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

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Basic descriptive and analytic statistics for disease outbreak event

CLIP#1

Sith Premashthira



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Describing epidemiologic data in outbreak event by basic statistics

How epidemiologists work?

1. Counting:

Counts cases or health events, and describes them in terms of time, place, and person

2. Dividing:

Divides the number of cases by an appropriate denominator to calculate “rates*”

3. Comparing:

Compares these “rates*” over time or for different groups of people

Descriptive
Epidemiology

Analytic
Epidemiology

*Rate, in this case, simply means division of one number by another

P. Thammawijaya

What is “Epidemiology”?

“The study of the **distribution** and determinants of **health-related states or events** in specified populations and the application of this study to control of health problems”

**Description of
states or events**

Descriptive epidemiology, answers the following questions

- What?
- When?
- Where?
- Who or (among) Whom?
- How much?

Basic questions

- What is the health problem? → Disease
- Who are risk populations? → Person
- When did the problem occur? → Time
- What is the future situation? → Trend
- Where is the problem area? → Place
- Why/How did it occur? → Cause/Factor

Descriptive study

- Describes the occurrence of a disease in a population by time, place, and person
- Often be the first step in an epidemiological investigation