The Online R-FETPV 1st Module : Basic Epidemiology and Surveillance Data Analysis

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USAID FROM THE AMERICAN PEOPLE

Department of Livestock Development

Food and Agriculture Organization of the United Nations

R-FETPV Regional Field Epidemiology Training Program for Veterinarian

Part 2 of 4: Goals and foundation of a disease outbreak investigation for animal disease

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Part 2: Content/Outline

Step of outbreak investigation

1. Preparing for a field outbreak investigation
2. Verifying that you actually have a problem (Confirm outbreak and diagnosis)

Part 1

3. Define case and start case-finding
4. Descriptive data collection and analysis
5. Develop hypotheses
6. Analytical studies to test hypotheses

Part 3

7. Special studies, e.g., environmental and laboratory studies
8. Communicate conclusions and recommend control measures
9. Implement control measures
10. Follow-up the control implementations

Part 4

3. Define a “case” and start case-finding

What should we call a case?

Case definition

- ✓ Textbook
- ✓ Expert

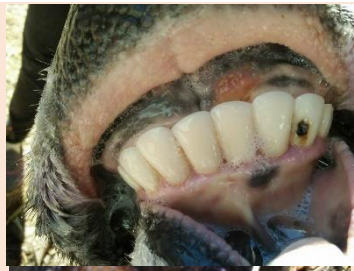
- **Animal**
- **Place**
- **Time (based on incubation period)**
- **Diagnostic criteria (Clinical/Lab)**

Unit of interest for case definition

- **Individual animal**: cattle, buffalo, dog, cat, chicken
- **Subgroup population**:
  - *Farm/herd/flock*: poultry, duck, buffalo, beef, goat
  - *Village*: village, subdistrict

Example; FMD outbreak investigation

- **Case:** A household, in Village A, with at least one cattle or buffalo developed one of these following signs/symptoms during 1 Jan 2017- 2 Feb 2017
  - ✓ Salivation, mouth ulcer, hoof wound, lameness, stiffness, sudden death of a calf



Unit of interest
Place
Animal
Time

4. Descriptive data collection and analysis

- **Data** (Determinants, Time, Place, Animal, Potential factors,…)
- **Sources of data?** *Primary data vs Secondary data*
- **How can we get the data?**
- **Active case finding** → Start case-finding systematically & record observation



Prevent introduce/spread agents?

Prevent introduce/spread agents?

Ideal → good restraint

Real situation → be professional and be careful



PPE

Bias?

Cases VS. non cases seeking

Analytic study

Factor

VS

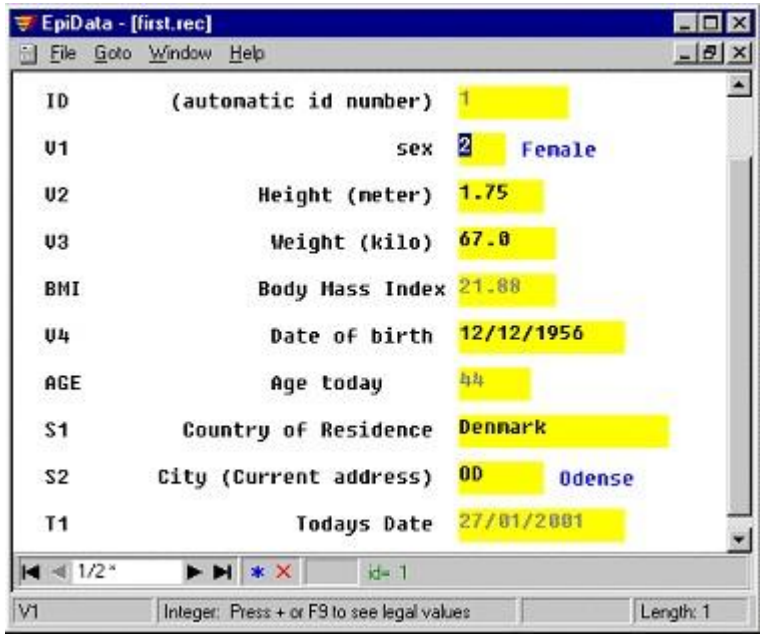
Disease

Descriptive data analysis

- Entry data → Line listing

Farm ID	Owner name	Animal ID	District	Species	Sex	Age (y)	Date onset	Symptom	...
1	A	Dang	Banna	Cattle	M	2	19/7/15	Anorexia	
2	B	Dam	Prupee	Cattle	F	1	23/7/15	Lameness	
3	C	Khao	Kuanna	buffalo	F	5	2/8/15	Salivation	

Back up your work



EpiData

- Small number of cases → rabies
- No comparative group
- Representative
- Time limitation
- The location (Soo far/So difficult to reach)
- Conceal information
- …

To be continue.....
Part 3 of goals and foundation of a disease outbreak investigation for animal disease