

Non-communicable diseases

🕒 They are important due to many reasons:

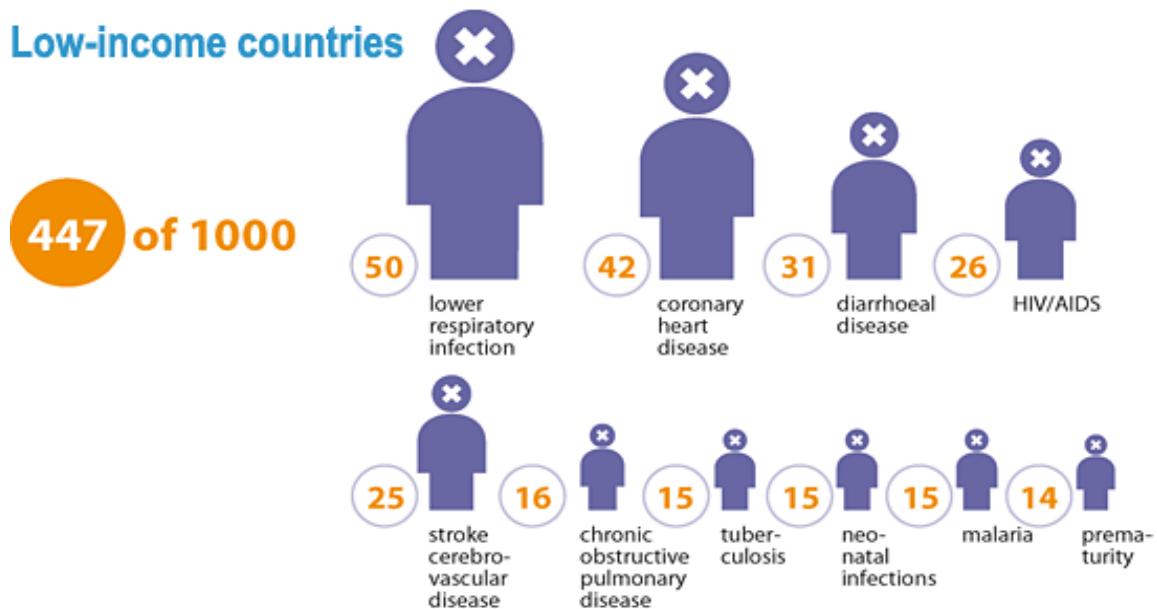
1) Nowadays lifespan becomes more longer which increases these diseases.

They became the main cause of death not only in developed world but also in middle and low income countries (like Jordan in which the coronary heart diseases are the major cause of death and also in most developed countries ...in middle income the cerebrovascular is the major and in low income infectious is the major)

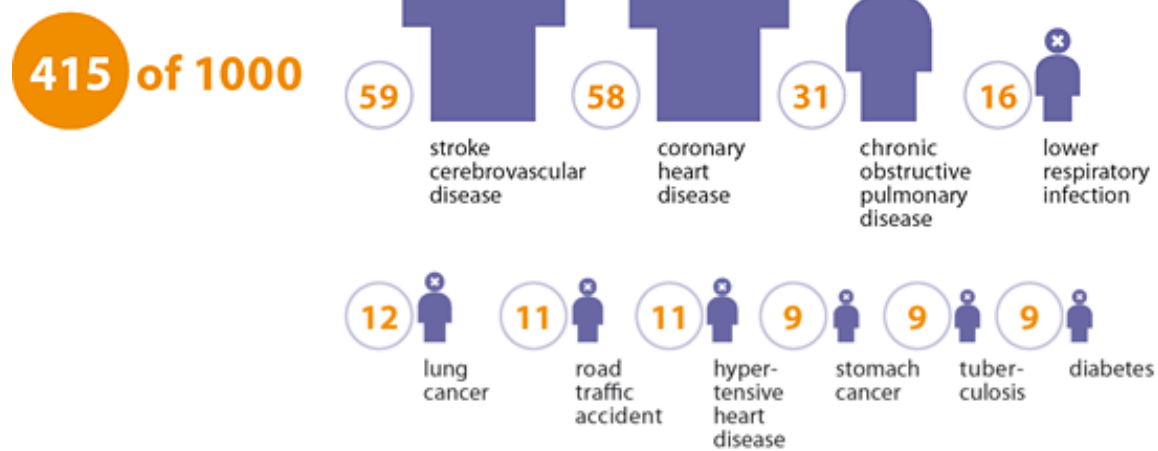
Non communicable diseases are the leading cause of functionary impairment(chronic impairment which make it worsen and the services of these patients are very costly , so there are centers for this purpose that is supported by government and their services are very limited like those for alzheimer's patients(USA) but in Jordan it is not supported) and death worldwide. These conditions(non-communicable disease) have been the leading cause of death in the United States and other high-income countries over the last fifty years, and they are emerging as a leading cause of death in low-to middle-income countries.

Deaths across the globe: Imagine a diverse international group of 1000 individuals representative of the women, men and children from all over the globe who died in 2004. Of those 1000 people, 138 would have come from high-income countries, 415 from middle-income countries and 447 from low-income countries

Low-income countries



Middle-income countries



High-income countries



Notice that the top cause of death in low-income countries is the infectious diseases whereas non-infectious diseases in middle income countries, but Jordan is similar to high income countries

The major non communicable diseases are :

- 1) Cardiovascular Diseases. (hypertension , myocardial infarction , heart failure)
- 2) Chronic Obstructive Pulmonary Disease (many patients in developed countries die from this disease)
- 3) Diabetes
- 4) Hypertension
- 5) Cancers
- 6) Accidents in its different types(it also involve injuries)

7) Psychiatric and Mental Diseases

Non communicable diseases also include injuries, which have an acute onset, but may be followed by prolonged convalescence and impaired function(fracture in vertebral column may lead to permanent paralysis), as well as chronic mental diseases.

Chronic diseases have been defined as :

Chronic illnesses.

- Non-Communicable.
- Degenerative.

▪ **Characteristics:**

1) Uncertain etiology.(there is no direct reason for these diseases .e.g (hyperlipidemia is a risk factor for hypertension but not a cause , genetic factors are risk factor for diabetes but not a cause)

2) they have multiple risk factors.(these may be high relative risk factor and moderate risk factor and low relative risk factor in relation with a disease .e.g in diabetes the high relative risk factor is obesity but obesity is a moderate risk factor in cardiovascular diseases , smoking is high relative risk factor in pulmonary obstructive disease but is a moderate risk factor in cardiovascular diseases, inactivity is high risk factor in cardiovascular disease)

3)long latency period .(latency period: is the period between contact of the causative agent with susceptible host to the onset of first sign a symptoms.) non communicable diseases are usually without symptoms so its very serious and patients come in late stages of the disease e.g : hypertension is called the silent killer because the patient come with serious symptoms such as bleeding ,brain damage..... so the prevention of these diseases need screening e.g the blood pressure should be screened with each medical test even who are in 20 and 25 at minimum they must be screened once a year, cancers are also examples of long latency period diseases

4) Prolonged course of illness.

5) non- contagious origin.(patients do not infect each other)

6) functional disability and sometimes incurability .(many of them are incurable but are controlled disease e.g controlled hypertension and controlled diabetes also bronchial asthma and epilepsy)

The cause of many chronic diseases remains obscure, but risk factors identified for some of the leading chronic diseases. The most important among these risk factor is Tobacco use especially in COPD .

▪ **Strategies for the prevention:**

Approach to prevention of chronic diseases can be considered under these headings :

1)Primordial prevention: (prevention before becoming risk factor)

prevention or avoiding the development of risk factors (before obesity and

before smoking)in the community to prevent the disease in the population and as such protects the individuals. This involves the avoidance of risk behaviors. (in relation to infectious diseases the primordial prevention is immunization)

prevention of disease occurrence by altering susceptibility of the host or reducing exposure of susceptible persons to the risk factors

Examples : immunization , good nutrition , health education ,

counseling, environmental sanitation, purification of water , protection against accidents at work place and seat belts.

Requires : accurate knowledge of causative agent and process of disease.

(to put it in policy)

2)Primary prevention : (here the risk factor is found and we have to modify it)

E.g: a history of breast cancer (one of the highly relative risk factor in breast cancer is genetic factor (family history)) , the risk factor is found and to avoid this we must begin screening

Modifying or reducing the risk factors associated with the development of a disease in individuals with or without the use of interventions, It involves modification of established risk behavior and risk factors with specific interventions to prevent clinically manifest disease. That is by early detection , screening by examinations altering the course of disease

Examples : screening high blood pressure , T.B. Diabetes , Cancer of the breast , Cancer of the cervix colo-rectal cancers, lung cancer etc.(all these are primary prevention)

3)Secondary prevention :

Modifying the risk factors in the presence of the manifested disease by changes in lifestyle and/or use of drugs. e.g. developing a diabetes and at the same time he is obese (risk factor) so he has to reduce his weight at first before giving any drug.

▪ **Tertiary Prevention :**

limitation of disability , improvement of quality of life , Rehabilitation and follow up.
(here we deal with complications and chronic impairment .. in diabetes we prevent renal failure)

Out of all non-communicable illnesses, cardiovascular diseases stay as the leading cause of morbidity and mortality (in middle and high income countries) , especially in developed and rich countries. All over the world, almost 1.5 million adults and elderly died in 1995 from heart disease, stroke or other forms of circulatory disease

Cancer is a growing health problem in developing countries, where more than half of the global total of six million deaths occur. Cancers are increasing in incidence due to many factors :

- a) Environmental factors
- b) Life style (kind of food
- c) Diagnosing of the cancers

d) **Other chronic diseases:**

-Disability or chronicity may be the outcome of many of these chronic diseases and they will not be accounted for by using the mortality indicators as the only indicators for chronic and degenerative diseases

-The number of people with disabilities is growing as a result of factors such as population growth, ageing and medical advances that preserve and prolong life

-Poverty and health :

Disability is both a cause and a consequence of poverty (disability with costly is very expensive) . About 80% of the world's population of people with disabilities live in low-income countries and experience social and economic disadvantages and denial of rights.

Poverty limits access to health and rehabilitation services. Health policies, programmes and practices impact on the rights of people with disabilities

-The causes of disability are divided into three groups such as **biological factors, genetic or hereditary factors** and **accidents**. There are various types of disability such as physical disability, hearing disability, visual disability, learning disability etc

-Causes of Learning Disability: (mainly hypoxia)

Most of the learning disabilities are caused by the development of the brain before (pregnant), during or after the birth

-Disabilities in Elderly:

The most common disabilities are associated with chronic conditions such as cardiovascular and chronic respiratory diseases, Cancer and diabetes ; injuries

-Magnitude: An estimated 10% of the World's population – approximately 650 million people , of which 200 million are children – experience some form of disability .

Disability mostly caused by chronic diseases and disability in children constitute 1/3 of the disability in the world and it is due to congenital abnormalities or traumas

-Chronic diseases that cause disability usually need rehabilitation

1-Developmental disability: disability that occurs in children during development:

a)ADD/ADHD (attention deficit hyperactivity disorder).mother constitute 1/3 of the diagnosis

b)Autism(another learning problem) there is limited centers in Jordan with limited possibilities

c)Down syndrome (they can be useful in some centers)

d)Dyslexia

2-Mental Disabilities:

a)*Anxiety Disorder* (80% of medical students have anxiety)

b)*Bipolar Disorder* (manic- depressive disorder) chronic and curable. Sometimes is caused by radiation and once we eliminate from it the person return normal . it is mood disorder ,patients experience a depressive mood alternating with elevated mood

c)*Depression* : there are two types of depression :

- reactive depression (due to accident happened with the person)

- endogenous depression : chronic disability disease.

d) Learning Disabilities

e) Memory Loss(the most important is dementia)

f) Obsessive Compulsive Disorder (OCD)

g) Phobia (examples: fear of closed places, seas, heights)

f) Alzheimer's Disease (life –long disability and last long rehabilitation)

h) Schizophrenia (psychotic disease)

(the difference between psychotic and neuronal disease is that psychotic when there is no contact with reality and there is hallucination...but in neuronal diseases like depression the patient still in contact with reality)

i) More in Types of Mental Illness - List of Mental Disorders

3) Physical Disabilities

Causes of physical disabilities

-Medical conditions : Medical conditions can cause muscular dystrophy, arthritis, cerebral palsy, head injury, multiple sclerosis etc.

-Accidents : Some accidents result into various serious conditions such as:- Amputation ,spinal injury , brain injury affecting limb control and motor skills

-Visual Impairment

a) Blindness

b) Blurred Vision

c) Cataract (clouding of the lens decreases the vision)

d) Color Blindness

-Hearing Impairment

The most common causes of hearing disability are diseases ,physical trauma ,genetic ,long term exposure to environmental noise and medications(aspirin and NSAIDs)

a) Hearing Loss (might be in children (mostly due to infections) and elderly people)

b)Meisel's Disease_(disorder in the inner ear affects the hearing (otitis media))

c)Tinnitus (Ringing In the Ears)

-Mobility Impairment

a)Arthritis : (the most important and very common in elderly, mostly in the knees and back):

-Rheumatoid Arthritis (RA)

-Osteoarthritis

b)Cerebral Palsy (brain paralysis in the children mainly due to hypoxia either during the labor or after it)

c)Multiple Sclerosis (MS) (end up with paralysis)

d)Muscular Dystrophy (MD)

e)Paralysis

f)Parkinson's Disease

g)Stroke

h)Head Injury :

-Traumatic Brain Injury

4)Asthma

5)cancer

6)diabetes

7)HIV (AIDS)

8)tuberculosis

9)renal failure

10)Hypoglycemia

11)substance abuse / addiction:

-alcohol addiction

-drug addiction

WHO's role is to enhance the quality of life and to promote and protect the rights and dignity of people with disabilities through local, national and global efforts

● **Key activities:**

In order to enhance the quality of life and to promote and protect the rights and dignity of people with disabilities through local, national and global efforts, WHO works towards the following key activities:

1)Advocacy

To raise awareness about the magnitude and consequences of disability

2)Data collection

To facilitate data collection, analysis, and dissemination of disability-related data and information

3)Community-based rehabilitation

To promote community-based rehabilitation (CBR)

4)Capacity building

5)Policies

To contribute to the development of local, national and international public health policies on disabilities and rehabilitation