

CONCEPTS OF HEALTH AND DISEASE AND PREVENTION

A pair of hands is shown from the front, cupping a glowing red heart. The heart is the central focus, with a bright red color and a subtle texture. The hands are positioned symmetrically on either side of the heart, with fingers slightly curled. The background is a soft, out-of-focus light blue and white, suggesting a clean, clinical or medical setting. The overall composition is centered and balanced.

HEALTH EDUCATION & COMMUNITY PHARMACY
UNIT III

WHO Definition

“Health is a state of complete physical, mental and social wellbeing and not merely an absence of disease or infirmity.”

now added

“the ability to lead a socially and economically productive life.”

○ The concept of health as defined by WHO is broad and positive in its implications; it sets out the standard, the standard of “positive” health.





- Traditionally health has been considered as an absence of the diseases and if someone was free from disease, then that person was considered healthy.

This concept is known as biomedical concept, and it has a basis on the




“germ theory of the disease.”

CHANGING CONCEPTS OF HEALTH



- Health is perceived in different ways giving rise to various concepts of health. Health has evolved over the centuries as a concept from an individual concern to a worldwide social goal.
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Biomedical Concept

- Health means “absence of disease.”
 - It was felt that human body is a machine and disease is an outcome of the breakdown of the machine, and one of the doctor’s tasks was to repair the machine.
 - Developments in medical and social sciences led to the conclusion that the biomedical concept of health was inadequate.
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Ecological Concept

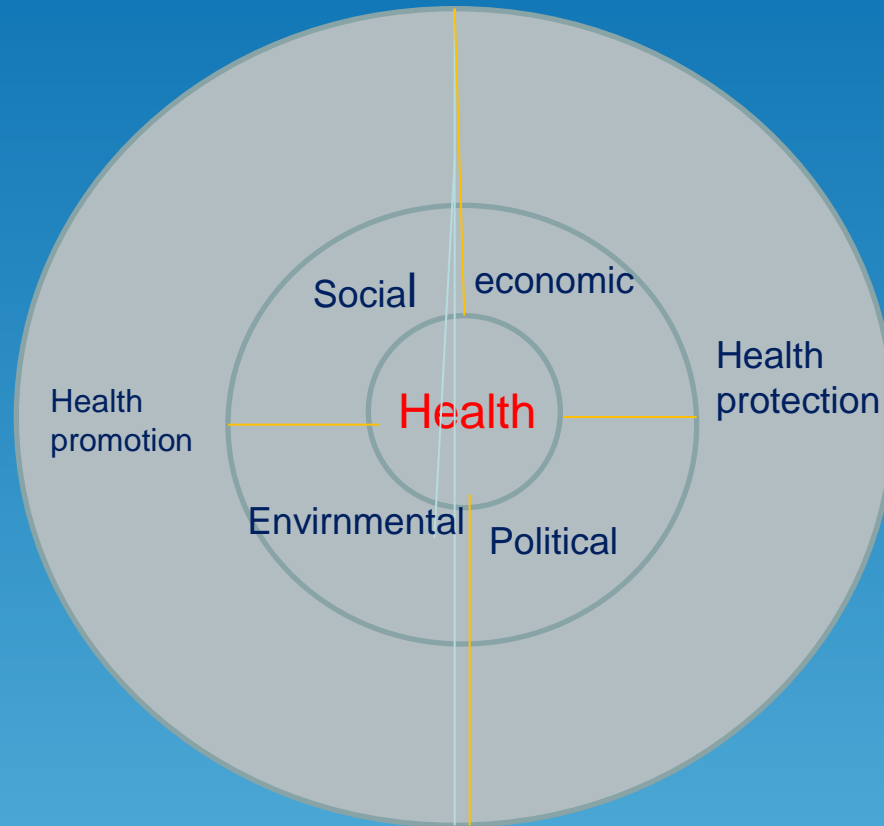
● Ecologists viewed health as a dynamic equilibrium between man and his environment, and disease – a maladjustment of the human organism to environment.

Psychosocial Concept

- Advances in social sciences showed that health is not only a biomedical phenomenon, but one which is influenced by social, psychological, cultural, economic and political factors of the people concerned. Thus health is both a biological and social phenomenon.

Holistic Concept

- Holistic concept recognizes the strength of social, economic, political and environmental influences on health.
- It has been variously described as multidimensional process involving the wellbeing of the person as a whole
- The emphasis is on the promotion and protection of health.



Holistic concept



DIMENSIONS OF HEALTH



- Health is multidimensional and are interrelated, each has its own nature

Physical Dimension

- “Perfect functioning” of the body.
- It conceptualizes health biologically as a state in which every cell and every organ are functioning at optimum capacity and in perfect harmony with the rest of the body.



Mental Dimension

- Ability to respond to many varied experiences of life with flexibility and a sense of purpose.
- Mental health has been defined as “a state of balance between the individual and the surrounding world, a state of harmony between oneself and others



Social Dimension

● Harmony and integration with the individual, between each individual and other members of society, and between individuals and the world in which they live.

“quantity and quality of an individual’s interpersonal ties and the extent of involvement with the community.”

Spiritual Dimension

● Spiritual health refers to “something” that transcends physiology and psychology.

CONCEPT OF WELLBEING



Standard of Living

- As per WHO, “Income and occupation, standards of housing, sanitation and nutrition, the level of provision of health, educational, recreational and other service and collectively as an index of the ‘standard of living’.”

Level of Living

- As per United Nations documents “level of living” consists of nine components: health, food consumption, education, occupation and working conditions, housing, social security, clothing, recreation and leisure, and human rights.

Quality of Life

- Quality of life as defined by WHO, "The condition of life resulting from combination of the effects of the complete range of factors such as those determining health, happiness, education, social and intellectual attainments, freedom of action, justice and freedom of expression."

Physical Quality of Life Index

- It includes three indicators such as
 - Infant mortality
 - Life expectancy at age one
 - Literacy.

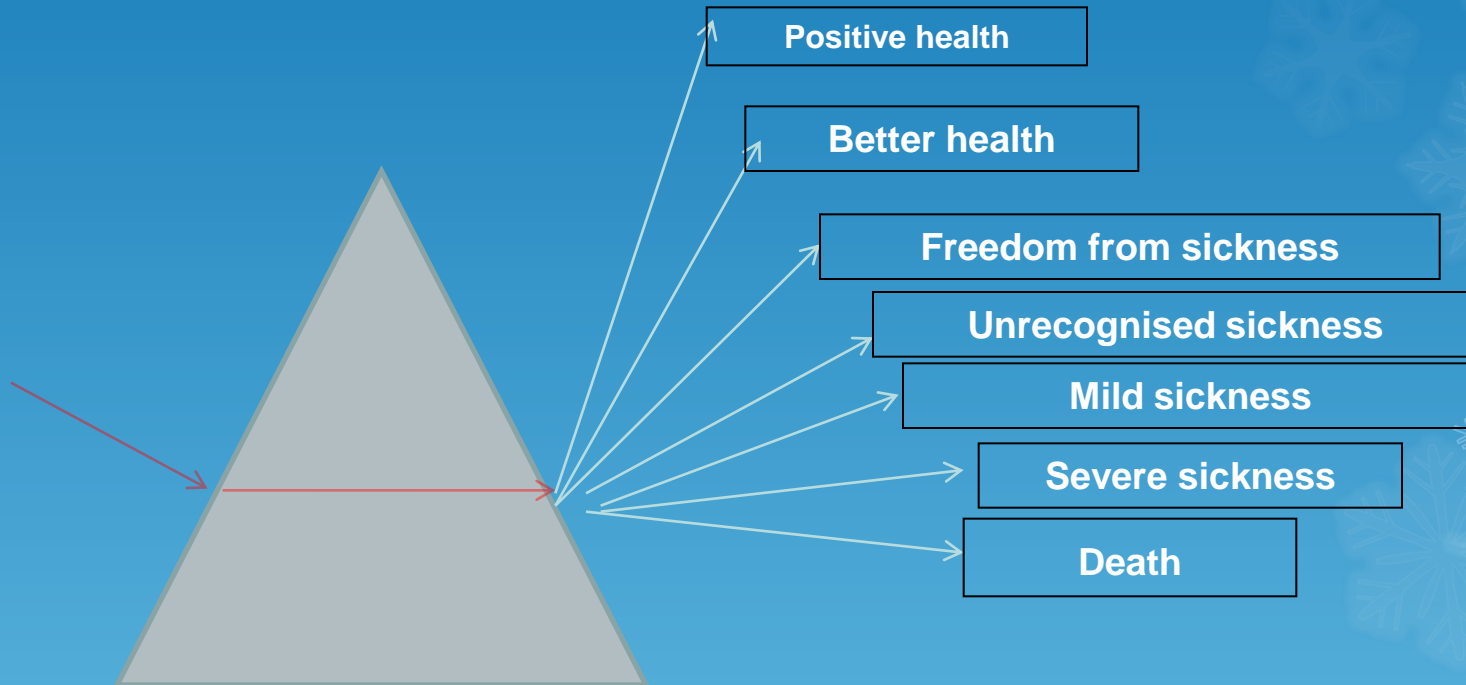
SPECTRUM OF HEALTH



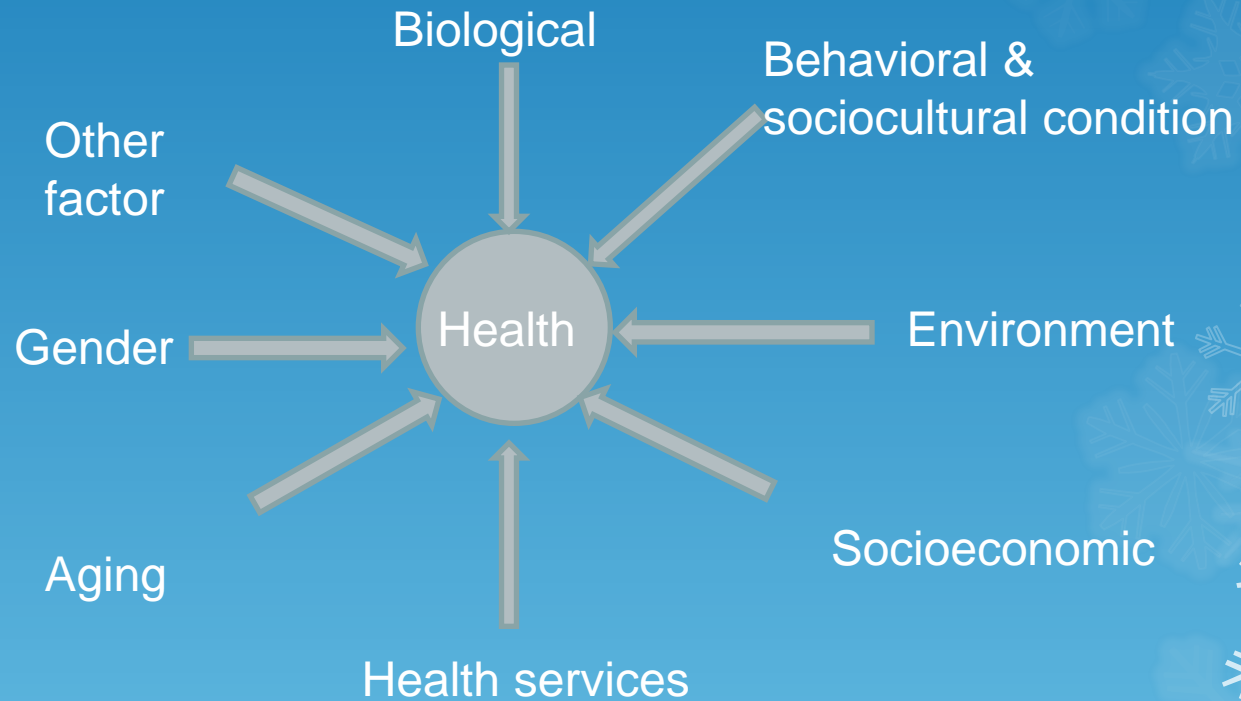
- This concept of health emphasizes that health of an individual is a dynamic phenomenon and a process of continuous change, subject to repeated, fine variations
- Transition from optimum health to ill health is often gradual, and where one state ends and other begins is a matter of judgment.
- Different stages are positive health, better health, freedom from sickness, unrecognized sickness, mild sickness, severe sickness, and death.



SPECTRUM OF HEALTH



DETERMINANTS OF HEALTH



Biological Determinants

● Physical and mental traits of every human being are to some extent determined by the nature of his genes at the moment of conception.

Behavioral and Sociocultural Conditions

● Health requires promotion of healthy lifestyle. Modern health problems especially in the developed countries and in developing countries are mainly due to changes in lifestyles. Healthy lifestyle includes adequate nutrition, enough sleep, sufficient physical activity etc.

Environment

● Environment has a direct impact on the physical, mental and social wellbeing of those living in it.

- Environmental factors range from housing, water supply, psychosocial stress and family structure

Socioeconomic Conditions

- *Economic status*: Economic situation in a country is an important factor in morbidity, increasing life expectancy and improving quality of life, family size and pattern of disease
- *Education*: Illiteracy correlates with poverty, malnutrition, ill health, high infant and child mortality rates.
- *Occupation*: Productive work provides satisfaction, promotes health and improves quality of life.
- *Political system*: timely decisions concerning, resource allocation, choice of technology etc

Health Services

● To be effective, the health services must reach the masses, equitably distributed, accessible at a cost the country and community can afford and social acceptable.

Aging of the Population

● A major concern of rapidly aging population is increased prevalence of chronic diseases and disabilities that deserve special attention.

Gender

● Women's health is gaining importance in areas such as nutrition, health consequences of violence, aging, lifestyle related conditions and the occupational environment.

● There is an increased awareness among policy makers of women's health issues, and encourages their inclusion in all development as a priority.

INDICATORS OF HEALTH



- Indicators should be valid, reliable and objective, sensitive, specific, feasible and relevant.
- The indicators are:
 1. Morbidity indicators
 2. Disability rates
 3. Nutritional status indicators
 4. Health care delivery indicators
 5. Utilization rates
 6. Indicators of social and mental health
 7. Environmental indicators
 8. Socioeconomic indicators
 9. Health policy indicators
 10. Indicators of quality of life
 11. Other indicators

Mortality Indicators

○ Mortality indicators represent the traditional measures of health status:

- *Crude death rate*: It is defined as the number of deaths per 1000 population per year in a given community.

- *Expectation of life*: “the average number of years that will be lived”

An increase in the expectation of life is regarded, inferentially, as an improvement in health status. It can be considered as a positive health indicator. It is a global health indicator.

- *Infant mortality rate*: It is the ratio of deaths under 1 year of age in a given year to the total number of live births in the same year; usually expressed as a rate per 1000 live births.

It is one of the most universally accepted indicators of health status.



Child mortality rate: It is defined as the number of deaths at ages 1-4 years in a given year, per 1000 children.


It is related to insufficient nutrition, low coverage by immunization, etc.





Under-5 proportionate mortality rate: It is the proportion of total deaths occurring in the under-5 age group. This rate can be used to reflect both infant and child mortality rates.



Maternal mortality rate: Maternal mortality accounts to the greatest proportion of deaths among women of reproductive age.



Disease-specific mortality rate: Mortality rates can be computed for specific diseases.



Morbidity Indicators

● Morbidity indicators supplement mortality data to describe the health status of a population.

● Morbidity rates are incidence and prevalence, notification rates, attendance rates at outpatient departments, health centres, admission, readmission and discharge rates, duration of stay in hospital, and spells of sickness or absence from work or school etc.

Disability Rates

● Disability rates related to illness and injury supplement mortality and morbidity indicators.

● The commonly used disability rates are:

(i) event-type indicators:

(ii) person-type indicators.

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Nutritional Status Indicators

- Nutritional status is a positive health indicator.
- It consists of anthropometric measurements of preschool children (e.g., weight and height, mid-arm circumference), heights and weights of children at school entry and prevalence of low birth weight (less than 2.5 kg).

Health Care Delivery Indicators

- Frequently used indicators of health care delivery are doctor-population ratio, doctor-nurse ratio, population bed ratio, population per health/subcentre and population per traditional birth attendant.

Utilization Rates

- Proportion of people in need of a service who actually receive it in a given period, usually a year.
- Utilization rates give some indication of the care needed by a population, and therefore, the health status of the population such as immunization, deliveries supervised by a trained birth attendant, methods of family planning etc.

Indicators of Social and Mental Health

- Indirect measures
- These include acts of violence and other crime, road traffic accidents, juvenile delinquency, alcohol and drug abuse, smoking etc.

Environmental Indicators

- Environmental indicators reflect the quality of physical and biological environment in which diseases occur and in which the people live.
- They include indicators relating to pollution of air and water radiation, solid wastes, noise, exposure to toxic substances in food or drink.

Socioeconomic Indicators

- indirect indicators of health.
- These include rate of population increase, level of unemployment, dependency ratio, literacy rates, especially female literacy rates, family size, etc.

Health Policy Indicators

- The most important indicator of political commitment is “allocation of adequate resources.”
- The relevant indicators are proportion of gross national product (GNP) spent on health services, proportion of GNP spent on health-related activities and proportion of total health resources devoted to primary health care.

Health Care

- It is defined as “a multitude of services rendered to individuals, families or communities by the professions, for the purpose of promoting, maintaining, monitoring or restoring health.”
- Health care should be appropriate, comprehensive, adequate, available, accessible, affordable and feasible.
- It can be delivered by appropriate planning of health systems with the aim of health development.
- Health systems are based on contemporary ideas and concepts and available resources.



Levels of Health Care

- **Primary health care.** It is the first level of **contact** between the individual and the health system where essential or primary health care is rendered.
- **Secondary health care.** At this level, more **complex** problems are dealt with. This care comprises essentially curative services and is provided by the district hospitals and community health centres.
- This level serves as the first referral level in the health system.

Tertiary health care.

- **This level offers super specialist care.**
- This care is provided by regional/central level institutions.
- These institutions provide not only highly specialized care, but also planning and managerial skills and teaching for specialized staff.

Health Team Concept

- Practice of modern medicine has become team of many groups of workers, both professional and non-professional.
- Health team has been defined as “a group of persons who share a common health goal and common objectives, determined by community needs and toward the achievement of which each member of the team contributes in accordance to her/his competence and skills.”
- The auxiliary is an essential member of the team. It is recognized that many functions of the physician can be performed by auxiliaries, given suitable training.








Health for All



- In May 1977, World Health Assembly decided that the main social goal of governments in the coming years should be the “attainment by all the people of the world by the year 2000 AD of a level of health that will permit them to lead a socially and economically productive life.
- “ This goal has come to be popularly known as “Health for all by the year 2000.”
- There was a growing concern about the low levels of health status of the majority of the world’s population, especially the rural poor
- the gross disparities in health between the rich and poor, urban and rural population, both between and within countries. The important principle in this concept is “equity in health”, which means all people should have an opportunity to enjoy good health.

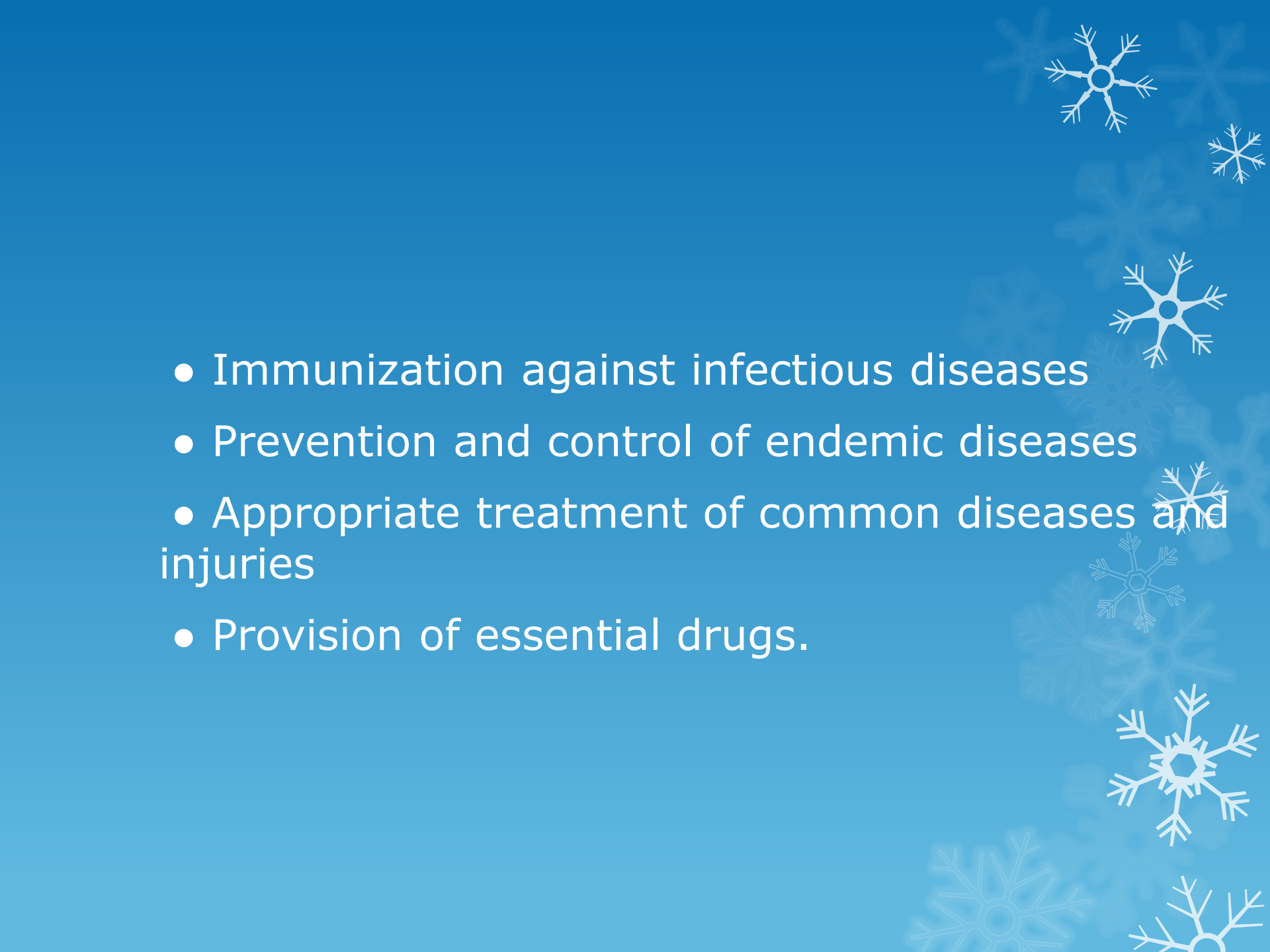


Primary Health Care

- The concept of primary health care came into limelight in 1978 following an international conference in Alma Ata, erstwhile USSR. It has been defined as:
- *"Essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-determination."*



- Primary health care approach is based on principles of social equity, nationwide coverage, self-reliance, intersectoral coordination, and people's involvement in the planning and implementation of health programs in pursuit of common health goals.
- Declaration of Alma Ata stated that primary health care includes at least:
 - Education about prevailing health problems and methods of preventing and controlling them
 - Promotion of food supply and proper nutrition
 - An adequate supply of safe water and basic sanitation
- ● maternal and child health care, including family planning

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- The background is a solid blue color with several white snowflake icons scattered across it. The snowflakes vary in size and opacity, with some being more prominent than others. They are located in the top right, middle right, and bottom right areas of the slide.
- Immunization against infectious diseases
 - Prevention and control of endemic diseases
 - Appropriate treatment of common diseases and injuries
 - Provision of essential drugs.

CONCEPTS OF PREVENTION



- Successful prevention depends upon a knowledge of causation, dynamics of transmission, identification of risk factors and risk groups, availability of prophylactic or early detection and treatment measures; an organization for applying these measures to appropriate persons or groups, and continuous evaluation and development of procedures applied.
- The objective is to intercept the “cause” and thereby the disease process .



Levels of Prevention

● Prevention can be achieved in terms of four levels:

- (1) Primordial prevention
- (2) Primary prevention
- (3) Secondary prevention
- (4) Tertiary prevention.

1. ***Primordial prevention:*** Prevention of emergence or development of risk factors in countries or population groups in which they have not yet appeared.

In primordial prevention, efforts are directed towards discouraging children from adopting harmful lifestyles.

The main intervention in primordial prevention is through individual and mass education.

Primary prevention:

A desirable goal relies on holistic approach that signifies intervention in the prepathogenesis phase.

- “action taken prior to the onset of disease, which removes possibility that a disease will ever occur.”
- Intervention, promote general health and wellbeing and specific protective measures.
- It concerns an individual’s attitude towards life and health and the initiative he takes about positive and responsible measures for himself, his family and his community.

Secondary prevention:

“Action which halts the progress of a disease at its incipient stage and prevents complications.”

- Interventions are early diagnosis and adequate treatment.
- Health programs initiated by governments are usually at the level of secondary prevention.
- Drawback of secondary prevention is that the patient has already been subjected to mental anguish, physical pain, and the community to loss of productivity.
- These situations are not encountered in primary prevention.

Tertiary prevention:

“All measures available to reduce or limit impairments and disabilities, minimize suffering caused by existing departure from good health.”

Interventions are disability limitation and rehabilitation.



Modes of Intervention

● Five modes of intervention have been described which form a continuum corresponding to the natural history of any disease:

(i) Health promotion

(ii) Specific protection

(iii) Early diagnosis and treatment

(iv) Disability limitation

(v) Rehabilitation.

Health Promotion

- “The process of enabling people to increase control over and improve health.”
 - It is not directed against any particular disease, but is intended to strengthen the host through a variety of approaches such as:
 - *Health education*: A large number of diseases could be prevented with little or no medical intervention
 - if people were adequately informed about them
 - if they were encouraged to take necessary precautions in time.
- Targets for educational efforts may include general public, patients, priority groups, health providers, community leaders and decision makers.



• *Environmental modifications:* Provision of safe water; installation of sanitary latrines; control of insects and rodents; improvement of housing, etc. promote health.

• *Nutritional interventions:* This refers to food distribution and nutrition improvement of vulnerable groups; child feeding programs; nutrition education, etc.

• *Lifestyle and behavioral changes:*

Specific Protection

● Some of the currently available interventions aimed at specific protection are: immunization, use of specific nutrients, chemoprophylaxis, protection against accidents, protection from carcinogens, avoidance of allergens, control of specific hazards in general environment etc.

Early Diagnosis and Treatment

● A WHO defined early detection of health impairment as “the detection of disturbances of homeostatic and compensatory mechanism while biochemical, morphological, and functional changes are still reversible.”

● Early detection and treatment are the main interventions of disease control. Earlier a disease is diagnosed and treated the better it is from the point of view of prognosis and preventing the occurrence of further cases or any long-term disability.

Disability Limitation

- Objective of this intervention is to prevent or halt the transition of the disease process from impairment to handicap.
- Intervention in disability will often be social, environmental as well as medical. While impairment which is the earliest stage has a large medical component, disability and handicap which are later stages have large social and environmental components in terms of dependence and social cost.

Rehabilitation

○“The combined and coordinated use of medical, social, educational and vocational measures for training and retraining the individual to the highest possible level of functional ability.”

Rehabilitation includes

- Medical rehabilitation (restoration of function),
- Vocational rehabilitation (restoration of the capacity to earn a livelihood),
- Social rehabilitation (restoration of family and social relationships),
- Psychological rehabilitation (restoration of personal dignity and confidence).