"CONCEPT OF HEALTH AND HEALTH INDICATORS"

🌱

CONCEPT OF HEALTH

Health is not static; its meaning has evolved over time with advances in medicine, sociology, and public health.

CHANGING CONCEPTS OF HEALTH 🔄

1. Biomedical Concept 🧬

- Health is defined as absence of disease or infirmity
- If a person is free from any diagnosable disease → considered healthy

Limitations:

- Ignores mental, social, and environmental factors

- Focuses only on treatment, not prevention or promotion

📌 *This was the earliest and most narrow concept of health.*

---

2. Ecological Concept 🌍

- Health is a dynamic equilibrium between:
  - Man
  - Environment

Disease occurs when → There is maladjustment between human beings and their environment

Key idea:

- Emphasizes environmental sanitation, vector control, and lifestyle

📌 *Bridges the gap between medicine and public health.*

---

3. Psychosocial Concept 🧠👥

- Health is influenced by:
  - Social factors
  - Psychological factors
  - Cultural factors
  - Economic factors
  - Political factors

Core principle:

→ Disease is not only biological but also socially determined

📌 *Foundation of social medicine & community health.*

---

4. Holistic Concept 🌐 (Most Accepted)

- Health is a synthesis of all previous concepts
- Considers the whole person, not just disease

Includes:

→ Physical

→ Mental

→ Social

→ Emotional

→ Spiritual

→ Vocational aspects

📌 *This concept aligns closely with WHO's definition of health.*

DEFINITION OF HEALTH (WHO) 🏛️

> *Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.*

DIMENSIONS OF HEALTH (MULTIDIMENSIONAL) 📊

Health is multidimensional, meaning multiple inter-related dimensions together define health.

---

1. Physical Dimension 💪

- Optimal functioning of:
  - Every cell
  - Every organ
- All body systems work in perfect harmony

📌 *Most visible and measurable dimension.*

---

2. Mental Dimension 🧠 (Knowing)

Achieved when a person:

- Is free from internal conflicts
- Is well adjusted to life situations
- Has:
  - Self-esteem
  - Self-control
  - Self-actualization

Mental health flowchart:

Mental balance → Emotional stability → Rational thinking → Intelligent problem solving

---

3. Social Dimension 👥

- Ability to:
  - Live in harmony within society
  - Maintain meaningful interpersonal relationships

Includes:

→ Integration within the individual

→ Integration between individual & society

---

4. Spiritual Dimension ✨

- Concerned with:
  - Integrity
  - Ethics
  - Principles
  - Purpose and meaning of life

5. Emotional Dimension ❤️ (Feelings)

- Ability to:
  - Recognize emotions
  - Express emotions appropriately
  - Manage stress effectively

---

6. Vocational Dimension 🎯

- Satisfaction from work
- Achievement of personal and professional goals
- Leads to:
  → Self-realization
  → Enhanced self-esteem

HEALTH INDICATORS 📈

DEFINITION OF INDICATORS (WHO) 📝

According to WHO guidelines for health programme evaluation:

> *Indicators are variables which help to measure changes.*

DEFINITION OF HEALTH INDICATORS 📊

Health indicators are quantitative or qualitative variables used to assess the health status of a community, compare populations, and evaluate health services.

HEALTH INDICATORS – USES & IMPORTANCE 🧩

Health indicators are used to:

→ Measure health status of a community
→ Compare health status between countries
→ Assess health care needs
→ Allocate scarce resources rationally
→ Monitor & evaluate health services and programmes

→ Measure achievement of programme objectives and targets

CHARACTERISTICS OF A GOOD HEALTH INDICATOR ✅

(V-R-S-S-R-F)

An ideal indicator should be:

1. Valid 🎯

- Measures what it is supposed to measure

---

2. Reliable 🔁

- Gives the same result:
  - When measured by different observers
  - In different places
  - Under similar conditions

---

3. Sensitive 🔍

- Able to detect small changes in health status

Example:

Infant Mortality Rate (IMR) → Highly sensitive indicator of health status

---

4. Specific 🎯

- Reflects changes only in the situation concerned

Example:

Primary school enrollment → Specific indicator of literacy

---

5. Feasible 🧾

- Data can be:
  - Easily obtained
  - Collected when required

---

6. Relevant 📌

- Contributes meaningfully to understanding the health problem

---

USES OF HEALTH INDICATORS 🛠️

Health indicators:

1. Reflect changes in health profile over time
2. Identify backward and priority areas
3. Permit national and international comparison
4. Allow evaluation of health services & interventions
5. Help diagnose community needs and perceptions
6. Assist programme planners & health administrators
7. Enable future projections and planning

TYPES OF HEALTH INDICATORS 🧩

Health indicators are broadly classified into the following categories:

→ Mortality Indicators
→ Morbidity Indicators
→ Disability Indicators
→ Nutritional Status Indicators
→ Health Care Delivery Indicators
→ Health Utilization Indicators
→ Social & Mental Health Indicators
→ Environmental Indicators
→ Socio-economic Indicators
→ Health Policy Indicators
→ Quality of Life Indicators
→ Social Indicators
→ Basic Need Indicators

---

1. MORTALITY INDICATORS ☠️

Used to measure death patterns in a population and are the most reliable indicators of health status.

---

a. Crude Death Rate (CDR)

Definition:
Total number of deaths per 1,000 population per year in a given community.

📌 Simple but crude → does not consider age or sex distribution.

---

b. Life Expectancy at Birth 🕰️

Definition:
Average number of years a newborn is expected to live if current mortality rates continue.

📌 Reflects overall health and development of a country.

---

c. Age-Specific Death Rate

Definition:

Total number of deaths occurring in a specific age group

→ Per mid-year population of the same age group

Example: 20–24 years age group

📌 Removes bias due to age structure.

---

d. Infant Mortality Rate (IMR) 👶

Definition:

Deaths of children <1 year in a given year

→ Per 1,000 live births in the same year

📌 Most sensitive indicator of community health.

---

e. Child Death Rate (1–4 years)

Definition:

Deaths in children aged 1–4 years

→ Per 1,000 children in that age group at mid-year

📌 Excludes infant mortality

---

f. Under-5 Proportionate Mortality Rate

Definition:

Proportion of total deaths occurring in children under 5 years

📌 Reflects both infant and child mortality

---

g. Adult Mortality Rate

Definition:

Probability of dying between 15–60 years

→ Per 1,000 population

📌 Indicator of non-communicable diseases & injuries

h. Maternal (Puerperal) Mortality Rate 🤰

- Measures deaths related to pregnancy and childbirth
- Major cause of death among women of reproductive age in developing countries

📌 Reflects quality of maternal health services

---

i. Disease-Specific Mortality Rate

Definition:

Deaths due to a specific disease

→ Per mid-year population

Examples:

→ Tuberculosis

→ Hepatitis

---

j. Proportional Mortality Rate

Definition:

Proportion of deaths due to a specific disease

→ Out of total deaths

📌 Measures burden of a disease, not risk.

---

k. Case Fatality Rate (CFR) ⚠️

Definition:

Deaths due to a disease

→ Per number of diagnosed cases of that disease

📌 Indicates:

→ Virulence / killing power of disease

---

l. Years of Potential Life Lost (YPLL)

Definition:

Death occurring before the expected age of survival

📌 Highlights premature mortality

2. MORBIDITY INDICATORS 🤒

Used to assess ill-health rather than death.

Common morbidity indicators:

→ Incidence
→ Prevalence
→ Notification rates
→ OPD attendance rates
→ Admission, re-admission & discharge rates
→ Duration of hospital stay
→ Sickness absenteeism (school/work)

Epidemiologist's Bathtub 🛁 (Conceptual Flow)

→ Incidence (water inflow)
→ Prevalent cases (water in tub)
→ Recovery / Death (water outflow)

---

3. DISABILITY INDICATORS ♿

Measure functional limitations due to disease.

A. Event-Type Indicators

→ Days of restricted activity
→ Bed disability days
→ Work-loss days

B. Person-Type Indicators

→ Limitation of mobility
→ Limitation of activity

Composite Disability Measures (Very High-Yield) ⭐

DALY (Disability Adjusted Life Years) → Years of life lost due to premature death

- Years lived with disability

DFLE (Disability-Free Life Expectancy) → Total life - Disabled life

HALE (Health Adjusted Life Expectancy) → Life lived with disability

- Life lived without disability

QALY (Quality Adjusted Life Years) → Years of life added due to intervention

📌 Positive indicator of health & wellbeing

---

4. NUTRITIONAL STATUS INDICATORS 🍎

Important indicators of child and community health.

Key indicators:

1. Anthropometry of preschool children
   → Weight
   → Height
   → Mid-arm circumference

2. Height (± weight) at school entry
3. Prevalence of Low Birth Weight → < 2.5 kg

---

5. HEALTH CARE DELIVERY INDICATORS 🏥

Reflect availability and equity of health services.

→ Doctor : Population ratio
→ Doctor : Nurse ratio
→ Population : Bed ratio
→ Population per Trained Birth Attendant
→ Population per Health Center

📌 Used for planning & resource allocation

---

6. HEALTH UTILIZATION INDICATORS 📈

Definition:
Proportion of people in need of a service who actually receive it in a given period.

Depends on:

→ Availability

→ Accessibility

→ Attitude of people

Examples:

→ Full immunization coverage (EPI)

→ Antenatal care coverage

→ Skilled birth attendance

→ Family planning usage

→ Bed occupancy rate

→ Average length of hospital stay

→ Bed turnover ratio

---

7. SOCIAL 👥 & MENTAL HEALTH INDICATORS 🧠

Valid positive indicators are scarce, so indirect indicators are used.

Examples:

→ Suicide

→ Homicide

→ Violence

→ Road traffic accidents

→ Juvenile delinquency

→ Smoking, alcohol & drug abuse

→ Obesity

→ Domestic violence

→ Battered baby / wife syndrome

→ Neglected & abandoned youth

---

8. ENVIRONMENTAL INDICATORS 🌍

Reflect the quality of the physical & biological environment.

→ Air pollution

→ Radiation

→ Noise

→ Solid waste

📌 Important for environmental health programs.

---

9. SOCIO-ECONOMIC INDICATORS 💰

Do not directly measure health, but strongly influence it.

→ Population growth rate
→ Per capita GNP
→ Unemployment rate
→ Dependency ratio
→ Literacy rate
→ Family size
→ Housing conditions
→ Per capita calorie availability

---

10. HEALTH POLICY INDICATORS 🏛️

Reflect political commitment to health.

Key indicators:

→ % of GNP spent on health
→ % of GNP spent on health-related sectors
→ % of total health resources devoted to PHC

📌 Allocation of adequate resources = strongest indicator

---

11. INDICATORS OF QUALITY OF LIFE ✨

Difficult to define & measure.

Composite indicators include:

→ Infant Mortality Rate
→ Life expectancy at age 1
→ Literacy rate

---

12. SOCIAL INDICATORS 👨‍👩‍👧‍👦

Grouped into 12 categories:
→ Family formation

→ Households
→ Education
→ Employment
→ Income distribution
→ Consumption
→ Social security
→ Health & nutrition
→ Housing
→ Environment
→ Leisure & culture

---

13. BASIC NEED INDICATORS 🚰

Include:

→ Calorie intake
→ Access to safe water
→ Life expectancy
→ Disease-related deaths
→ Illiteracy

→ Doctors & nurses per population

→ Rooms per person

-> The End <-