

Global Health Assessment Strategies

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Objectives

- General strategies for data collection in developing countries
- General guidelines for qualitative and quantitative assessment in developing countries
- General guidelines for carrying out surveys
- General guidelines for assessment and evaluation of global health interventions in developing countries

*Health Assessment of District

- District is the is the most peripheral unit of a government administrative system
- Therefore, it has comprehensive powers and responsibilities
- Population between 100,000 and 300,000 inhabitants
- Covers an area of 5,000 to 50,000 square kilometers
- *As used by World Health Organization (WHO)

- Usually there is a capital of the District and the Health Services Headquarters are located in this town or small city
- Other government offices also function in the District capital such as: agriculture, education, social-welfare, community development

- The District is the natural meeting point of the bottom-up community planning and organization and the top-down
- The District is the key element in Primary Health Care (PHC)
- Structures of a Health District: Hospital, Health Centre, Health Sub-centre, Health Posts

- Personnel: Physicians, nurses, health auxiliary, health worker, environmental health technician

District health management team

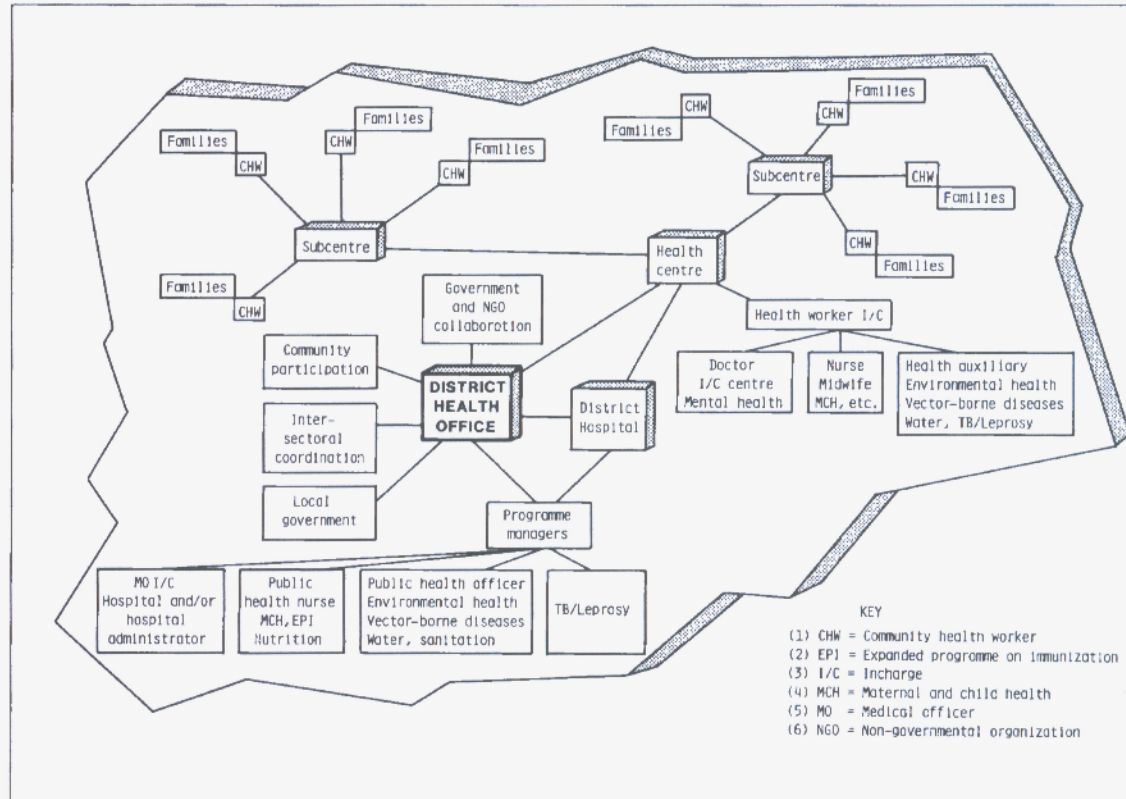
The central team that manage the Health District usually includes:

- District health officer (usually a physician)
- Public health nurse
- Health Administrator
- Nutritionist
- Environmental health officer

District health system

- District hospital
- District health centre (clinics with four basic specialties: internal medicine, surgery, pediatrics, and OB/GYN)
- District health sub-centers (general and preventive medicine)
- Health Posts (Community health worker)

Figure 1.1. The central role of the district health office within the district health system



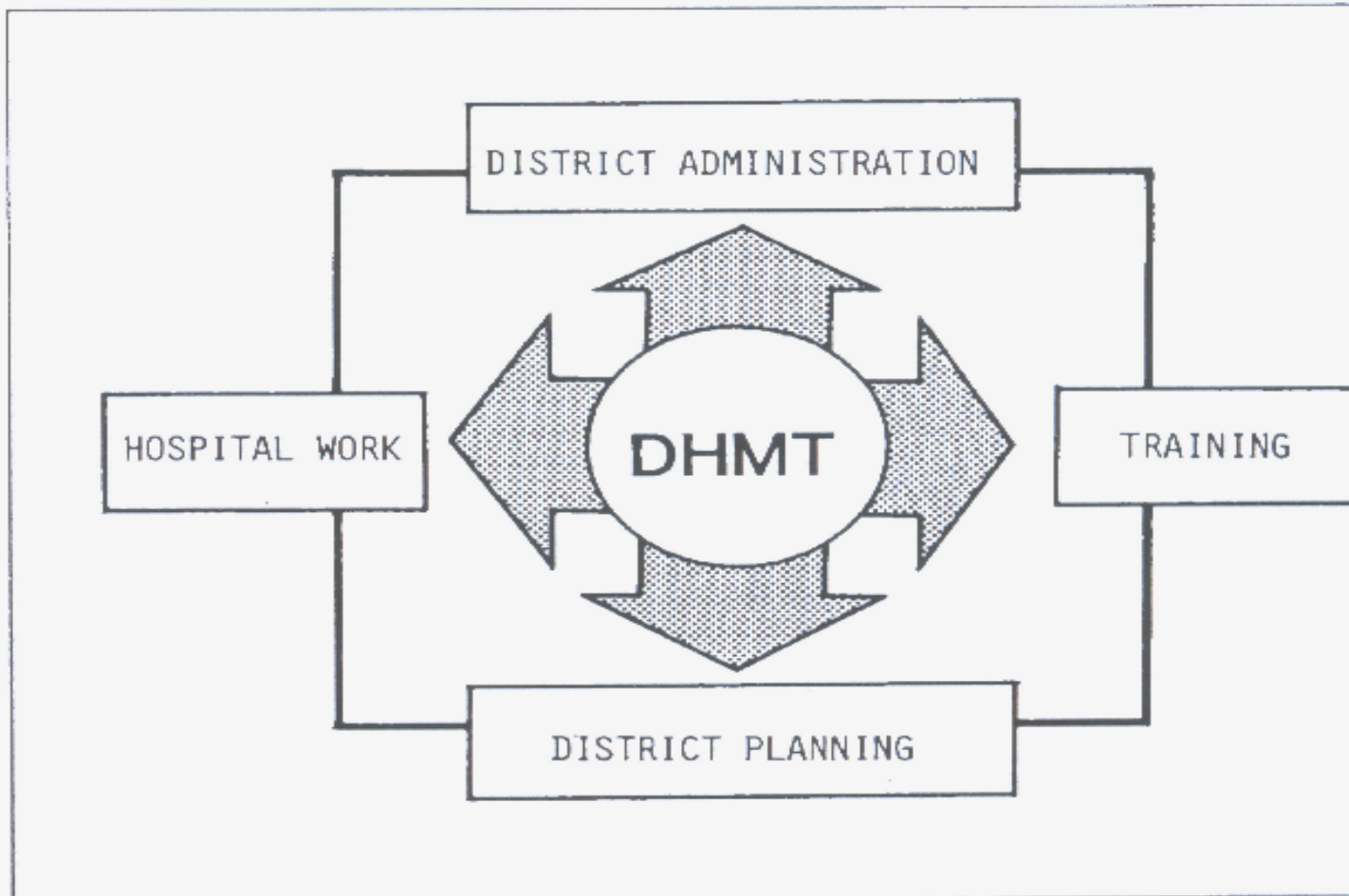
Functions of the District Health Management Team

- District health planning
- Coordination with other institutions
- Administration and management of all district health programs
- Training and supervision
- Administration and management of all district health services

Responsibilities of the DHMT

- Primary Health Care planning
- Health Promotion and Prevention
- Curative health services

Figure 1.2. The main responsibilities of the district health management t



General information

- District history
- Geography
- Climate
- Community organization
- Economy
- Main productive activities
- Local government

Sources of health information

- Census
- Health services statistics
- Health surveillance system

Census

Examples of available data:

- District population
- Geographical distribution
- Migration patterns
- Age and gender
- Number of households
- Ethnic distribution
- Occupation

Health Services Statistics

Examples of available data:

- Incidence of diarrheal diseases
- Number of deliveries attended by trained health workers in a year
- Number of children that received a third dose of DTP
- Number of undernourished children <5 years old
- Incidence and prevalence of communicable diseases like tuberculosis, HIV/AIDS, malaria, etc

Health Surveillance System

Examples of available data:

- Morbidity and Mortality
- Birth Rate
- Fertility Rate
- Infant Mortality Rate
- Child Mortality Rate
- Maternal Mortality Rate
- Access to safe water, sanitation, etc

Institutions that provide health services

- Governmental and Nongovernmental health services
- Educational Institutions
- Faith based organizations

These institutions may implement health interventions that require an assessment

Examples of health services to be assessed

- Pregnancy: antenatal, delivery and postnatal care
- Nutrition: growth, nutritional status
- Immune preventable diseases: immunization program
- Environmental health: water, sanitation, and hygiene
- Communicable diseases control

Type of District Diagnosis

	Clinical Medicine	Public Health Assessment
Objective	Cure patient	Improve public health status
Sources of information	<ul style="list-style-type: none"> • Clinical history • Physical examination • Laboratory tests 	<ul style="list-style-type: none"> • Key informant interviews • Records • Surveys
Diagnosis	Disease diagnosis	Community diagnosis
Action Plan	Treatment	Disease control
Evaluation	Follow-up visit	Evaluation of impacts

Tasks for a district health assessment (Manual of Epidemiology for DHM)

1. District population
2. Define population groups
3. Health and disease assessment
4. Data collection
5. Data processing
6. Assessment of District Health Status

(continued)

7. Define Priorities
8. Select interventions
9. Program implementation
10. Increase access and coverage
11. Evaluation
12. Health Impact

EXAMPLES OF EPIDEMIOLOGICAL ASSESSMENTS

Key questions for a descriptive epidemiology assessment

- WHAT is the health problem or disease?
- WHO is affected (age, sex, social class, ethnic group, socio-economic status, occupation, habits)
- WHERE does it occur (geographic distribution and place)
- WHEN (days, weeks, months, years, seasons)

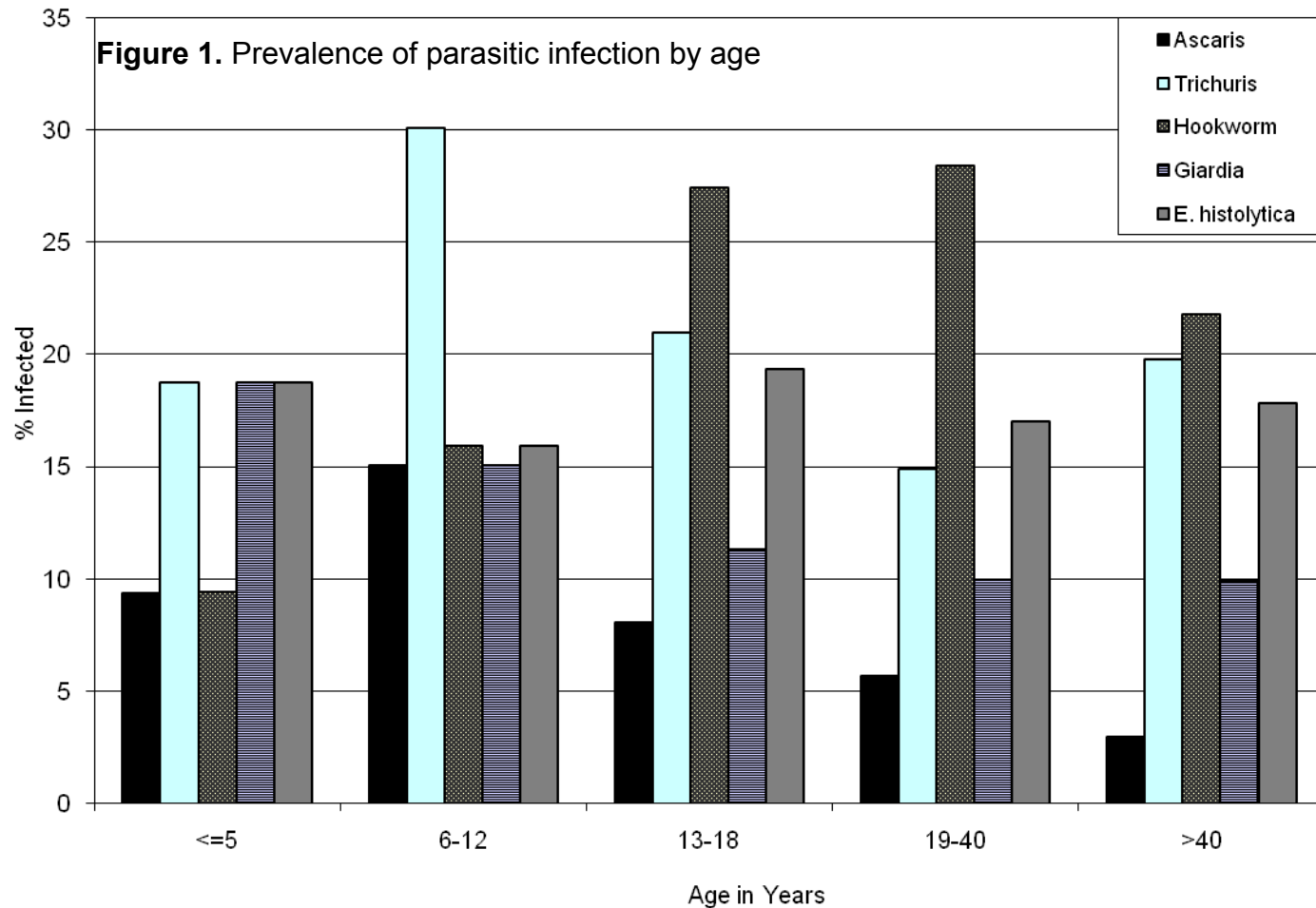
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- HOW does the health problem or disease occur (Association with risk or protective factors)?
- WHY does it occur? (Is it associated with environmental factors?)

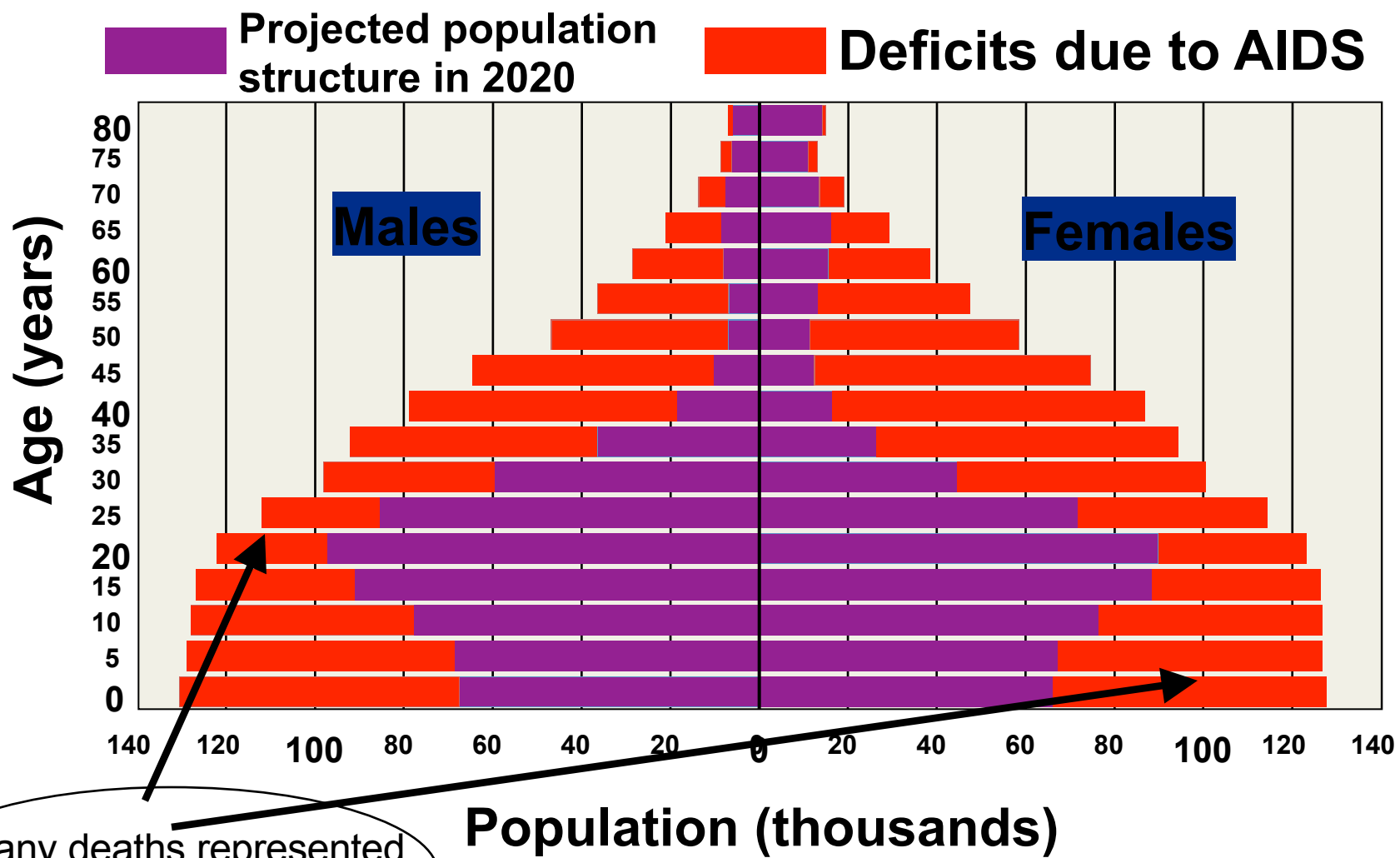
Who?

- Age
- Gender
- Level of education
- Occupation
- Income
- Culture and religion
- Access to safe water and sanitation
- Nutritional and immune status

Age distribution of intestinal parasites in Rural Communities of El Salvador



Projected population structure with and without the AIDS epidemic, Botswana, 2020



Many deaths represented in red are due to TB

UNAIDS. Report on the global HIV/AIDS epidemic. June 2000; Source: US Census Bureau, World Population Profile 2000

Where?

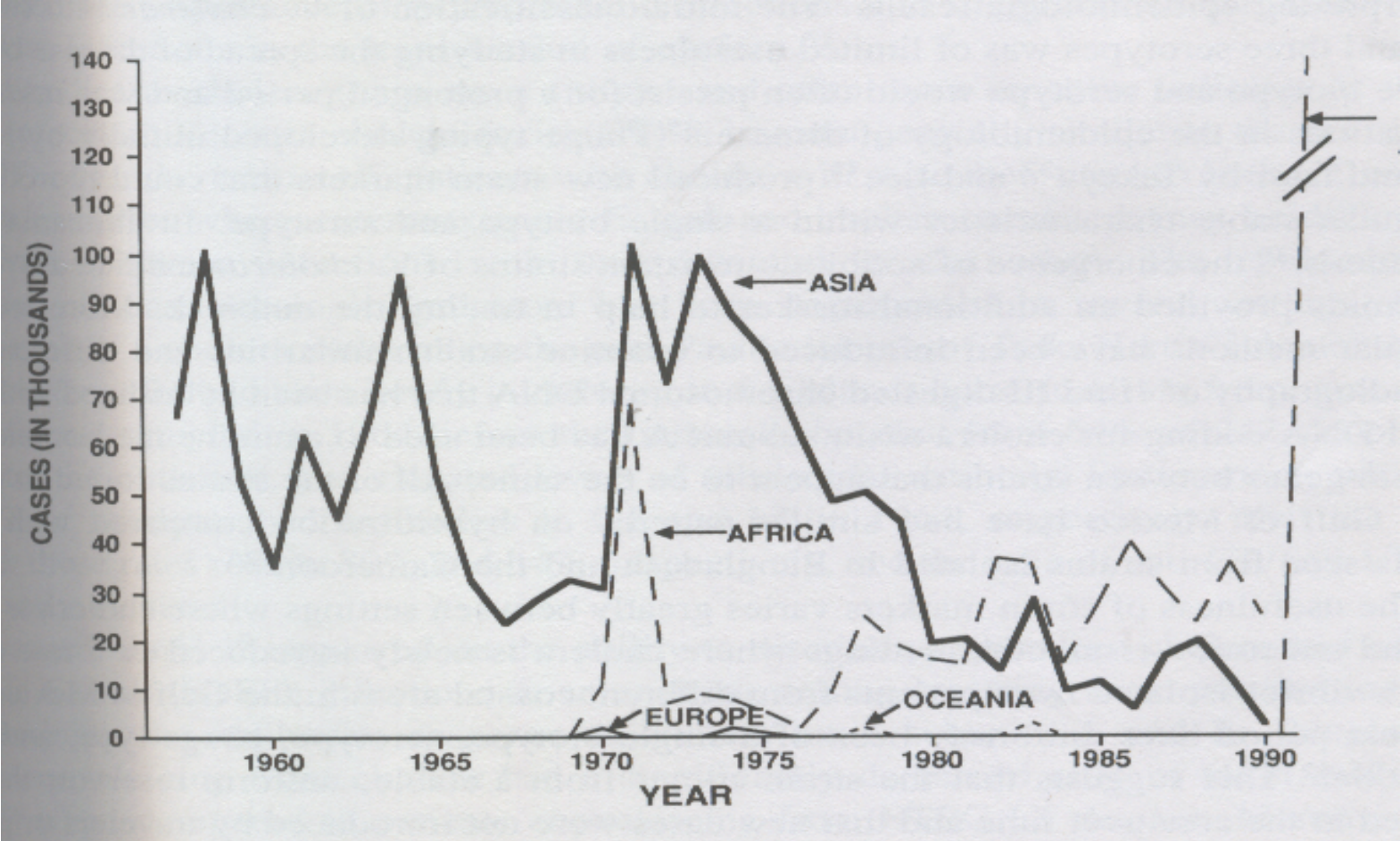
- Town or village
- Ecology (rainforest, rivers)
- Altitude
- Distance from health services

When?

New cases per :

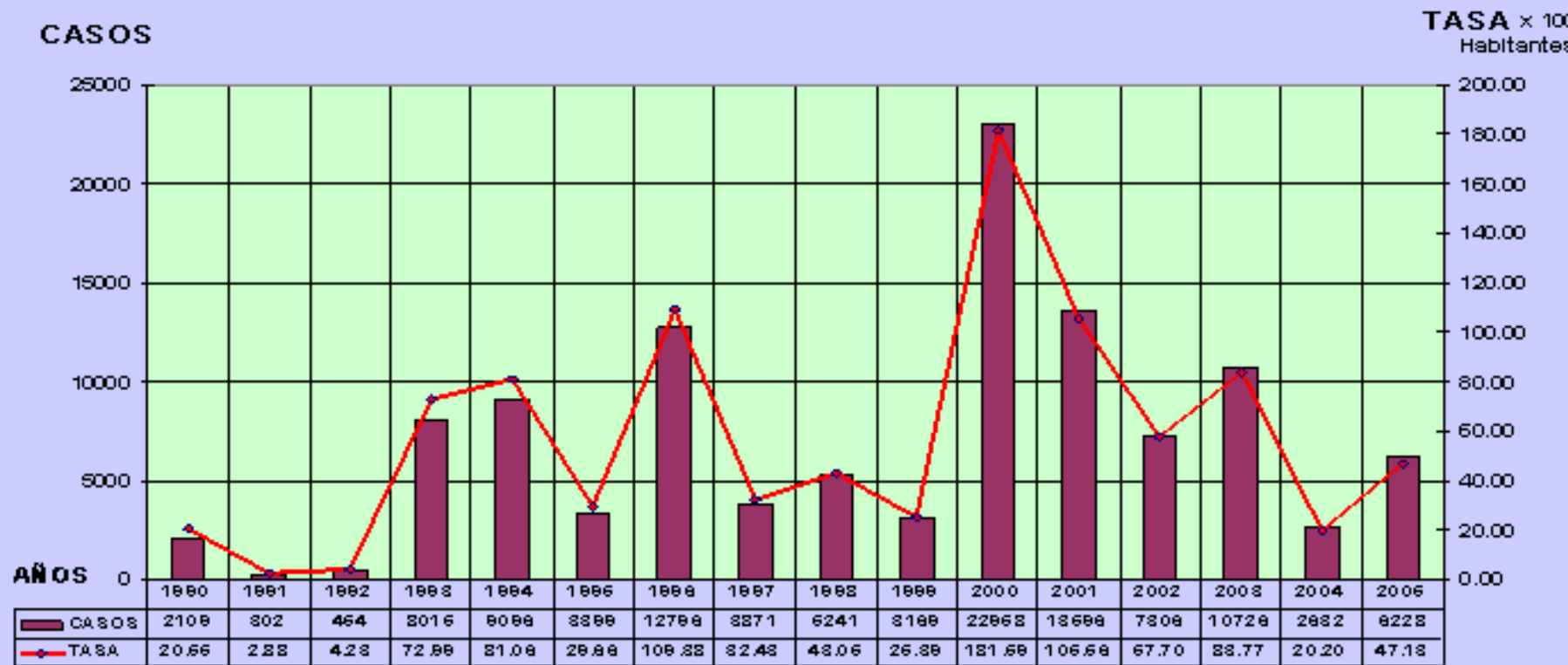
- Day
- Week
- Month
- Year
- Season
- Period (4-5 years El Niño, Monsoon)

Cholera cases in the world 1950-1990



Dengue cases in Ecuador 1990-2005

CASOS Y TASAS DE DENGUE CLASICO ECUADOR 1990 - 2005



FUENTE: EPI-1 AÑO 2004 DATOS CONFIRMADOS REPORTADOS POR 888 SECRETARÍA REGIONAL
COBTA EMBULAR

CASOS TASA

Measuring frequency

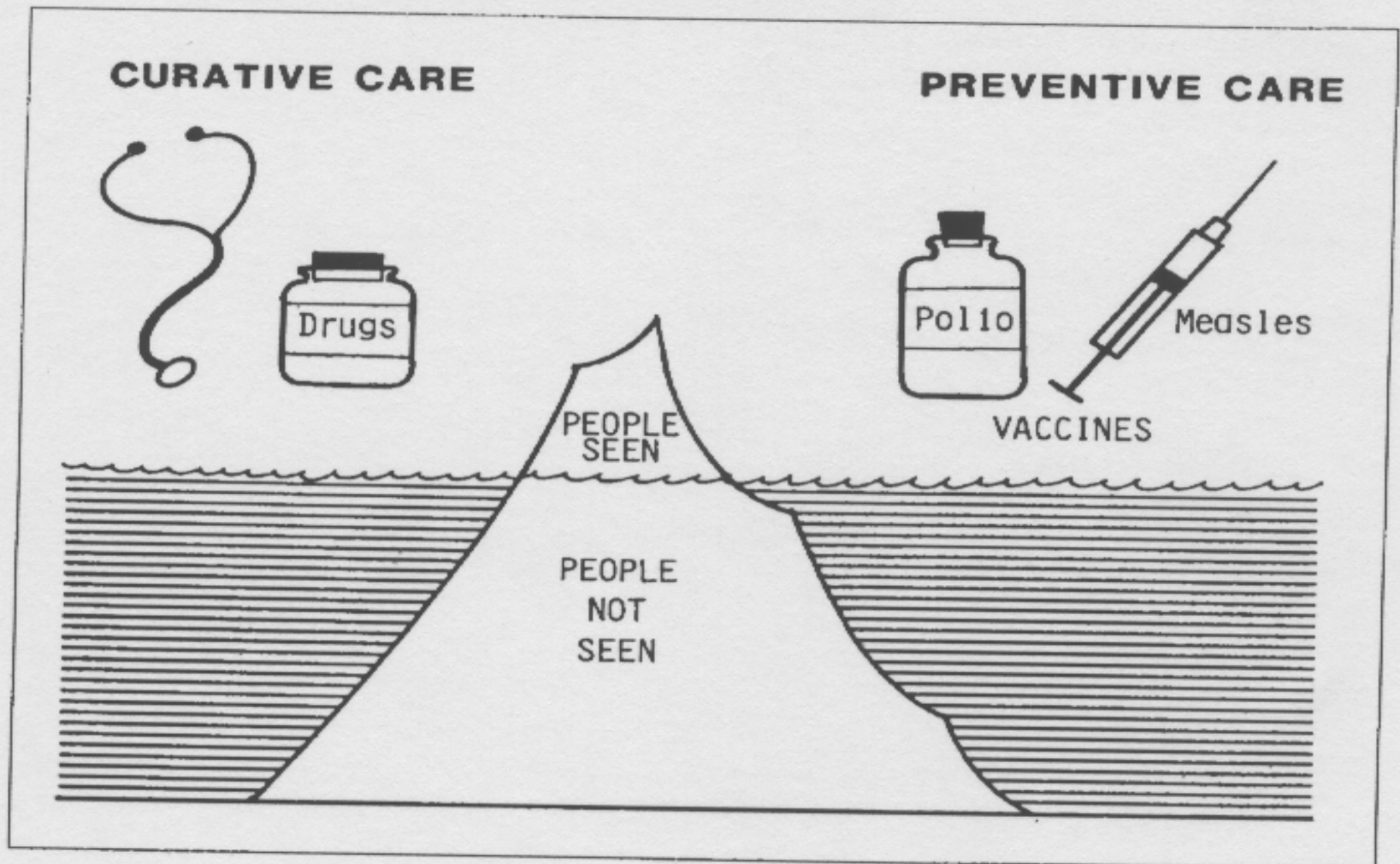
- Incidence
- Prevalence

Under stable conditions:

Prevalence = Incidence x Average duration of the disease

Remember the iceberg phenomenon

Figure 4.1. The iceberg phenomenon—routine information comes mainly from people who attend the health services



Rates

- Incidence rate= new cases in a period/ total population at risk * factor (1000.000)
- Prevalence rate= existing cases at specific point of time/ total population at risk * factor
- Age and sex specific rates
- Note: You do not need to memorize these formulas but understand the concepts

Episodes and Attendances

A person may have several *episodes* of a diseases in one year, e.g.

- Malaria
- Diarrhea (ADD)
- Acute Respiratory Infection (ARI)

A person can be seen by the health service several times in one year in relation to the same episode (*attendances*) e.g.

- Tuberculosis

Case definition

- Possible case: a clinical case that presents symptoms and signs of the disease
- Probable case: clinical case that responded to treatment
- Confirmed case: clinical case confirmed by laboratory tests. During epidemics a confirmed case can be defined as a clinical case which has been in contact with a laboratory confirmed case

Health Indicators

Categories of health data

- Qualitative (Social and Behavioral Sciences)
- Quantitative (Epidemiology)

They are useful for:

- Analysis of present situation
- Make comparisons
- Measure changes over time

Example comparing demographic pyramids

