

Unit II: Components and Processes of Community Health Diagnosis

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Components of Community Health Diagnosis

1. **Topography/ Climatic** condition.
2. **Demography** including all vital events.
3. Causes of **mortality and morbidity**.
4. **Services and resources available** for development.
5. **Health service seeking behaviour** including traditional healers.
6. **KAP** on illness, disease and health related activities.
7. **Uses of health services** including **MCH/FP**.
8. **Communication system** and leadership patterns.

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9. **Environmental health condition:** water, solid waste, housing, vectors etc.
10. **Nutritional status**
11. Mental health and common causes of stress.
12. Detail of **any endemic** condition.
13. **Any health related events in the past**
14. The degree of **involvement of people** in their own health care including the use of traditional healers.
15. The **reasons for failure of health programmes** in the past and the difficulties likely to be encountered.

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i. **Demographic Characteristics**

Demography is the study of the characteristics of populations. It analyses:

- population size
- population composition
- population growth
- population distribution
- population density
- sex structure
- age structure
- all other vital statistics related to the characteristics of a particular population.

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Source of demographic information

- i. Main source:
 - ✓ Census data
- ii. Reliable sources:
 - ✓ Village Health worker's Register
 - ✓ Total household survey by health worker
 - ✓ Primary data by researcher
- iii. Other sources:
 - ✓ Vital registration such as births, deaths, migration, register from Palika
 - ✓ NGO/INGO survey data etc

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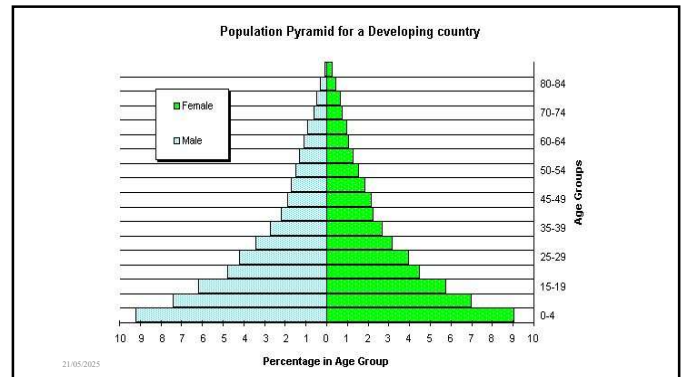
Demographic table and population pyramid

- When we collect demographic information, we need to **construct demographic table** and **population pyramid** which gives visual image of age and sex distribution of the population of your field VDC.

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Statistical measurement

Statistical measurement means calculation of simple indices such as

- Rate
- Ratio
- Proportion and
- central tendency such as:
 - mean, median, mode.

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Socio-economic characteristics

- Socioeconomic status (SES)** is an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position in relation to others, based on income, education, and occupation. When analyzing a family's SES, the household income, earners' education, and occupation are examined.
- Health is greatly affected by socio-economic condition of the people. Therefore this is another crucial component of community diagnosis. Lower socioeconomic status has been linked to chronic Stress, heart disease, ulcers, type 2 diabetes, rheumatoid arthritis, certain types of cancer, and premature aging.

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Environmental health and sanitation

- Many diseases are related to poor environment. Therefore, improvement of environmental health and sanitation is an **essential component** of community diagnosis.
- As environmental health and sanitization are crucial aspect in the community diagnosis, hence following factors are to be studied during community diagnosis process:

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- Drinking water sources
- Housing and light condition
- Cooking method(smoky/non-smoky)
- Refuse (solid/liquid waste) disposal
- Human excreta disposal
- Animal keeping
- Toilets
- Vectors and rodents
- Sanitation condition of public places (school, office, temple etc)

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Knowledge Attitude and Practice (KAP)

- **Knowledge:** is a familiarity with someone or something, which can include **facts, information, description, or skills** acquired through **experience or education**. It can refer to the theoretical or practical understanding of a subject.
- **Attitude:** An attitude is "a relatively enduring organization of beliefs, feelings, and behavioral tendencies towards socially significant objects, groups, events or symbols" (Hogg & Vaughan 2005, p. 150)
- **Practice (Behavior):** Health behavior refers to those activities undertaken by people to avoid disease and to practice good health habits.

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Maternal and child Health

- Maternal and child Health (MCH) refers to the promotive, preventive, curative and rehabilitative health care for mother and children.
- Indicators (IMR, CMR and MMR) related to MCH shows the health conditions in the community. **If the rates of these indicators are high, this denotes the worse health status** and long term impact to the country so this aspect also to be analyzed during the community diagnosis.

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Morbidity and disability

- In community diagnosis morbidity and disability are also **important component because** these describe the health status of the people, measure the incidence and prevalence of the specified diseases.
- **One of the objective** of community diagnosis is **to reduce the morbidity and disability**. Therefore this component also to be considered at the time of community diagnosis.

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Availability of health services and its utilization

- **Easy access** of health service facilities **promote the** frequency of utilization of available health services **that** promote health and prevent and cure diseases.
- Nearer, affordable and reliable health service becomes accessible to the poor people.
- **Health and disease status** of community people is determined by the availability of health services and its utilization. So this has been an important component in the community diagnosis.

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Community recourses

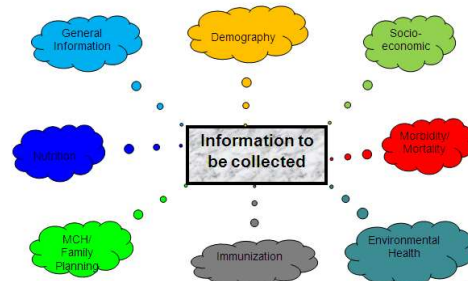
- Health is also affected by geographic condition including different resources available to them. **Available resources at community** geographic coverage like Health Post, School, Water Sources, Jungle, Roads, religious places, Offices, Bank, Post office, Palika Office, river etc can also have some role in community health.
- Thus these factors are also needed to be considered during community diagnosis.
- This can be done with the help of local community people as they are aware of these things in their community and **these can be noted using PRA tools called social and resource map**.

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Information to be collected



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Community health diagnosis and disease surveillance

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Disease surveillance

- The current concept of public health surveillance evolved from public health activities developed to control and prevent disease in the community
- Public health surveillance is the continuous, systematic collection, analysis and interpretation of health-related data needed for the planning, implementation, and evaluation of public health practice.

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• Surveillance can:

- serve as an early warning system for impending public health emergencies;
 - document the impact of an intervention, or track progress towards specified goals; and
 - monitor and clarify the epidemiology of health problems, to allow priorities to be set and to inform public health policy and strategies.
- (Acc. to WHO)

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Active surveillance:

A system of employing staff members to regularly contact health care providers or the population to seek information about health conditions. Active surveillance provides the most accurate and timely information, but it is also expensive.

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Passive surveillance:

A system by which a health jurisdiction receives reports submitted from hospitals, clinics, public health units, or other sources. Passive surveillance is a relatively inexpensive strategy to cover large areas, and it provides critical information for monitoring a community's health. However, because passive surveillance depends on people in different institutions to provide data, data quality and timeliness are difficult to control.

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Utility of Surveillance data

Immediate detection of	Epidemics
	Newly emerging health problems
	Changes in health practices
	Changes in antibiotic resistance
	Changes in distribution of population at risk for Disease
Periodic dissemination for	Estimating magnitude of a health problem, including cost
	Assessing control activities
	Setting research priorities
	Determining risk factors for disease
	Facilitating planning
	Monitoring risk factors
	Monitoring changes in health practices
	Documenting distribution and spread of disease and injury
Stored information for	Describing natural history of diseases
	Facilitating epidemiologic and laboratory research
	Validating use of preliminary data
	Setting research priorities
	Documenting distribution and spread of disease and injury

Source: Adapted from [Thacker and Shoup 1999](#), 65

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Process of community health diagnosis

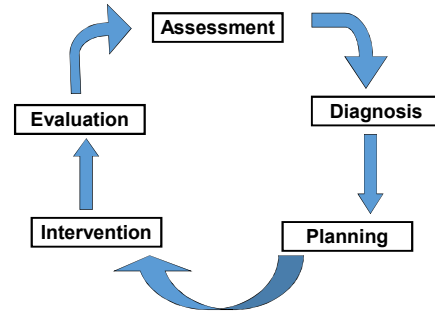
- Community diagnosis is the process of identifying overall health status of entire community.
- The process of community diagnosis involves initial exploration and interaction with community for planning the survey in detail, testing the tools, executing the survey and analysis of the results.
- The final task in community diagnosis process is to provide feedback to community peoples, stakeholders and health service provider for getting support in planning health services and activities (MHP) for the community people.

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Community Health Diagnosis



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Input

- Group Leader
- Group Members
- College supervisor/s
- Community

Process

- Observation
- Interview
- Supervision
- Monitoring

Output

- Micro-health project/s
- Community Health Diagnosis Report

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Process of community diagnosis

1. Exploration and interaction with community
2. Objective formulation
 - General objectives
 - Specific objectives
3. Planning the survey and framing the questionnaire
 - Work plan (Gantt chart)
 - Site finalization
 - Area to be covered under the study site
 - Type of the respondent
4. Training the enumerators (groups visiting to community)
5. Pre – testing the survey tools

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6. Piloting the survey
7. Modification of the survey tools
8. Visiting to the site of community
9. Rapport building with the community peoples, stakeholders and health human resources.
10. Transit walk, social mapping, resource mapping, mobility mapping
11. Community level data collection (Quantitative and qualitative)
12. Data processing analysis and interpretation
13. Community Presentation over the collected data
14. Planning and implementation of the Micro health Project
15. Implementation of school health projects

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16. Final community Presentation
17. Evaluation of the intervention
 - Process evaluation
 - Outcome evaluation
 - Impact evaluation

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Indicators used in community health diagnosis

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Community Diagnosis evolves with the assessment of the following health Indicators

- Mortality
- Morbidity
- Disability rates
- Nutritional status
- Health care delivery
- Utilization rates
- Social and Mental Health
- Environmental
- Socio-economic
- Health policy
- Quality of Life

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Socio-economic Indicators

- **Socio-economic Indicators**
 - Is not a direct measure of health status.
 - For interpretation of health care indicators.
- Rate of population increase
- Per capita GNP
- Level of unemployment
- Literacy rates - females
- Family size
- Housing condition e.g. No. of persons per room

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Mortality Indicators

- **Mortality Rates**
 - The traditional measures of health status.
 - Widely used because of their ready availability. (*death certificate is a legal requirement in many countries*)
- Crude death rates
- Specific death rates: age/disease
- Expectation of life
- Infant mortality rate
- Maternal mortality rate
- Proportionate mortality ratio
- Case Fatality rate

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Morbidity Indicators

- **Morbidity rates**
 - Data on morbidity are preferable, although often difficult to obtain
- Incidence and prevalence
- Notification rates
- Attendance rates: out-patient clinics or health centers.
- Admission and discharge rates
- Hospital stay duration rates

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Integrated Management of Newborn and Childhood Illnesses (IMNCI)

Indicator	Numerator	Denominator	Multiplier
CHILDREN UNDER FIVE YEARS: DIARRHOEA			
Diarrhoea incidence rate among children under five years	Number of children under five years with a new case of diarrhoea	Estimated number of children under five years	1,000
% of children under five years with diarrhoea suffering from dehydration (facility, outreach and community)	Number of children under five years with diarrhoea suffering from dehydration (facility, outreach and community)	Number of children under five years with diarrhoea (facility, outreach and community)	100
% of children under five years with diarrhoea treated with zinc and ORS (facility, outreach and community)	Number of children under five years with diarrhoea treated with ORS and zinc (facility, outreach and community)	Number of children under five years with diarrhoea (facility, outreach and community)	100
% of children under five years with diarrhoea treated with IV fluid	Number of children under five years with diarrhoea treated with IV fluid	Number of children under five years with diarrhoea	100
Diarrhoea mortality rate among children under five years (per 1,000)	Number of deaths due to diarrhoea among children under five years (facility and community)	Estimated number of children under five years	1,000
Diarrhoea case fatality rate among children under five years (per 1,000)	Number of deaths due to diarrhoea among children under five years occurring at health facilities	Number of children under five years with diarrhoea treated at a health facility	1,000

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Malaria Program Indicators

Main Indicators	Numerator and Denominator	
1 Annual Blood Examination Rate (ABER)	Total no of slides examined	x 100
	Total population at risk of malaria	
2 Slide Positivity Rate (SPR)	Total no of positive slides	x 100
	Total slides examined	
3 Annual Parasite Incidence (API)	Total no of confirmed malaria cases	x 1000
	Population at risk of malaria	
4 Proportion of <i>P. falciparum</i> (PF percent)	Total PF cases	x 100
	Total confirmed positive cases	
5 Clinical Malaria Incidence (CMI)	Total no of clinical malaria cases	x 100
	Total population at risk of malaria	

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Disability Indicators

Disability rates

- No. of days of restricted activity
- Bed disability days
- Work/School loss days within a specified period.
- *Expectation of life free of disability*

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Nutritional Indicators

Nutritional Status Indicators

- Anthropometrics measurements (Stunting, Wasting and Under weight)
- Height of children at school entry
- Prevalence of low birth weight
- Clinical surveys: Anemia, Night blindness

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Nutrition Indicators

Indicator	Numerator	Denominator	Multiplier
GROWTH MONITORING			
% of children aged 0-11 months new registered for growth monitoring	Number of children aged 0-11 months new registered for growth monitoring	Estimated number of children aged 0-11 months	100
% of children aged 12-23 months new registered for growth monitoring	Number of children aged 12-23 months new registered for growth monitoring who never registered for growth monitoring in 0-11 months	Estimated number of children aged 12-23 months	100
Average number of visits among children aged 0-23 months registered for growth monitoring	Total number of visits among children completed 23 months and registered for growth monitoring in 0-23 months	Number of children completed 23 months and who were registered for GM in 0-23 months	
% of children aged 0-23 months registered and visited for growth monitoring who were underweight (new-old)	Number of children aged 0-23 months registered and visited for growth monitoring who were underweight	Number of children aged 0-23 months registered and visited for growth monitoring	100

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Health Care Delivery Indicators

Health Care Delivery Indicators

- Doctor / Population ratio
- Doctor / Nurse ratio
- Population / Bed ratio
- Population / per health center

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Utilization Indicators

Health care utilization Rates

- Extent of use of health services
- Proportion of people in need of service who actually receive it in a given period
- Proportion of infants who are fully immunized in the 1st year of life. i.e. Immunization coverage.
- Proportion of pregnant women who receive ANC.
- Hospital-Beds occupancy rate.
- Hospital-Beds turn-over ratio

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Immunization Indicators

Indicator	Numerator	Denominator	Multiplier
CHILDREN			
% of children under one year immunized with BCG	Number of children under one year immunized with BCG	Number of children under one year	100
% of <1-year children immunized with Rota vaccine 1	# of <1-year children immunized with Rota vaccine 1	Number of children under one year	100
% of <1-year children immunized with Rota vaccine 2	# of <1-year children immunized with Rota vaccine 2	Number of children under one year	100
% of children under one year immunized with OPV 1	Number of children under one year immunized with OPV 1	Number of children under one year	100
% of children under one year immunized with OPV 3	Number of children under one year immunized with OPV 3	Number of children under one year	100
% of children under one year immunized with fIPV 1	Number of children under one year immunized with fIPV 1	Number of children under one year	100

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Social/Mental Health Indicators

Indicators of Social and Mental Health

- Suicide & Homicide rates
- Road traffic accidents
- Alcohol and drug abuse.

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Environmental Indicators

- **Environmental health Indicators**
 - Reflect the quality of environment
- Measures of Pollution
- The proportion of people having access to safe water and sanitation facilities
- Vectors density

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Health Policy Indicators

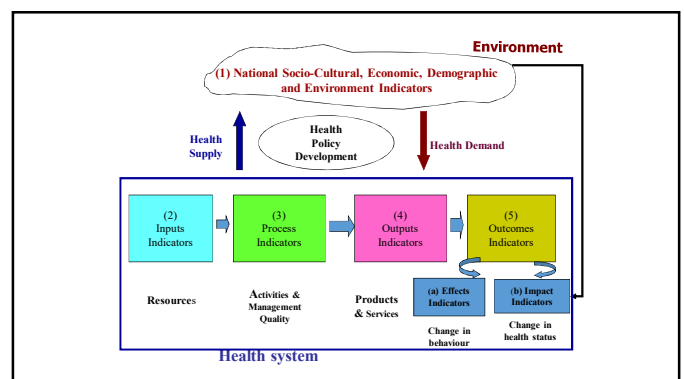
- **Health Policy Indicators**
 - Allocation of adequate resources.
 - Proportion of GNP spent on health services.
 - Proportion of GNP spent on health related activities.
 - Proportion of total health resources devoted to primary health care

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Other Indicators

- Indicators of quality of life.
- Basic needs indicators.
- Health for all indicators.

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Characteristics of Indicators

- a. should be **valid**, i.e., they should actually measure what they are supposed to measure;
- b. should be **reliable** and objective, i.e., the answers should be the same if measured by different people in similar circumstances;
- c. should be **sensitive**, i.e., they should be sensitive to changes in the situation concerned,
- d. should be **specific**, i.e., they should reflect changes only in the situation concerned,
- e. should be **feasible**, i.e., they should have the ability to obtain data needed, and;
- f. should be **relevant**, i.e., they should contribute to the understanding of the phenomenon of interest.

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