

# Introduction to Non-communicable Disease (NCDs) Prevention and Control

Dr . Ali Al-hazmi

# OBJECTIVES

- Definition of non-communicable diseases
- Epidemiology of non-communicable diseases
- Disability as a consequence of NCDs
- Goals of NCD prevention and control
- Current challenges in NCD control
- Discuss and understand the global frame work of prevention and control of NCDs

# Definition of non-communicable diseases

- also known as chronic diseases
- tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behaviours factors (WHO).
- A disease that has a prolonged course, that does not resolve spontaneously, and for which a complete cure is rarely achieved (CDC)

• <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>

# Characteristics of non-communicable diseases

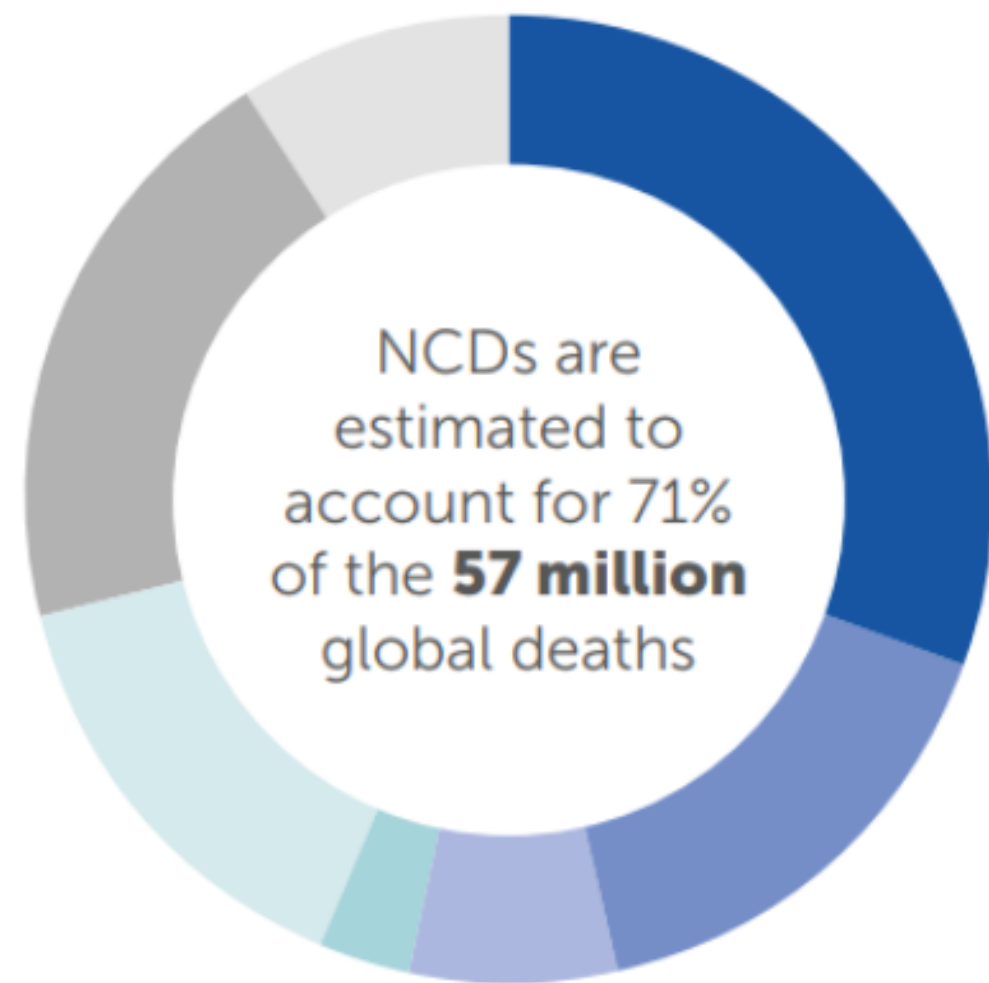
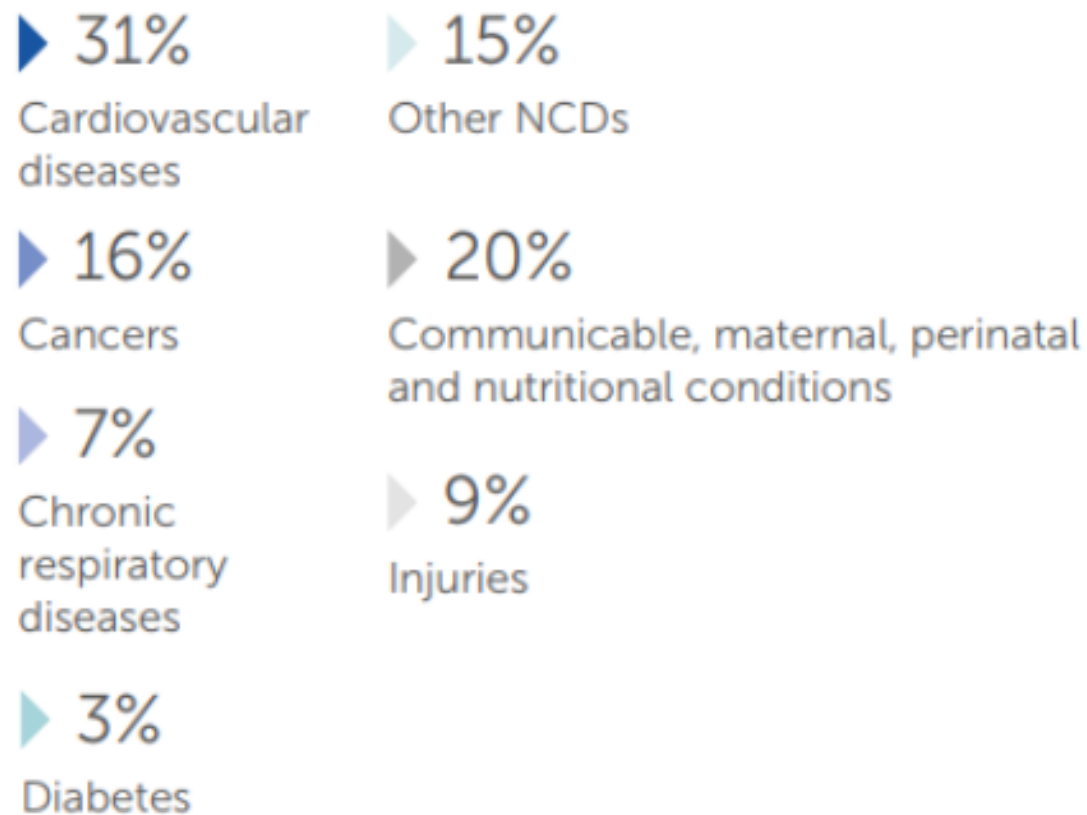
- Complex etiology (causes)
- Multiple risk factors
- Long latency period
- Non-contagious origin (noncommunicable)
- Prolonged course of illness
- Functional impairment or disability

# Types of non-communicable diseases

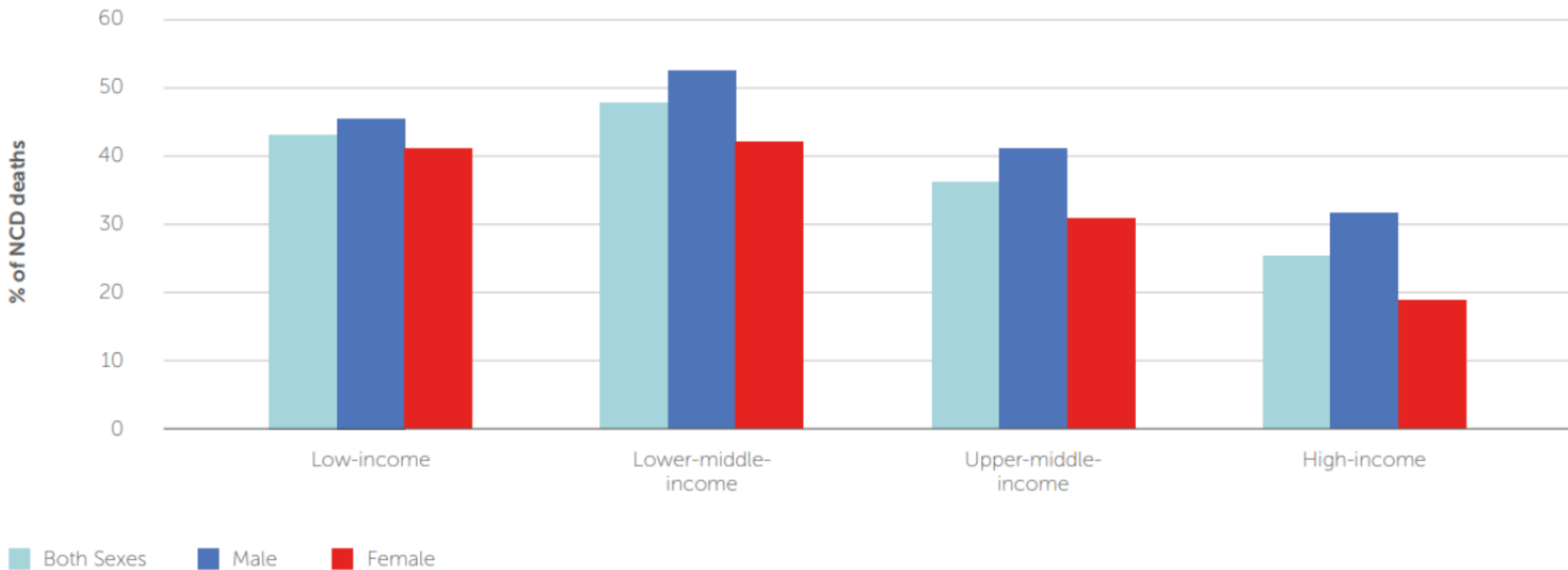
- cardiovascular diseases (like heart attacks and stroke)
- Cancers
- chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma)
- Diabetes
- Chronic neurologic disorders (e.g., Alzheimer's, dementias)
- Arthritis/Musculoskeletal diseases
- Unintentional injuries (e.g., from traffic crashes)
- .....

# Epidemiology of non-communicable diseases

## GLOBAL MORTALITY (% OF TOTAL DEATHS), ALL AGES, BOTH SEXES, 2016



**FIGURE 2: PROPORTION OF NCD DEATHS OCCURRING AMONG THOSE AGED 30 - 69 YEARS, BY INCOME GROUP, 2016**





# Epidemiology of non-communicable diseases

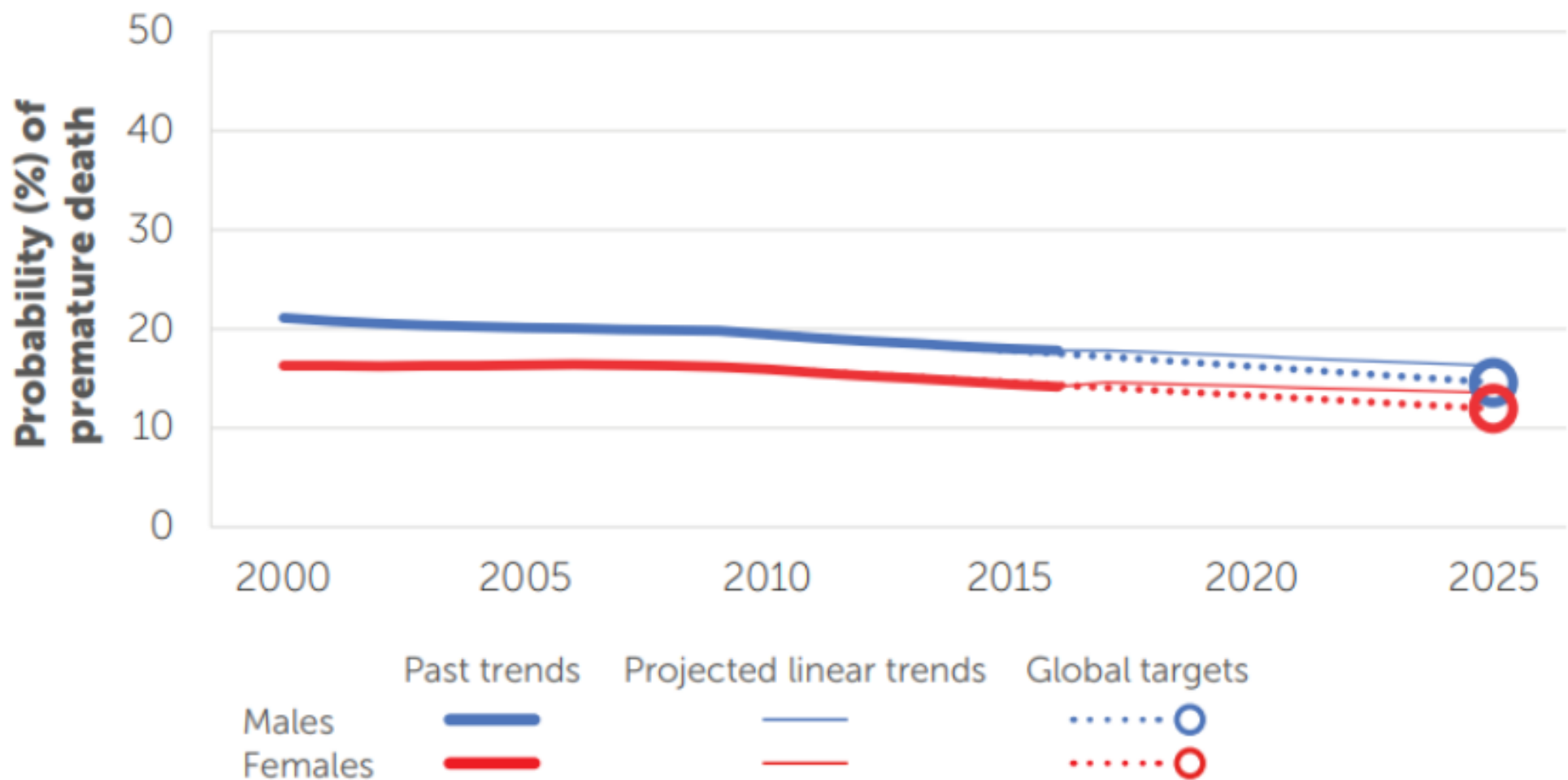
- **Key facts**
- Noncommunicable diseases (NCDs) kill 41 million people each year, equivalent to 71% of all deaths globally.
- Each year, 15 million people die from a NCD between the ages of 30 and 69 years; over 85% of these "premature" deaths occur in low- and middle-income countries.
- Cardiovascular diseases account for most NCD deaths, or 17.9 million people annually, followed by cancers (9.0 million), respiratory diseases (3.9million), and diabetes (1.6 million).

# Epidemiology of non-communicable diseases

- Key facts
- These 4 groups of diseases account for over 80% of all premature NCD deaths.
- Tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets all increase the risk of dying from a NCD.
- Detection, screening and treatment of NCDs, as well as palliative care, are key components of the response to NCDs.

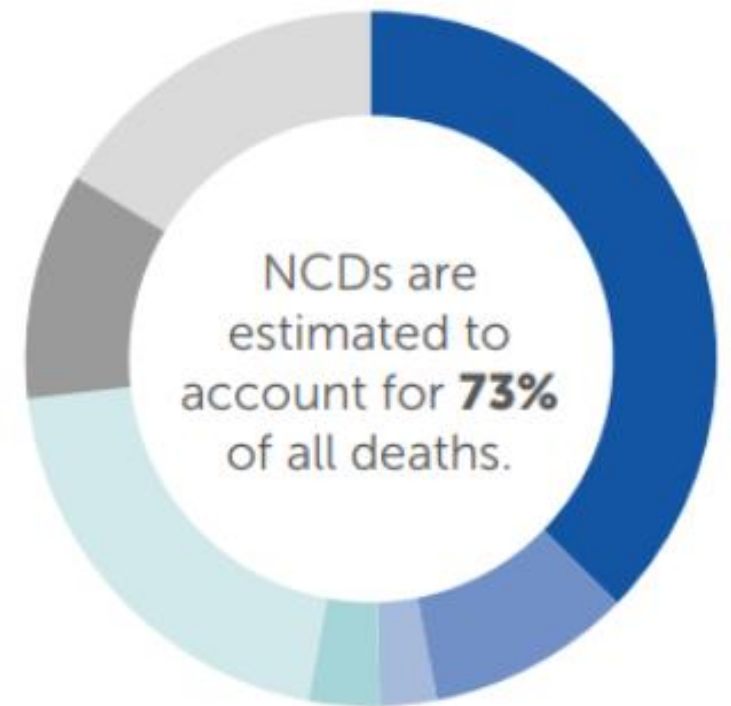
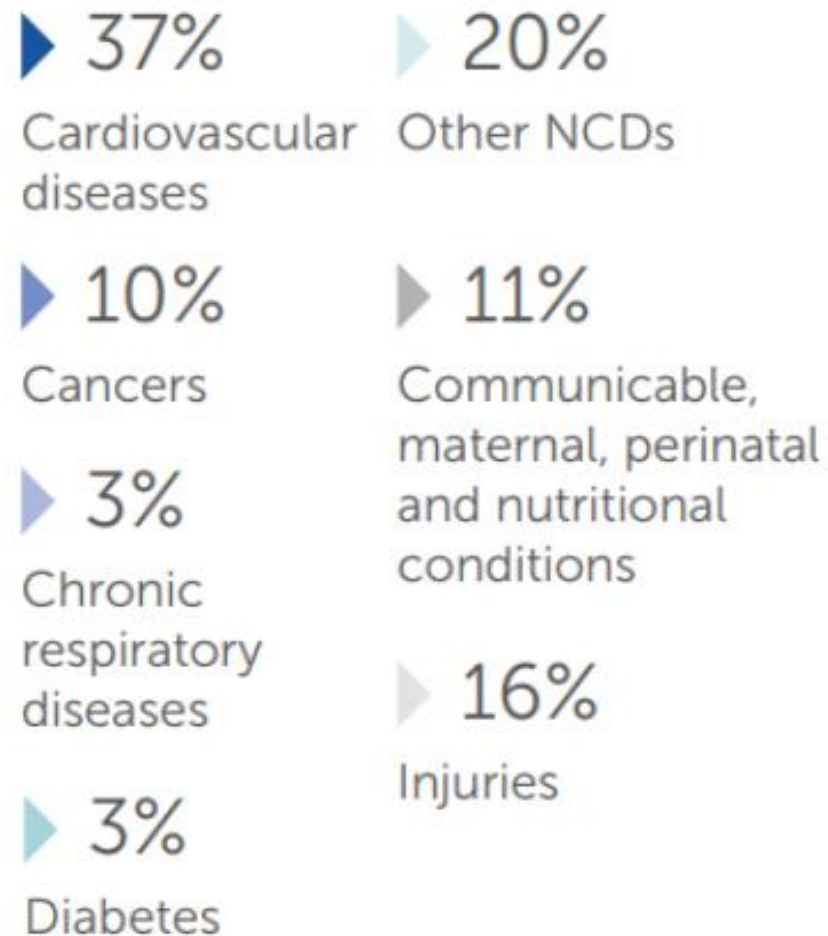
# SAUDI ARABIA

RISK OF PREMATURE DEATH DUE TO NCDS (%)\*



**2016 TOTAL POPULATION:** 32 276 000  
**2016 TOTAL DEATHS:** 114 000

### PROPORTIONAL MORTALITY\*



## NATIONAL TARGET SET

## DATA YEAR

## MALES

## FEMALES

## TOTAL

## MORTALITY\*

**Premature mortality from NCDs**

✓

Total NCD deaths

2016

48 600

34 500

83 100

Risk of premature death between 30-70 years (%)

2016

18

14

16

**Suicide mortality**

-

Suicide mortality rate (per 100 000 population)

2016

-

-

3

## RISK FACTORS

**Harmful use of alcohol**

X

Total alcohol per capita consumption, adults aged 15+ (litres of pure alcohol)

2016

0

0

0

**Physical inactivity**

✓

Physical inactivity, adults aged 18+ (%)

2016

44

64

52

**Salt/Sodium intake**

X

Mean population salt intake, adults aged 20+ (g/day)

2010

8

8

8

**Tobacco use**

✓

Current tobacco smoking, adults aged 15+ (%)

2016

26

2

16

**Raised blood pressure**

✓

Raised blood pressure, adults aged 18+ (%)

2015

21

16

19

**Diabetes**

X

Raised blood glucose, adults aged 18+ (%)

2014

15

14

14

**Obesity**

✓

Obesity, adults aged 18+ (%)

2016

31

41

35

Obesity, adolescents aged 10-19 (%)

2016

19

14

17

**Ambient air pollution**

-

Exceedance of WHO guidelines level for annual PM2.5 concentration (by a multiple of)

2016

-

-

8

**Household air pollution**

-

Population with primary reliance on polluting fuels and technologies (%)

2016

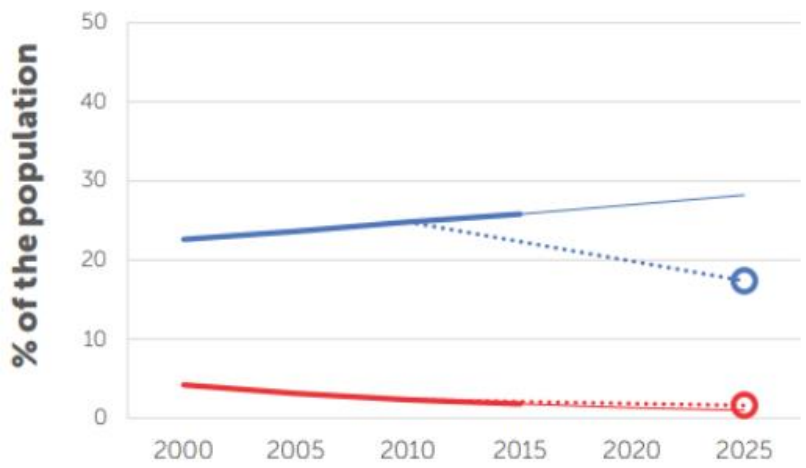
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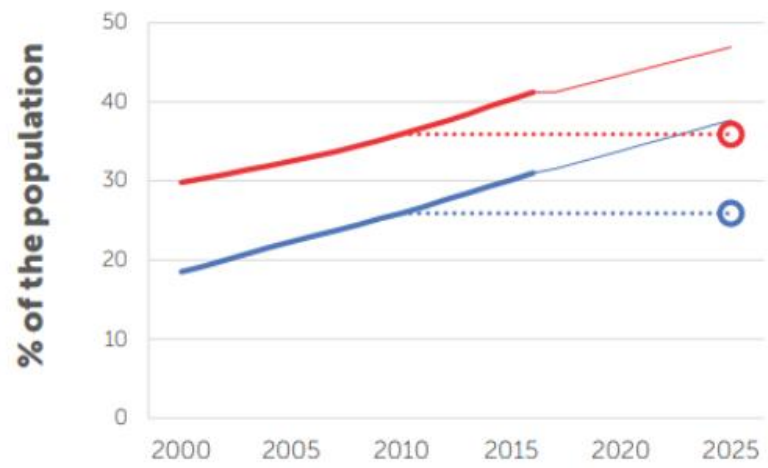
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**SELECTED ADULT RISK FACTOR TRENDS**

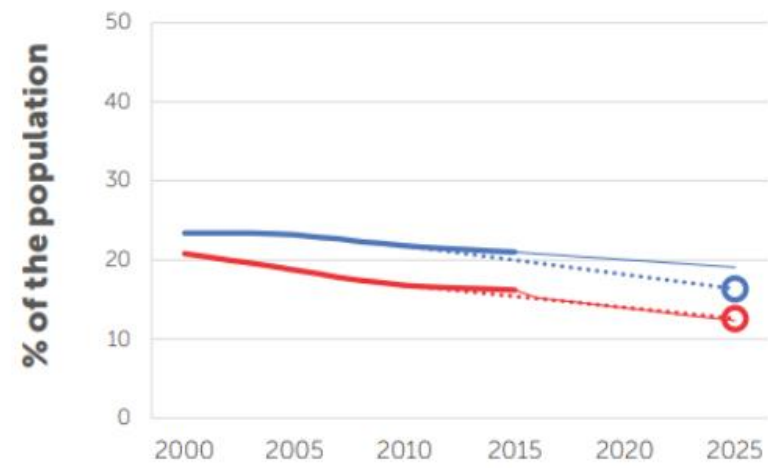
**CURRENT TOBACCO SMOKING**



**OBESITY**





**RAISED BLOOD PRESSURE**



Past trends    Projected linear trends    Global targets  
 Males        —————        —————        ..... ○  
 Females      —————        —————        ..... ○

## NATIONAL SYSTEMS RESPONSE

 <b>Drug therapy to prevent heart attacks and strokes</b>	X	Proportion of population at high risk for CVD or with existing CVD (%)	-	...
		Proportion of high risk persons receiving any drug therapy and counselling to prevent heart attacks and strokes (%)	-	...
		Proportion of primary health care centres reported as offering CVD risk stratification	2017	More than 50%
		Reported having CVD guidelines that are utilized in at least 50% of health facilities	2017	Yes
 <b>Essential NCD medicines and basic technologies to treat major NCDs</b>	X	Number of essential NCD medicines reported as "generally available"	2017	10 out of 10
		Number of essential NCD technologies reported as "generally available"	2017	6 out of 6

... = no data available

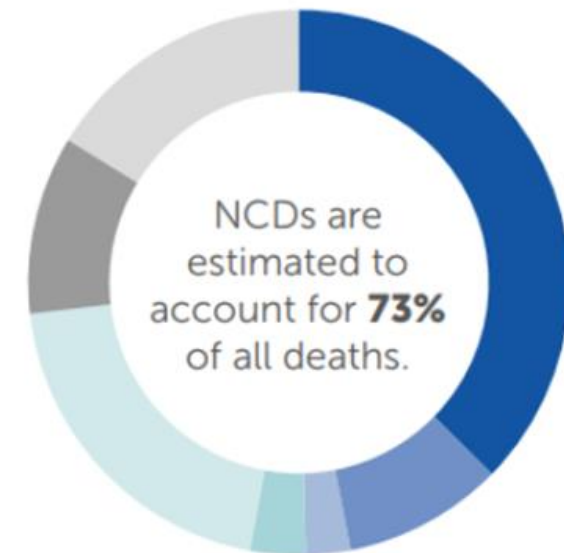
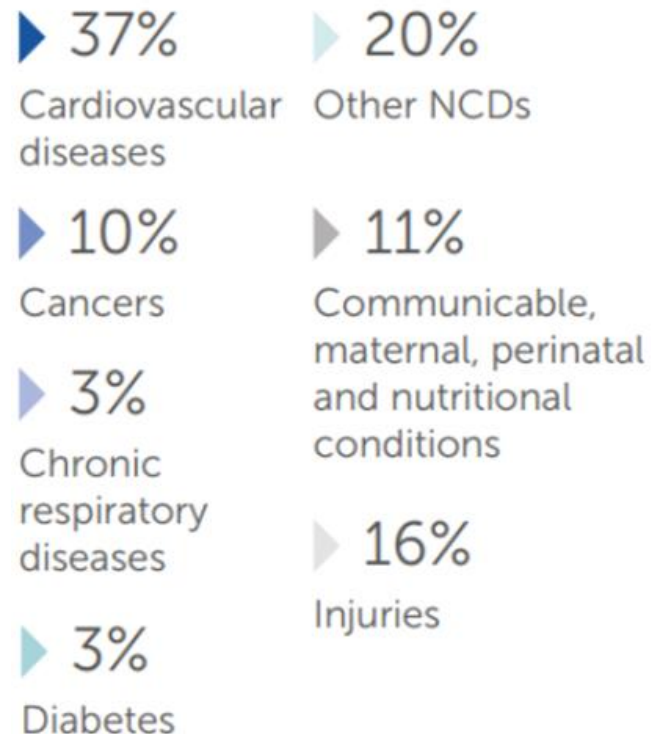
\* The mortality estimates for this country have a high degree of uncertainty because they are not based on any national NCD mortality data (see Explanatory Notes)

World Health Organization - Noncommunicable Diseases (NCD) Country Profiles, 2018.

# Disability as a consequence non-communicable diseases

- What are the disability of non-communicable diseases?

## PROPORTIONAL MORTALITY\*





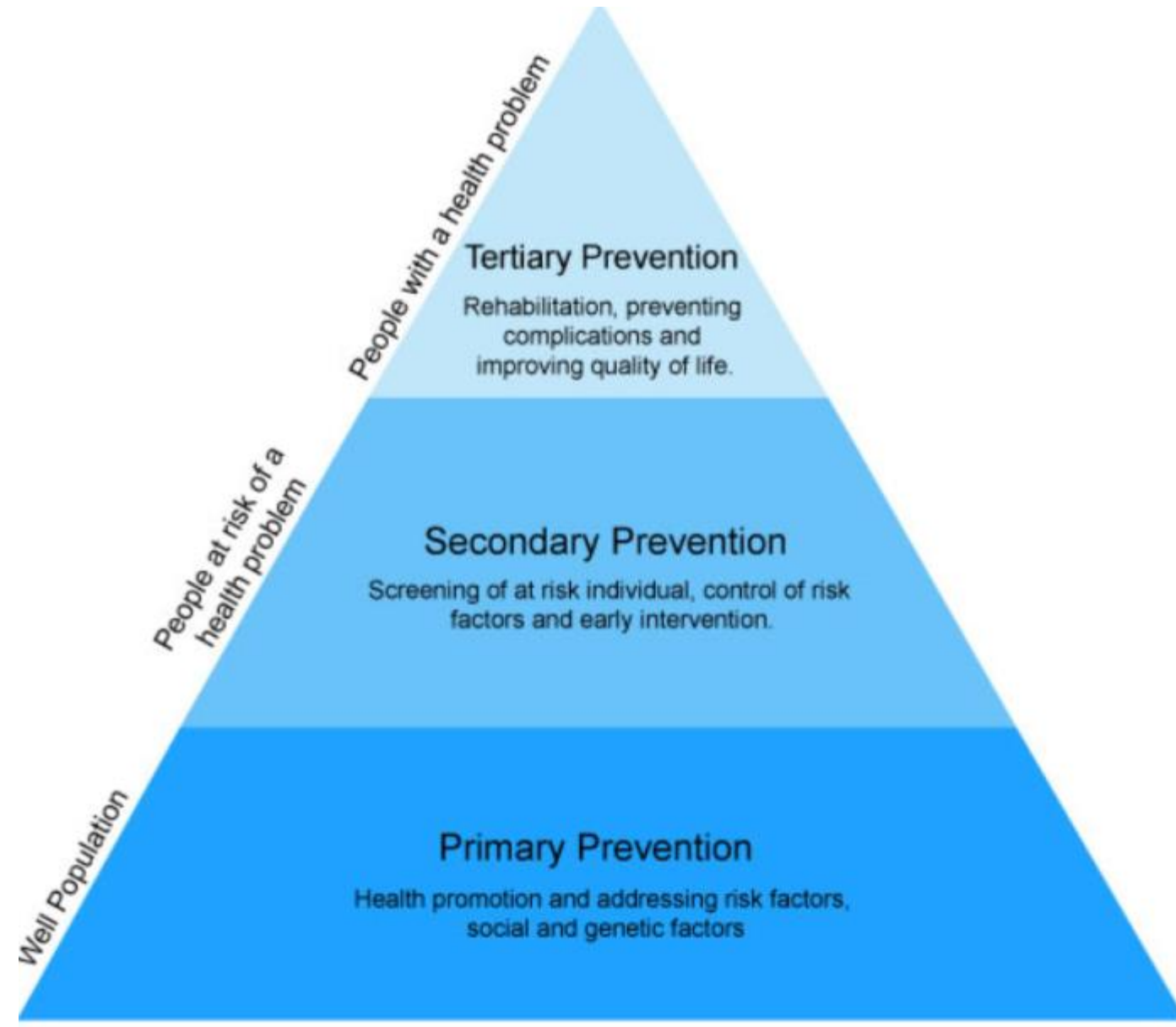
# Goals of NCD prevention and control

- **To reduce disease incidence To prevent / delay onset of disability To alleviate severity of disease To prolong the individuals'**
- **Change of the public's perception of NCD from one of "inevitability" to that of "preventability"**

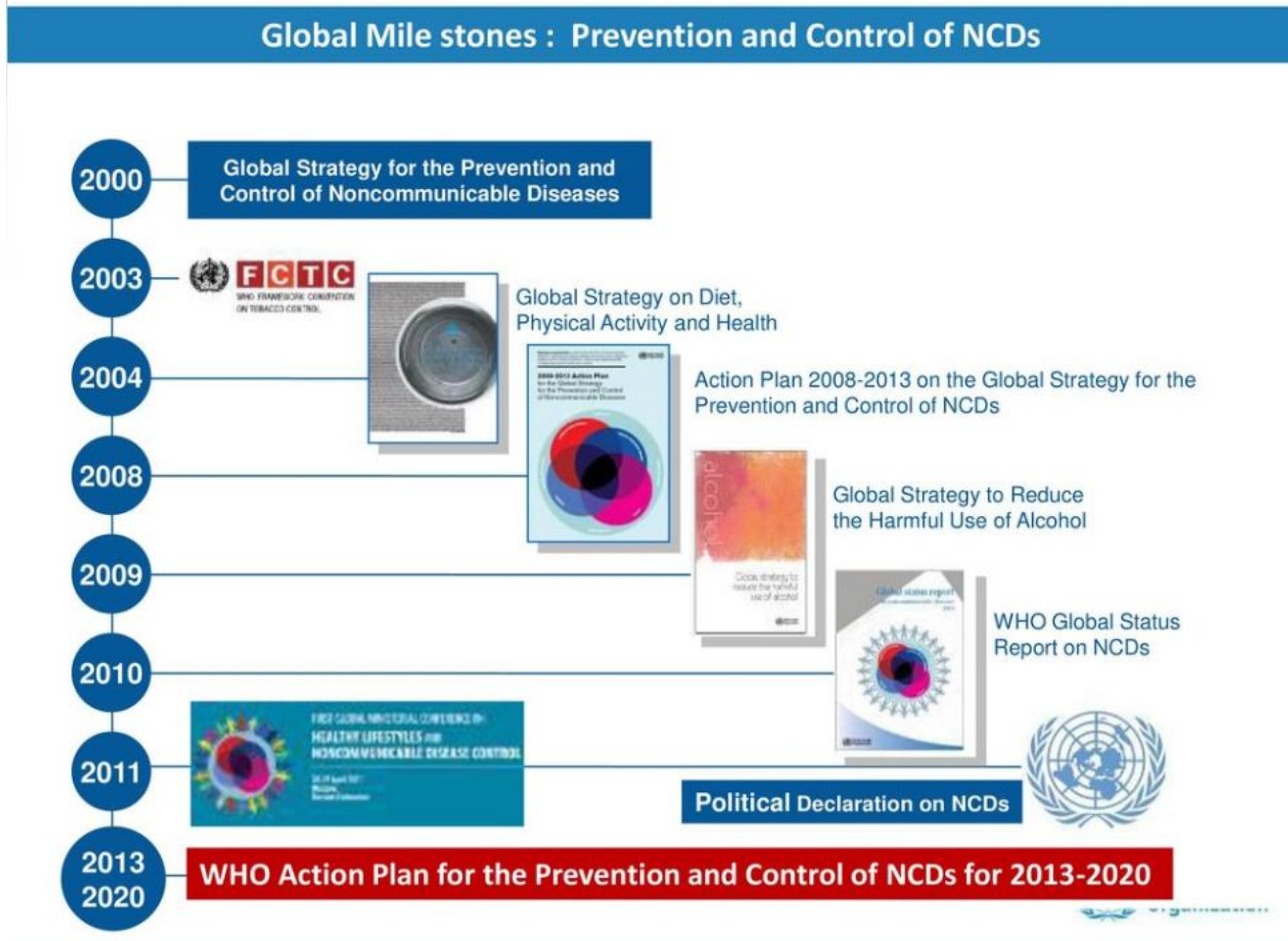
# Goals of NCD prevention and control

- Primary and Secondary Prevention of NCDs
- Planning NCDs policies and control measures
- Stakeholders Collaboration
- Patient Empowerment Programs
- Capacity Building for Health Professionals
- Surveillance of NCDs
- Research and Information Systems
- Health Promotion: Enhancement of Community Participation

# Goals of NCD prevention and control



Discuss and understand the global framework of prevention and control of NCDs

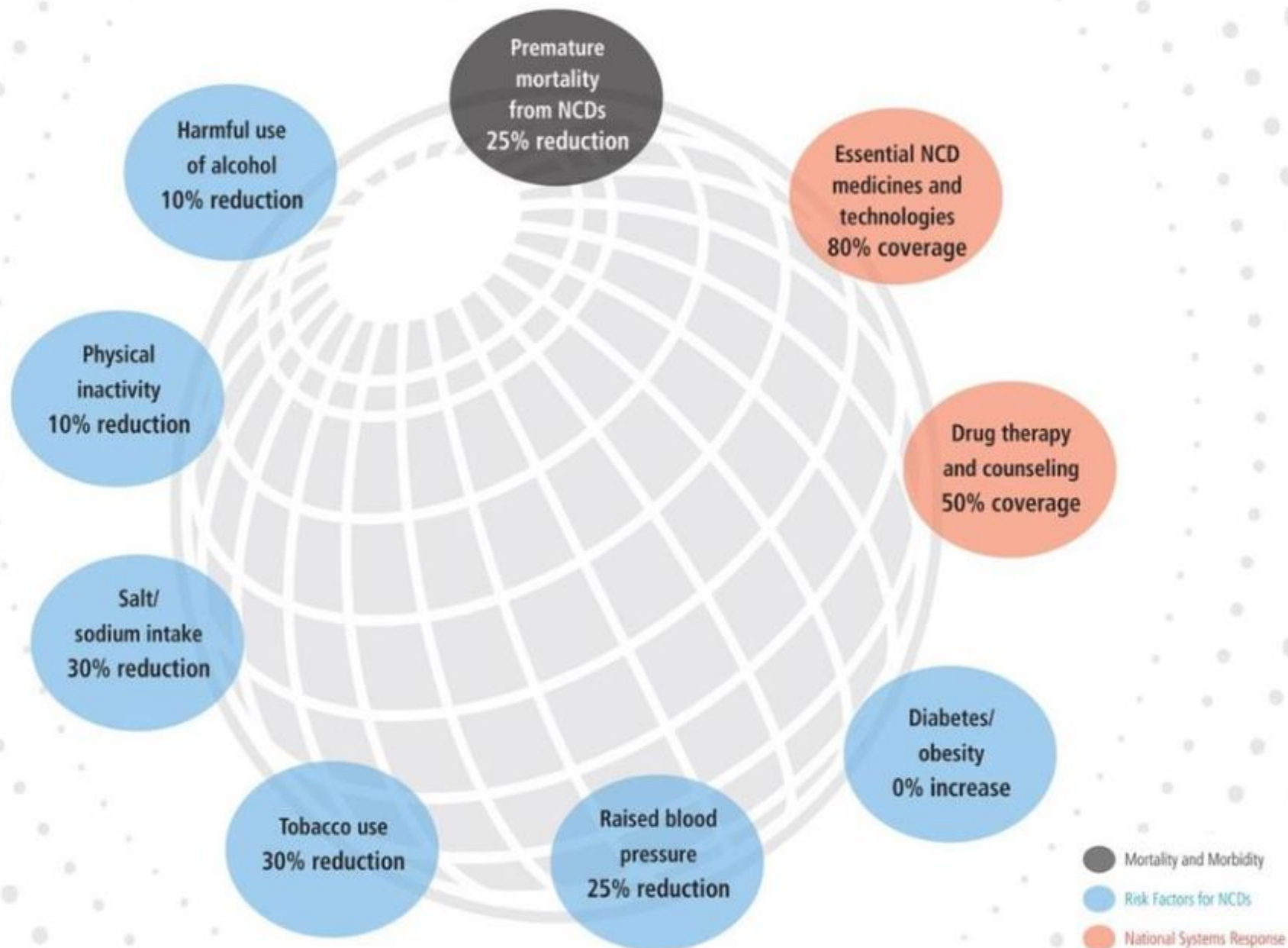


## WHO Global NCD Action Plan 2013-2020 –objectives

<u>Objective 1:</u>	<u>Objective 2:</u>	<u>Objective 3:</u>	<u>Objective 4:</u>	<u>Objective 5:</u>	<u>Objective 6:</u>
To strengthen international cooperation and advocacy to raise the priority accorded to prevention and control of NCDs in the development agenda and in internationally-agreed development goals	To strengthen national capacity, leadership, governance, multisectoral action and partnerships to accelerate country response for prevention and control of NCDs	To reduce exposure to modifiable risk factors for NCDs through creation of health-promoting environments	To strengthen and reorient health systems to address prevention and control of NCDs through people-centred primary health care and universal coverage	To promote and support national capacity for high quality research and development for prevention and control of NCDs	To monitor trends and determinants of NCDs and evaluate progress in their prevention and control

*The Action Plan comprises a set of actions which, when performed collectively by Member States, UN agencies, international partners and WHO, will reduce the burden of preventable morbidity and disability and avoidable mortality due to NCDs.*

# Set of 9 voluntary global NCD targets for 2025



# **'BEST BUYS' AND OTHER RECOMMENDED INTERVENTIONS FOR THE PREVENTION AND CONTROL OF NONCOMMUNICABLE DISEASES**

**UPDATED (2017) APPENDIX 3 OF THE GLOBAL ACTION PLAN  
FOR THE PREVENTION AND CONTROL OF NONCOMMUNICABLE DISEASES 2013-2020**

# WHAT IS IN THIS DOCUMENT

- provides policymakers with a list of ‘best buys’ and other recommended interventions to address noncommunicable diseases
- A list of options is presented for each of the four key risk factors for NCDs (tobacco, harmful use of alcohol, unhealthy diet and physical inactivity) and for four disease areas (cardiovascular diseases, diabetes, cancer and chronic respiratory diseases).



TABLE 1: **NONCOMMUNICABLE DISEASE “BEST BUYS”**

Risk factor/ disease to be addressed	Intervention	Detailed description
Reduce Tobacco use	<b>Tax</b>	Increase excise taxes and prices on tobacco products
	<b>Packaging</b>	Implement plain/standardized packaging and/or large graphic health warnings on all tobacco packages
	<b>Advertising, promotion and sponsorship</b>	Enact and enforce comprehensive bans on tobacco advertising, promotion and sponsorship
	<b>Smoke-free public places</b>	Eliminate exposure to second-hand tobacco smoke in all indoor workplaces, public places, and public transport
	<b>Educate</b>	Implement effective mass media campaigns that educate the public about the harms of smoking/tobacco use and second-hand smoke

Reduce  
unhealthy diet

**Reformulate  
food**

Reduce salt intake through the reformulation of food products to contain less salt and the setting of target levels for the amount of salt in foods and meals

**Supportive  
environments**

Reduce salt intake through the establishment of a supportive environment in public institutions such as hospitals, schools, workplaces and nursing homes, to enable lower sodium options to be provided

**Educate**

Reduce salt intake through a behaviour change communication and mass media campaign

**Packaging**

Reduce salt intake through the implementation of front-of-pack labelling

Reduce physical  
inactivity

**Educate**

Implement community-wide public education and awareness campaigns for physical activity which includes a mass media campaign combined with other community-based education, motivational and environmental programmes aimed at supporting behavioural change of physical activity levels

***THANK YOU***

***ANY QUESTIONS?***

