passive surveillance
losses incurred
age-category differences
stakeholder consultation
role of value chains
morbidity

What can outbreak investigation tell us more about FMD?

competency of veterinary staff
incidence
risk factors
risk factors for clinical fmd
vaccine effectiveness
cost-benefit of interventions
impact assessment

<https://answergarden.ch/441304>



To support disease control management

Is it really FMD?

- How good is your passive surveillance?
- How competent is sampling, submission, reporting?

What are routes and risks for introduction and onwards spread?

Support local community to reduce direct impact and future incursions?

What is the socio-economic impact on livestock and livelihoods?

What can outbreak investigation tell us more about FMD?

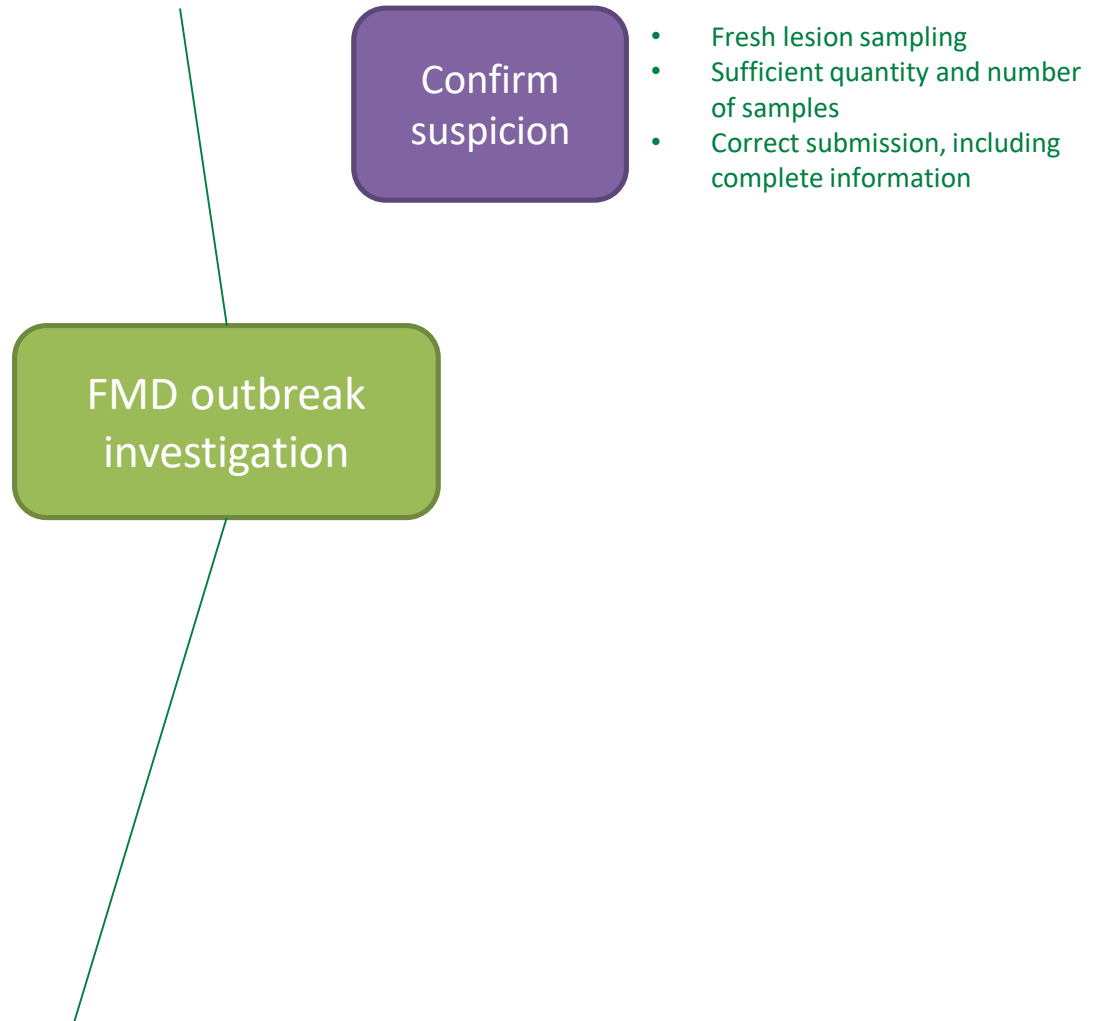
- What proportion of households is affected? What is the morbidity and mortality?
 - What are the losses incurred?
- What is the benefit-cost of FMD control measures?

Test the assumptions

- What was the vaccine effectiveness?
- How to investigate suspected vaccine failure?
 - What are risks for clinical FMD?

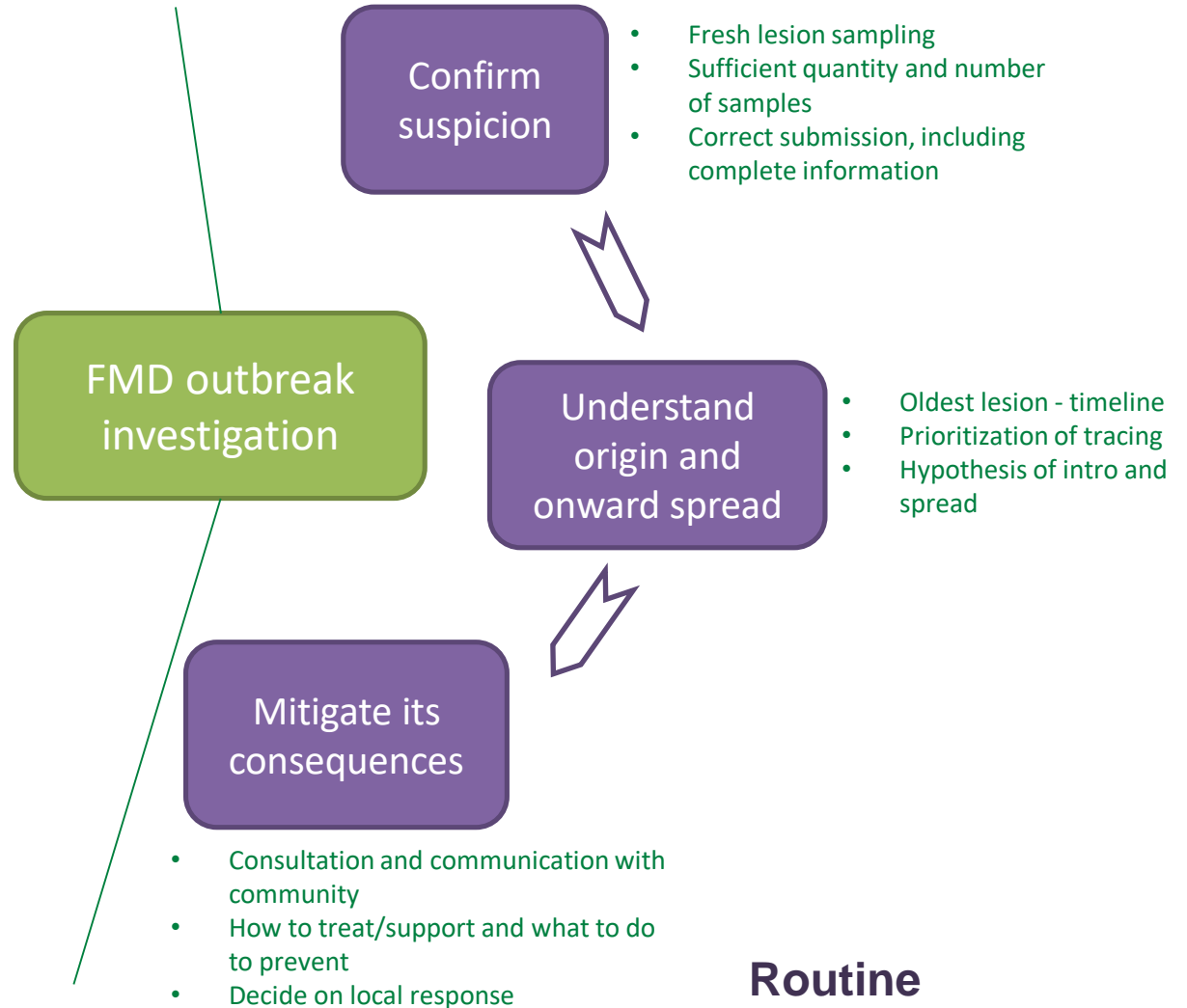


A handful of outbreak investigation approaches



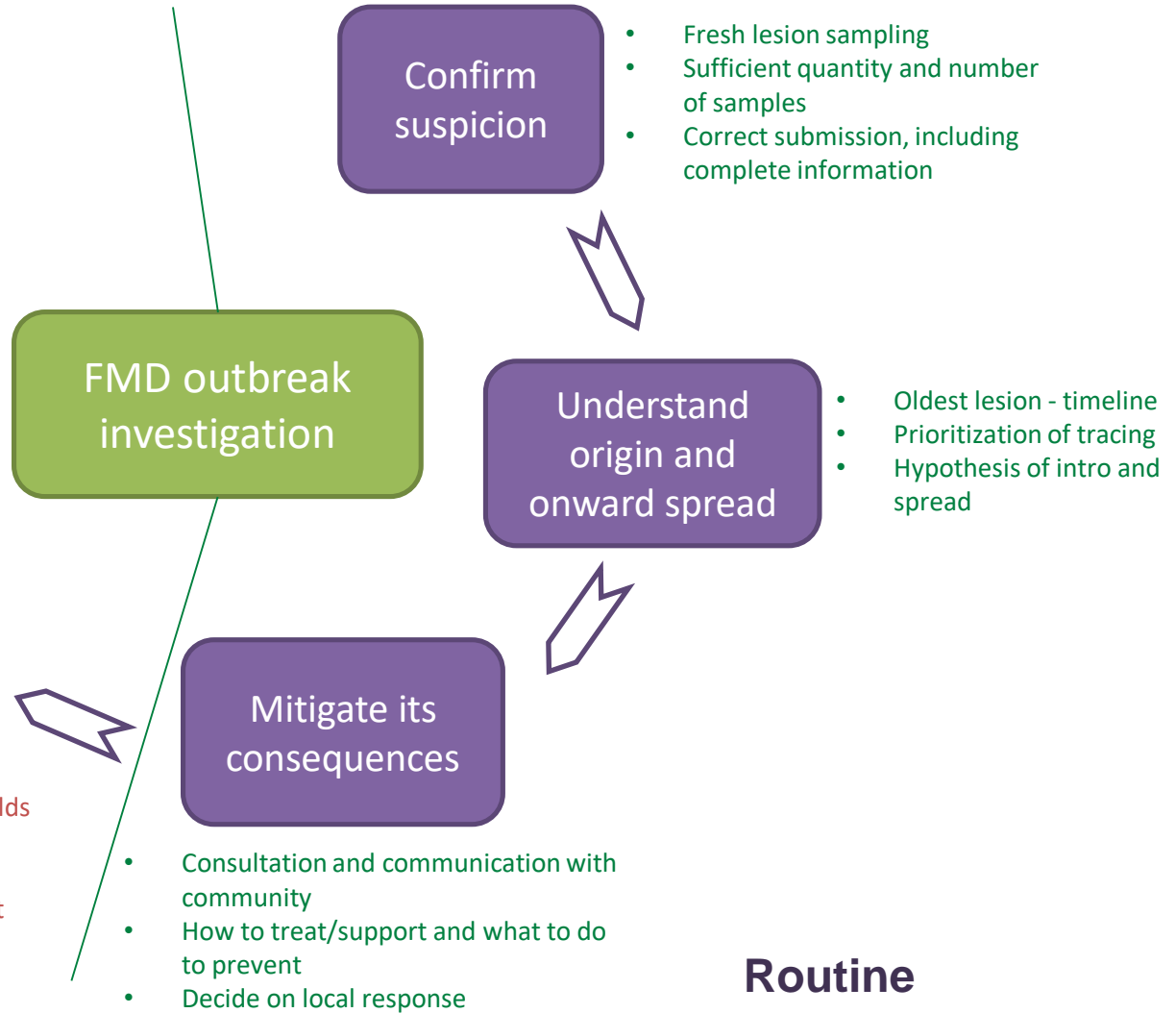


A handful of outbreak investigation approaches





A handful of outbreak investigation approaches





A handful of outbreak investigation approaches

- Vaccine effectiveness
- Risk-factors for FMD
- Impact of local response

Evaluate assumptions

Confirm suspicion

- Fresh lesion sampling
- Sufficient quantity and number of samples
- Correct submission, including complete information

FMD outbreak investigation

Understand origin and onward spread

- Oldest lesion - timeline
- Prioritization of tracing
- Hypothesis of intro and spread

Assess its impact

- Proportion of households affected
- Morbidity, mortality
- Socio-economic impact

Mitigate its consequences

- Consultation and communication with community
- How to treat/support and what to do to prevent
- Decide on local response

Advanced

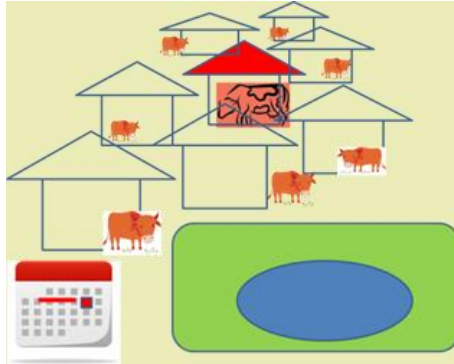
Routine



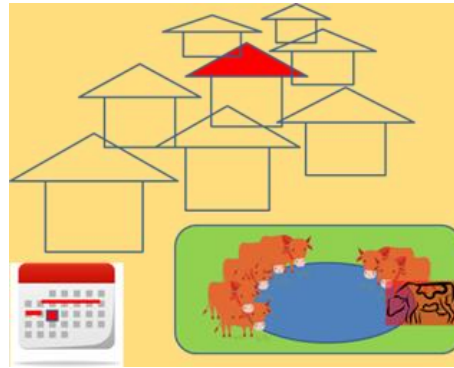
Spatial and time considerations

for how long has outbreak been going on and how wide is outbreak dispersed?

Introduction



Exposure



Spread





Definitions



Case	refers to an animal with clinical FMD
Outbreak	refers to an epi-unit with clinical FMD
Epi-unit	the smallest collection of animals that may be considered as one group with regard to their risk for FMD infection. This may be a herd (of dairy cattle), a village (of smallholders with some cattle, sheep and goats) or a extended nomadic group (of herders migrating across the country)
Epi-curve	the compilation of the number of outbreaks per unit of time (day, week), occurring over an extended period of time (weeks, months).
Epidemic	the collation of the FMD outbreaks that are related in time, geography and assumed routes of transmission