

Health Level Indicators

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**Health level indicators
Value of information
in support of public health
Measuring the
health of population
Information systems and
community diagnosing**



Phase 1 lecture, 2022 - 2023

academic year, spring semester

18th April 2023, Ankara - TURKIYE

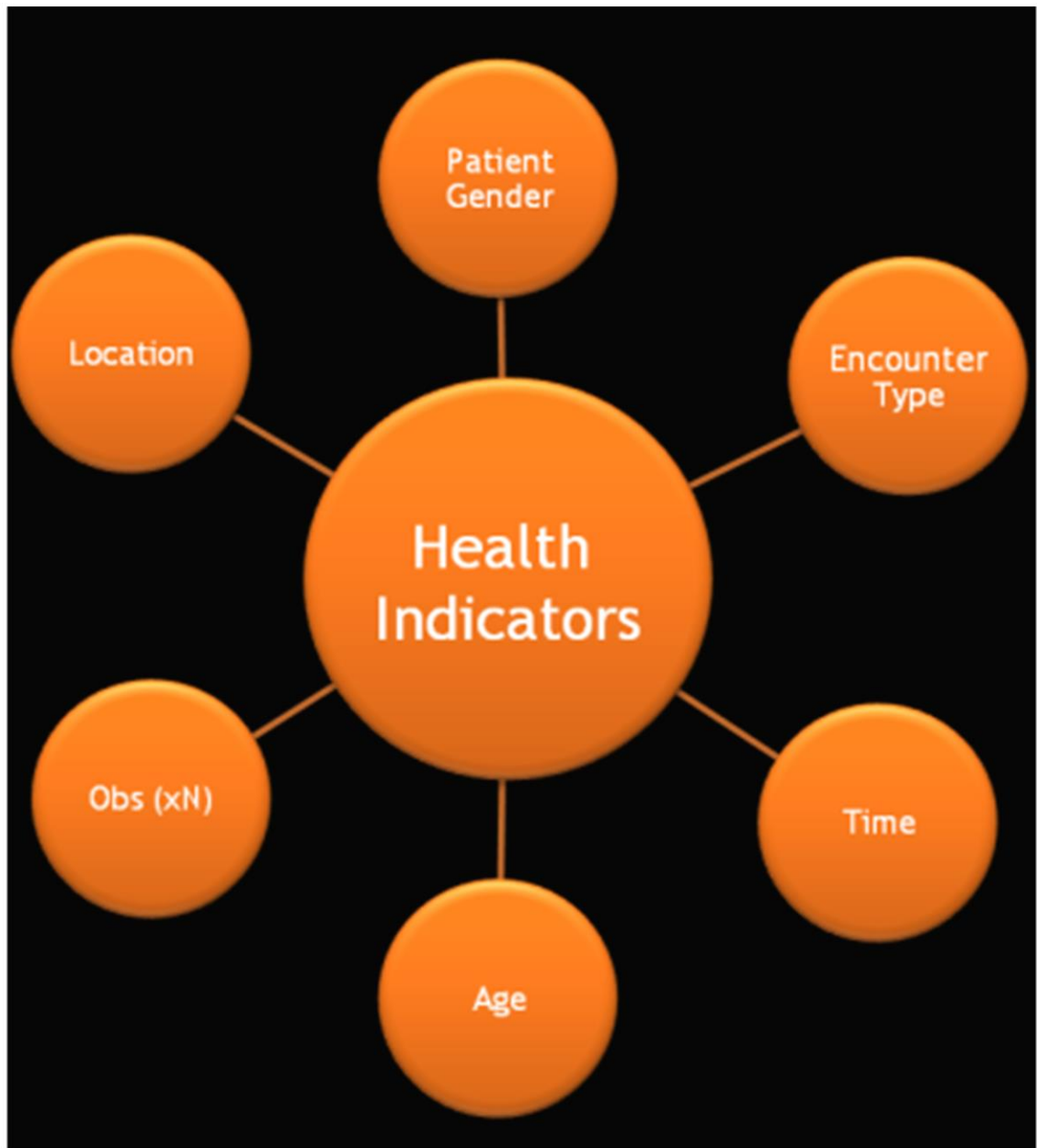


Learning Objectives

- At the end of this lecture students will be able to :
- **Define** what the **Health Level Indicators** were..
- *Understand the meaning and function of health level indicators in Public Health*
- **Calculate** and debate essential health level indicators
- *Interpretate and inference the major health level indicators*
- **Utilise** health level indicators for managing & planning health services regionally
- *Use health level indicators for evaluating & **prioritising** health care and problems*
- **Articulate** health level indicators for comparing countries, regions, social classes etc.
- *Utilise health level indicators for **diagnosing inequalities within the community***
- **Evaluate** the national and international health statistics through these indicators
- *Realise the concept of **Disease Burden** & recognise national/international databases*
- *Recognise national-international databases on health statistics and reach/utilise them*

What is a Health Indicator??

- ✓ A **health indicator** is a measure designed to summarize information about a given priority topic in **population health** or health system performance. Health indicators provide comparable and actionable information across different geographic, organizational or administrative boundaries and/or can track progress over time.
- ✓ *Health indicators support provinces/territories, regional health authorities and institutions as they monitor the health of their populations and track how well their local health systems function.*
- ✓ They help in monitoring key performance dimensions described in the **Health System Performance** Measurement Framework, which provides a common approach for managing health system performance across the country.



Health Indicators

- Health indicators are used to measure health of a community
 - Health indicators can be used to compare health of two communities
 - It can be used to assess the health needs of a community
 - It is useful for monitoring and evaluation of health programmes

New indicators in the 2019 edition

- Avoidable mortality
- Chronic diseases
- Opioids – use, deaths, prescribing
- Extent of health care coverage
- Safe care – hospital-acquired infections, safe prescribing, safe LTC
- Patient-reported outcomes – hip and knee, breast cancer
- Breast cancer survival by stage
- Prices in the health sector
- Public funding of health spending
- Health expenditure projections
- LTC workers, LTC costs

- Inequality indicators (health status, risk factors, access)

<https://www.oecd.org/health/health-data.htm> 9.5.22



OECD Health Statistics 2022

- ❑ The online database *OECD Health Statistics 2022* has been updated on 30,11.2022. The **OECD Health Database** offers the most comprehensive source of comparable statistics on health and health systems across **OECD countries**. It is an essential tool to carry out comparative analyses and draw lessons from international comparisons of diverse health systems.
- ❑ Access all datasets in the 2022 online [database](#)
- ❑ Need help navigating the database ?
- ❑ Read the user's guide on [how to create tables in OECD.Stat](#)
 - Subscribers and readers at subscribing institutions can access the database via [iLibrary](#), the **OECD online library**
 - Journalists may also contact the Media Relations Division at news.contact@oecd.org

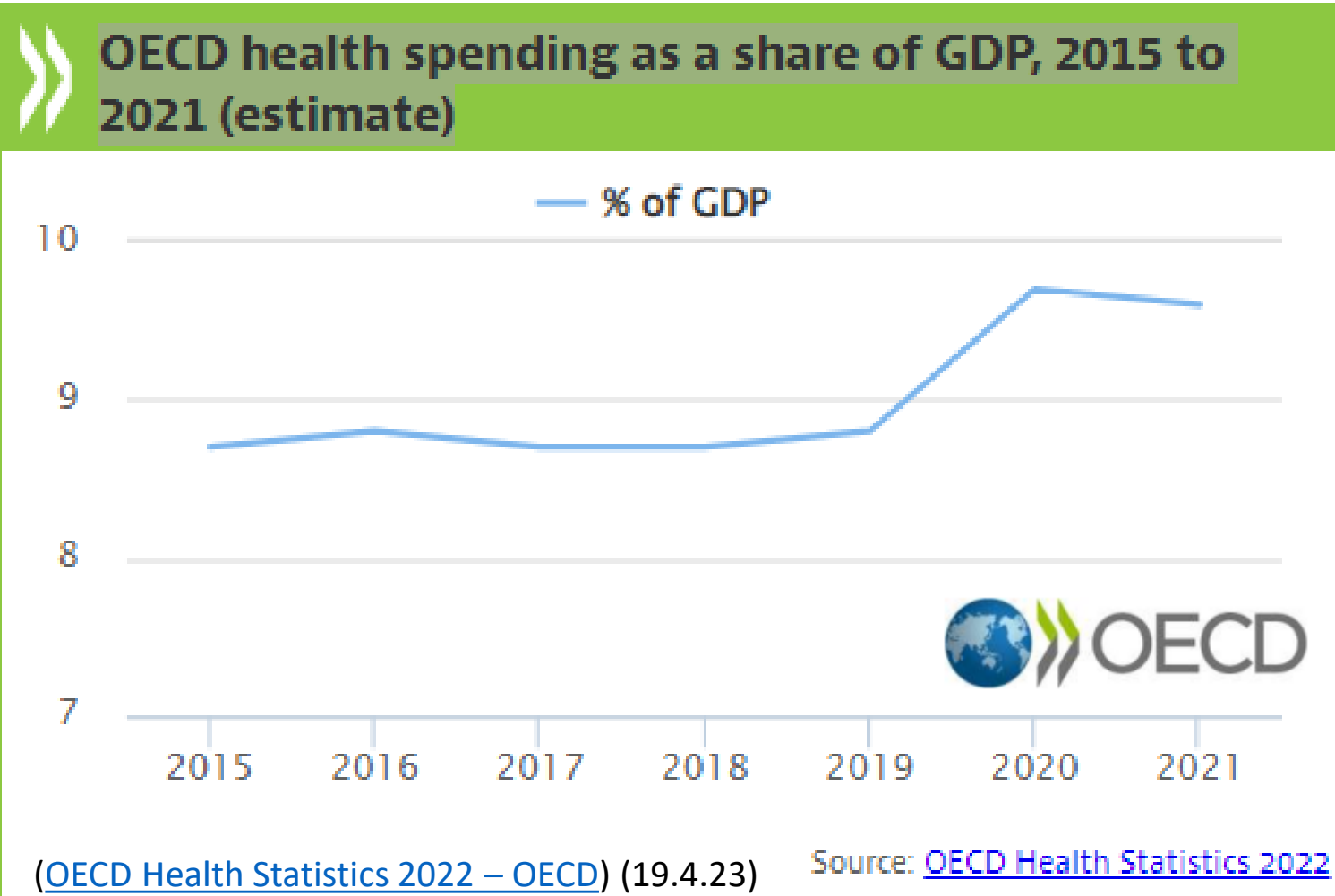


[OECD Health Statistics 2022 - OECD](#) 19.4.23

OECD health spending as a share of GDP, 2015 to 2021 (estimate)

- ❑ Latest OECD estimates point to average health expenditure growth of 5% in 2020, driven by the exceptionally high growth in spending by government and compulsory schemes (+8.1%) in response to the additional needs to address the **COVID-19 pandemic**.
- ❑ **Private spending**, on the other hand, fell on average by more than 3%.
- ❑ As a result of the substantial spending growth and the widespread economic downturn, **health spending** as a share of GDP jumped to 9.7% across OECD countries in 2020, up from 8.8% in 2019.
- ❑ Preliminary estimates for a group of 20 OECD countries suggest that **health spending** continued to grow strongly in 2021 – by around 6%.
- ❑ Yet, as economies recovered globally in 2021, the proportion of health spending in GDP is not expected to have grown further in 2021, according to the database OECD Health Statistics 2022, updated in November 2022. ([OECD Health Statistics 2022 – OECD](#)) (19.4.23)

OECD health spending as a share of GDP, 2015 to 2021 (estimate)



Note: Based on preliminary estimates of health spending for 2021 for 20 countries.

- ❖ The OECD carries out work on health data and indicators to improve international comparisons and economic analyses of **health systems**.
- ❖ **OECD Health Statistics** and **Health at a Glance** are, respectively, the leading statistical database and publication for international comparisons of health and health systems.
- ❖ They help policy makers, researchers, journalists and citizens compare the performance of health systems across OECD and partner countries.

CHARACTERISTICS

- **Valid** – they should actually measure what they are supposed to measure.
- **Reliable** – the results should be the same when measured by different people in similar circumstances.
- **Sensitive** – they should be sensitive to changes in the situation concerned.
- **Specific** – they should reflect changes only in the situation concerned.
- **Feasible** – they should have the ability to obtain data when needed.
- **Relevant** – they should contribute to the understanding of the phenomenon of interest.

CLASSIFICATION OF HEALTH INDICATORS

1. Mortality Indicators.
2. Morbidity Indicators.
3. Disability Rates
4. Nutritional Status Indicators
5. Health care delivery indicators
6. Utilization rates
7. Indicators of social and mental health
8. Environmental health
9. Socioeconomic Indicators
10. Health policy Indicators
11. Indicators Of quality of life
12. Other Indicators

INDICATORS OF HEALTH

- **Health status indicators measure different aspects** of the health of a population. Examples include life expectancy, infant mortality, disability or chronic disease rates.
- **Health determinant indicators measure things that influence health.** Examples include diet, smoking, water quality, income and access to health services

Turkey



Demographic and
Health Survey

2018

Key Findings

- **Drinking water and sanitation:** 98% of the households in Turkey have access to an improved source of drinking water, and 99% use improved toilet facilities.
- **Tobacco smoking inside the home:** In 28% of the households, someone smokes inside the house on a daily basis, and in 3% of the households someone smokes inside on a weekly basis.
- **Household composition:** On average, households in Turkey have 3.5 members, and 16% of the households are female-headed.
- **Birth registration:** 98% of the children under age 5 are registered with civil authorities.
- **School attendance:** 95% of females age 6-13 attend primary or secondary school, as compared with 94% of males. The net attendance ratio (NAR) drops in high school: 77% of females and 78% of males age 14-17 attend high school.

Summary trends: 2018 TDHS results

Sustainable Development Goal Indicators – 2018 Turkey DHS

Indicator	Sex		Total
	Male	Female	
2. Zero hunger			
2.2.1 Prevalence of stunting among children under 5 years of age	6.1	5.8	6.0
2.2.2 Prevalence of malnutrition among children under 5 years of age	11.0	8.4	9.8 ^a
a) Prevalence of wasting among children under 5 years of age	1.7	1.6	1.7
b) Prevalence of overweight among children under 5 years of age	9.3	6.8	8.1
3. Good health and well-being			
3.7.1 Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods ¹	na	60.6	na
5. Gender equality			
5.6.1 Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care ^{1,2}	na	49.8	na
16. Peace, justice, and strong institutions			
16.9.1 Proportion of children under 5 years of age whose births have been registered with a civil authority	98.2	98.7	98.4

na = Not applicable

¹ This figure is not presented in the main report. ² Data are available for currently married women who are not pregnant

^a The total is calculated as the simple arithmetic mean of the percentages in the columns for males and females

TURKEY – 5 REGIONS



REGIONS AND PROVINCES

01 WEST

09 Aydın
10 Balıkesir
16 Bursa
17 Çanakkale
20 Denizli
22 Edirne
34 İstanbul
35 İzmir
39 Kırklareli
41 Kocaeli
45 Manisa
48 Muğla
54 Sakarya
59 Tekirdağ
77 Yalova

02 SOUTH

01 Adana
07 Antalya
15 Burdur
31 Hatay
32 Isparta
33 İçel
46 K.Maraş
80 Osmaniye

03 CENTRAL

03 Afyon
05 Amasya
06 Ankara
11 Bilecik
14 Bolu
18 Çankırı
19 Çorum
26 Eskişehir
38 Kayseri
40 Kırşehir
42 Konya
43 Kütahya
50 Nevşehir
51 Niğde
58 Sivas

60 Tokat
64 Uşak
66 Yozgat
68 Aksaray
70 Karaman
71 Kırıkkale
81 Düzce

04 NORTH

08 Artvin
28 Giresun
29 Gümüşhane
37 Kastamonu
52 Ordu
53 Rize
55 Samsun
57 Sinop
61 Trabzon
67 Zonguldak
74 Bartın
78 Karabük

05 EAST

02 Adıyaman
04 Ağrı
12 Bingöl
13 Bitlis
21 Diyarbakır
23 Elazığ
24 Erzincan
25 Erzurum
27 Gaziantep
30 Hakkari
36 Kars
44 Malatya
47 Mardin
49 Muş
56 Siirt

62 Tunceli
63 Şanlıurfa
65 Van
69 Bayburt
72 Batman
73 Şırnak
75 Ardahan
76 Iğdır
79 Kilis

TURKEY – 12 REGIONS



REGIONS AND PROVINCES

- 01 İSTANBUL**
34 İstanbul
- 02 WEST MARMARA**
10 Balıkesir
17 Çanakkale
22 Edirne
39 Kırklareli
59 Tekirdağ
- 03 AEGEAN**
03 Afyon
09 Aydın
20 Denizli
35 İzmir
43 Kütahya
45 Manisa
48 Muğla
64 Uşak

- 04 EAST MARMARA**
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16 Bursa
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41 Kocaeli
54 Sakarya
77 Yalova
81 Düzce
- 05 WEST ANATOLIA**
06 Ankara
42 Konya
70 Karaman

- 06 MEDITERRANEAN**
01 Adana
07 Antalya
15 Burdur
31 Hatay
32 Isparta
33 İçel
46 K. Maraş
80 Osmaniye
- 07 CENTRAL ANATOLIA**
38 Kayseri
40 Kırşehir
50 Nevşehir
51 Niğde
58 Sivas
66 Yozgat
68 Aksaray
71 Kırıkkale

- 08 WEST BLACK SEA**
05 Amasya
07 Antalya
18 Çankırı
19 Çorum
37 Kastamonu
55 Samsun
57 Sinop
60 Tokat
67 Zonguldak
74 Bartın
78 Karabük
- 09 EAST BLACK SEA**
08 Artvin
28 Giresun
29 Gümüşhane
52 Ordu
53 Rize
61 Trabzon

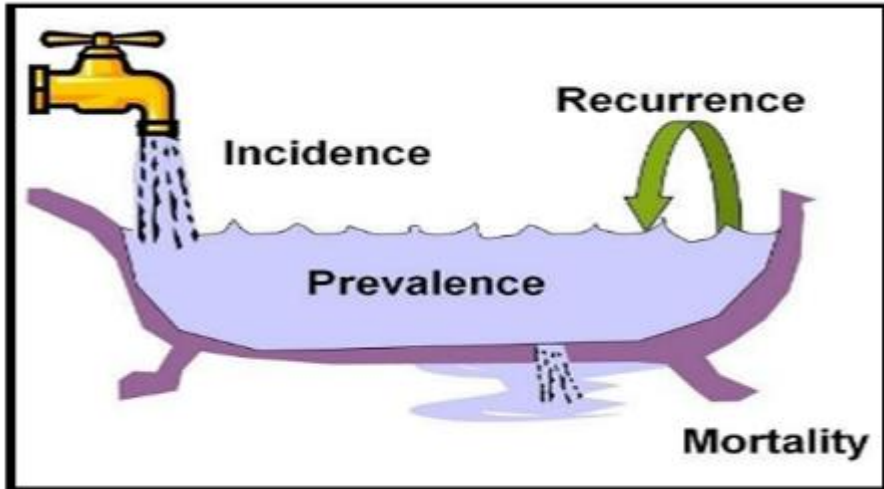
- 10 NORTHEAST ANATOLIA**
04 Ağrı
24 Erzincan
25 Erzurum
36 Kars
69 Bayburt
75 Ardahan
76 Iğdır
- 11 CENTRAL EAST ANATOLIA**
12 Bingöl
13 Bitlis
23 Elazığ
30 Hakkari
44 Malatya
49 Muş
62 Tunceli
65 Van

- 12 SOUTHEAST ANATOLIA**
02 Adıyaman
21 Diyarbakır
27 Gaziantep
36 Mardin
47 Mardin
56 Siirt
63 Şanlıurfa
72 Batman
73 Şırnak
79 Kilis



Indicators of health

- To measure health status.
- To compare
- To assess the health needs
- To plan & implement----
- To evaluate health care



INDICATORS OF HEALTH

- Indicator also termed as Index or Variable is only an indication of a given situation or a reflection of that situation.
- **Health Indicator is a variable, susceptible to direct measurement, that reflects the state of health of persons in a community.**
- Indicators help to measure the extent to which the objectives and targets of a programme are being attained.
- Numerical indication of the health of a given population derived from a specified composite formula.

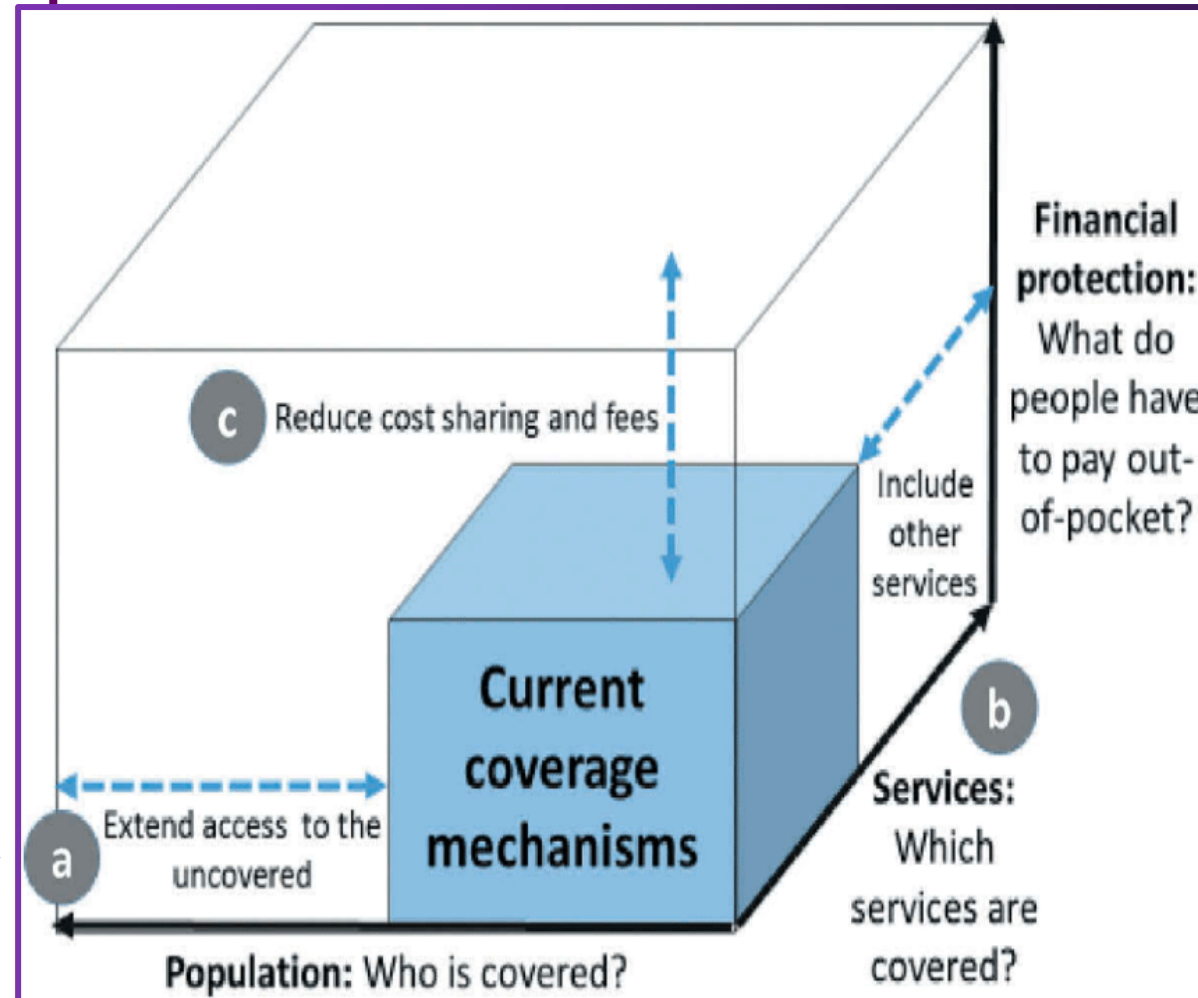
Universal health coverage-UHC/WHO

WHO uses 16 essential health services in 4 categories as indicators of the level and equity of coverage in countries:

Reproductive, maternal, newborn and child health:

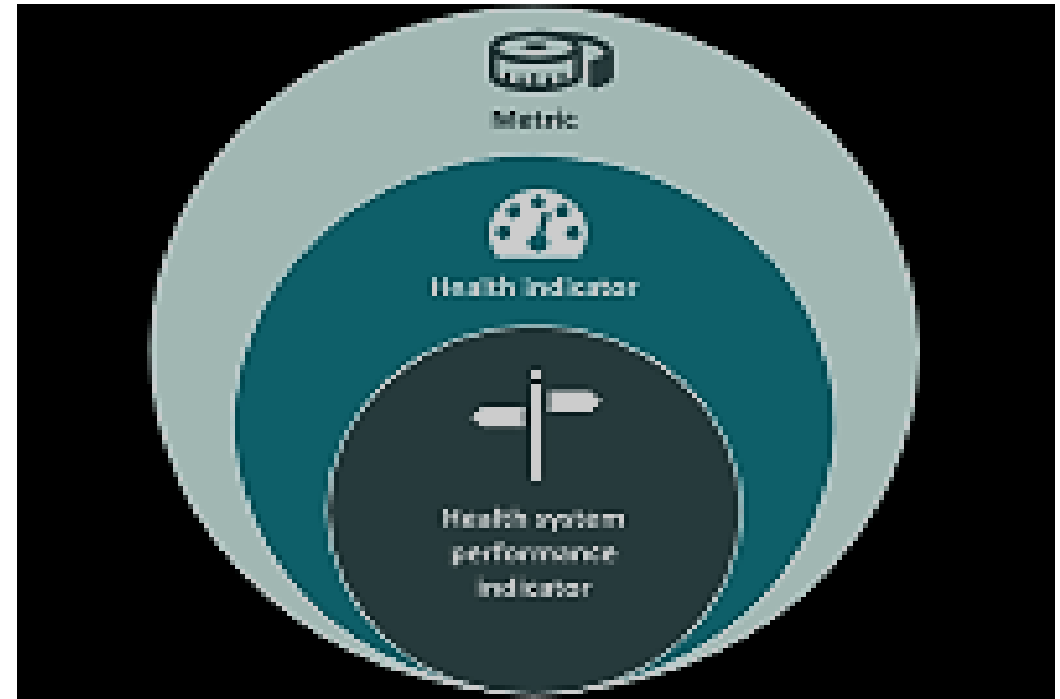
- family planning
- antenatal and delivery care
- full child immunization
- health-seeking behaviour for pneumonia

[http://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-\(uhc\)](http://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc)), 01.09.2018



Mortality Indicators

- Crude death rates
- Infant mortality rates
- Maternal mortality rates
- Child mortality rates.
- Proportional mortality rates.



Metric : Information that is quantifiable and is reported as a number.

Has value and many uses but cannot be compared.

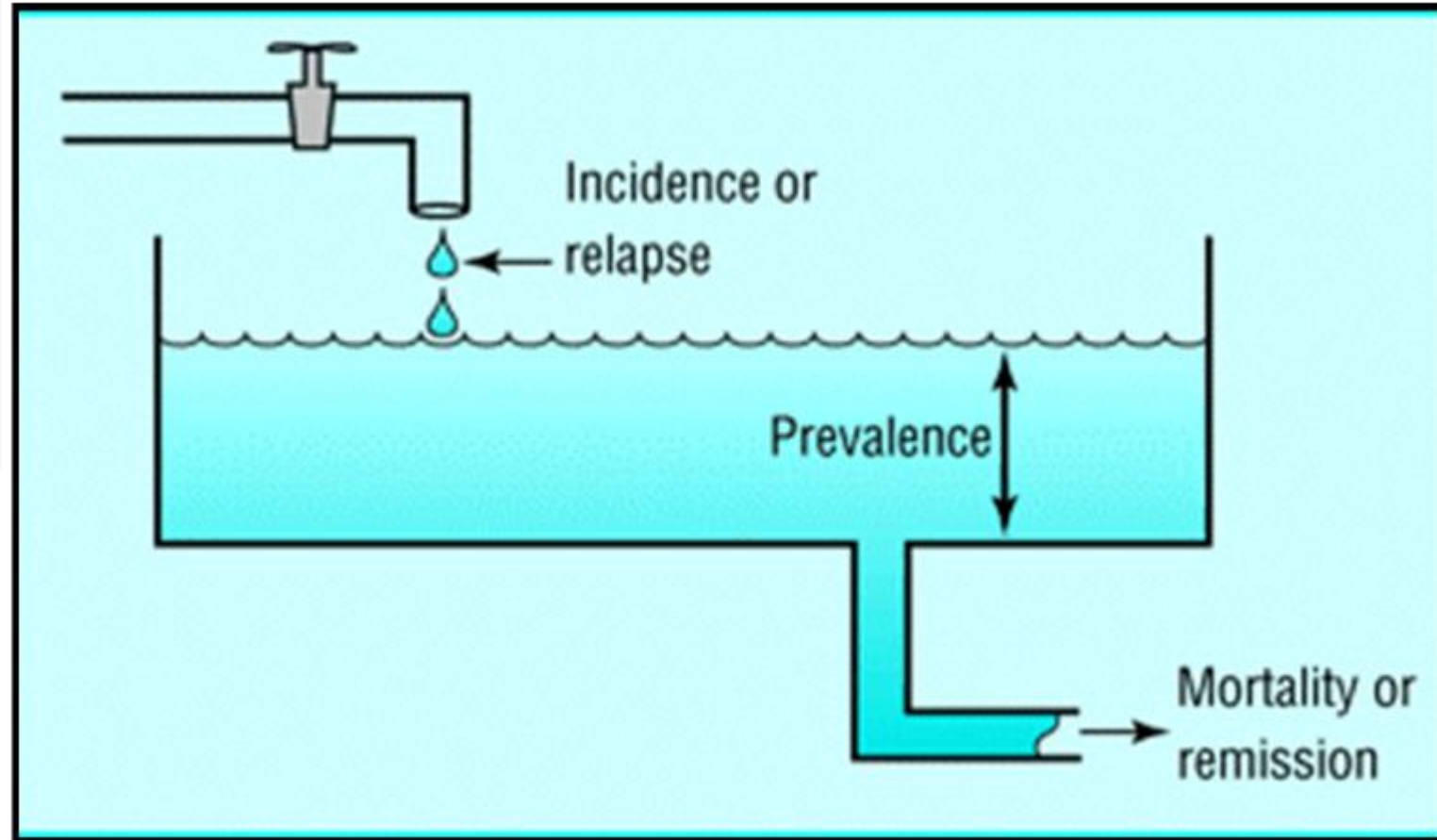
Health indicator : Puts metrics into some kind of context, usually using a ratio (per X) and is designed to ensure comparability (e.g., by being risk-adjusted or standardized).

Directionality may or may not exist.

Health system performance indicator : A health indicator that has a desired direction (e.g., lower is better).

Morbidity indicators

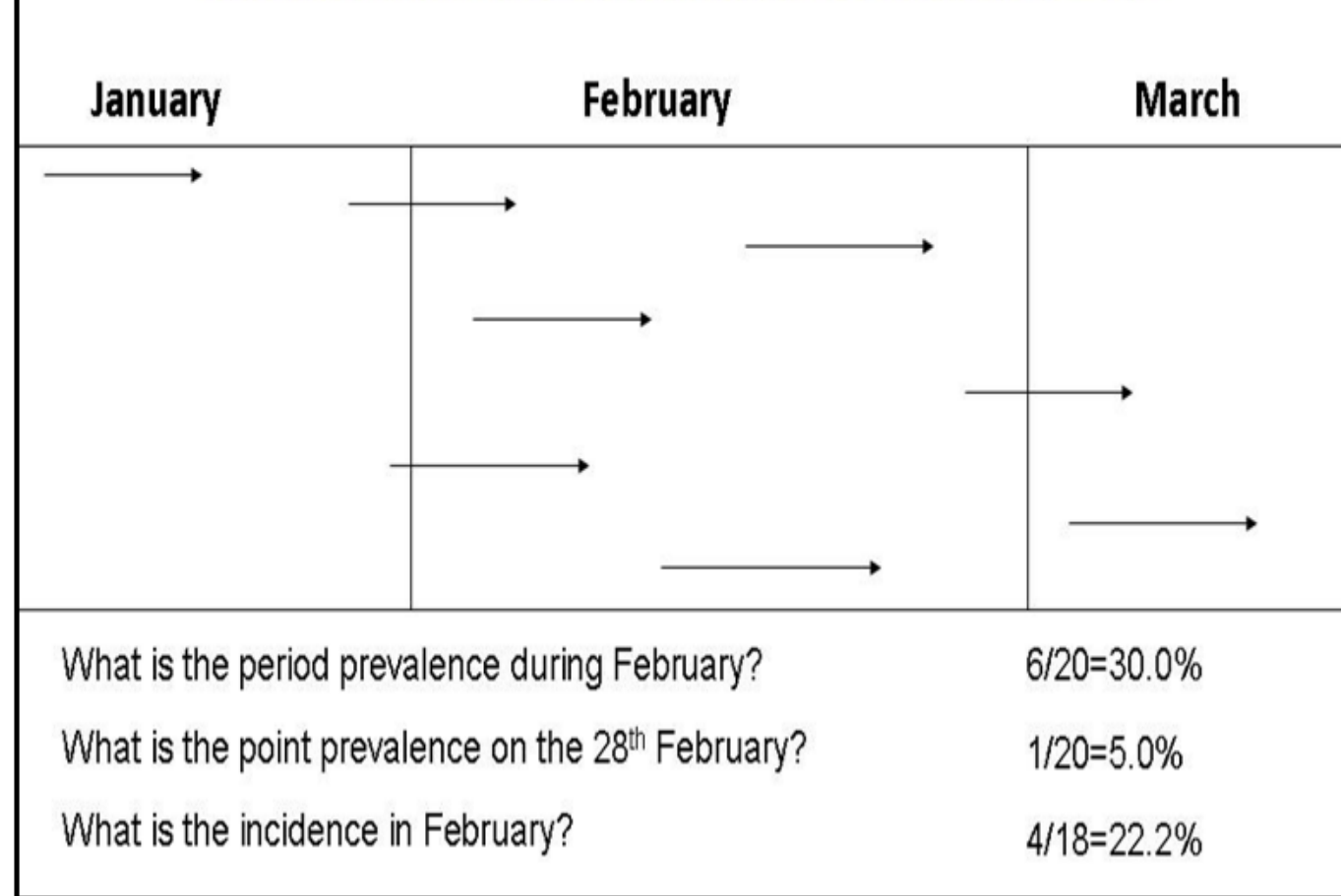
- Incidence rate
- Prevalence rate.
- Notification rate.
- Out patients attendance rate.
- Hospital admission rate
- Duration of stay in the hospital.



Disability rates

- Event type
 - No of days of restricted activity.
 - Bed disability days.
 - Sickness absenteeism.
- Person type
 - Limitation of mobility.
 - Limitation of daily activity.

Cases of cold infections in class 4J : Class size = 20



DALY

Disability Adjusted Life Year is a measure of overall disease burden, expressed as the cumulative number of years lost due to ill-health, disability or early death

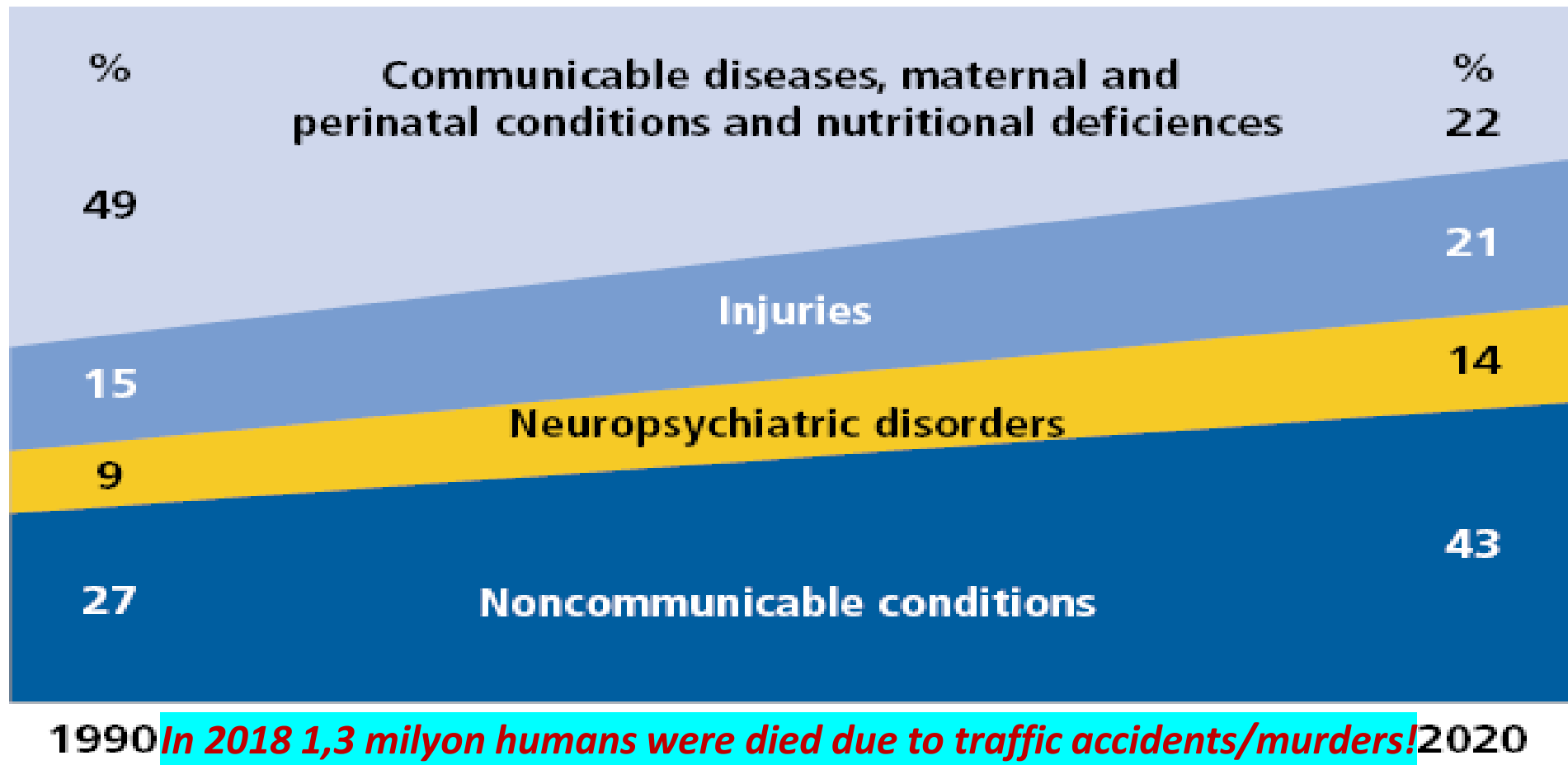
$$= \text{YLD} + \text{YLL}$$

Years Lived with Disability + Years of Life Lost



DALYs, by broad cause group 1990-2020 in developing countries (baseline scenario)

DALY = Disability-Adjusted Life Year



Source: WHO, Evidence, Information and Policy, 2000

Increasing burden of noncommunicable diseases and injuries change in rank order of DALYs for the 15 leading causes (baseline scenario)

1999 Disease or Injury	2020 Disease or Injury
1. Acute lower respiratory infections	1. Ischaemic heart disease
2. HIV/AIDS	2. Unipolar major depression
3. Perinatal conditions	3. Road traffic injuries
4. Diarrhoeal diseases	4. Cerebrovascular disease
5. Unipolar major depression	5. Chronic obstructive pulmonary disease
6. Ischaemic heart disease	6. Lower respiratory infections
7. Cerebrovascular disease	7. Tuberculosis
8. Malaria	8. War
9. Road traffic injuries	9. Diarrhoeal diseases
10. Chronic obstructive pulmonary disease	10. HIV
11. Congenital abnormalities	11. Perinatal conditions
12. Tuberculosis	12. Violence
13. Falls	13. Congenital abnormalities
14. Measles	14. Self-inflicted injuries
15. Anaemias	15. Trachea, bronchus and lung cancers

DALY = Disability-adjusted life year

Source: WHO, Evidence, Information and Policy, 2000

WHO : *The number of people living with depression increased by more than 18% between 2005 and 2015.*

- **Depression: Let's talk**
- **World Health Day**, celebrated on **7 April** every year to mark the anniversary of the founding of WHO, provides us with a unique opportunity to mobilize action around a specific health topic of concern to people all over the world.
- The theme of 2017 World Health Day campaign was **d e p r e s s i o n .**





Healthy life expectancy (HALE) at birth

- **Healthy life expectancy (HALE)** is a form of health expectancy that applies disability weights to health states to compute the equivalent number of years of life expected to be lived in full health.

Good health years

poor health years

- Overall, **global HALE** at birth in 2013 for males and females combined was 62 years, 7 years lower than total life expectancy at birth (Eo). In other words, *poor health* resulted in a loss of nearly 7 years of healthy life, on average globally.
- **Global HALE** at birth for females was only 4 years greater than that for males. In comparison, female life expectancy at birth was almost 5 years higher than that for males.

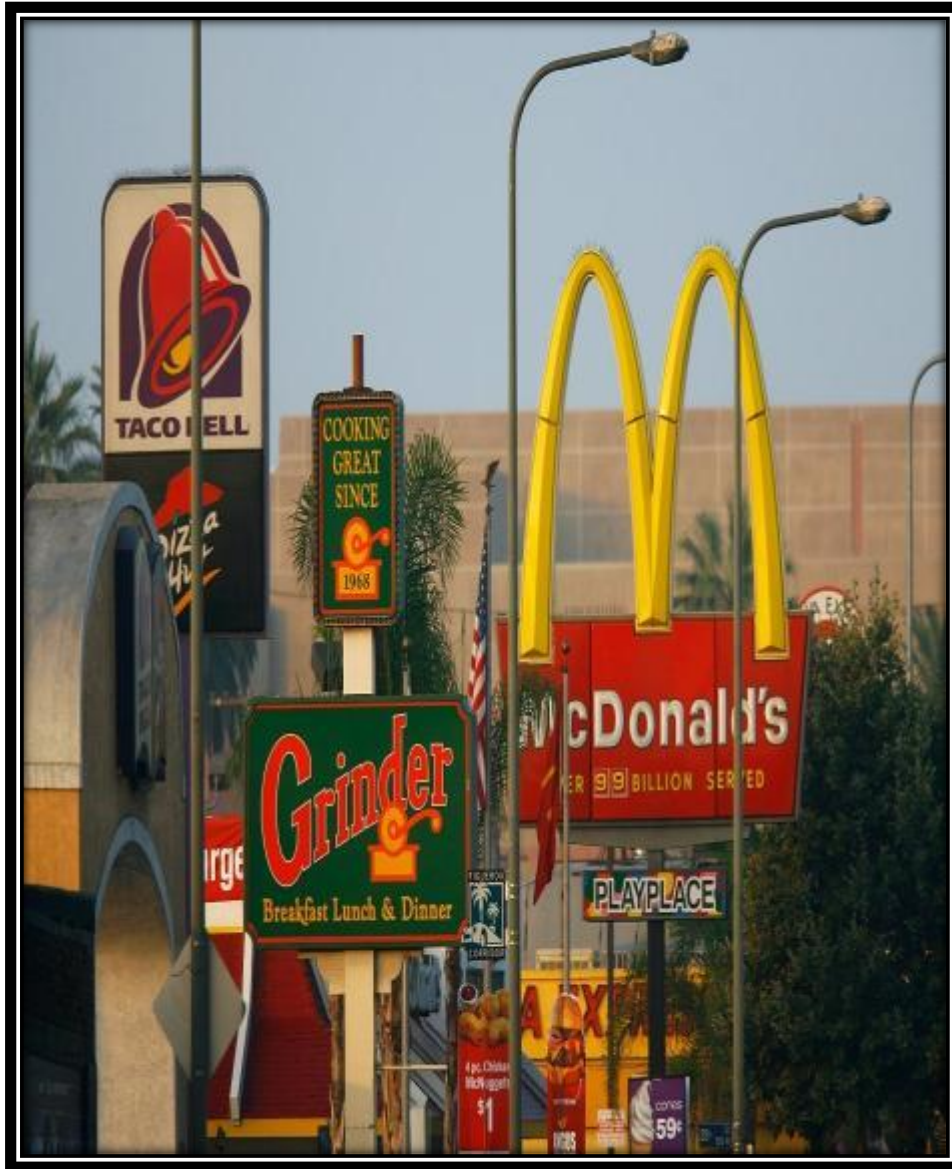
http://www.who.int/gho/mortality_burden_disease/life_tables/hale_text/en/ 23.12.15

Nutritional status indicators

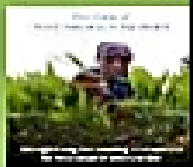
- Incidence of LBW
- Incidence of LBW
- Anthropometric measurements of < 5
mid arm circumference
height & weight with age



CRUDE DEATH RATE is the total number of deaths to residents in a **specified geographic area** (country, state, county, etc.) divided by the total population for the **same geographic area** (for a **specified time period**, usually a calendar year) and multiplied by 1000.

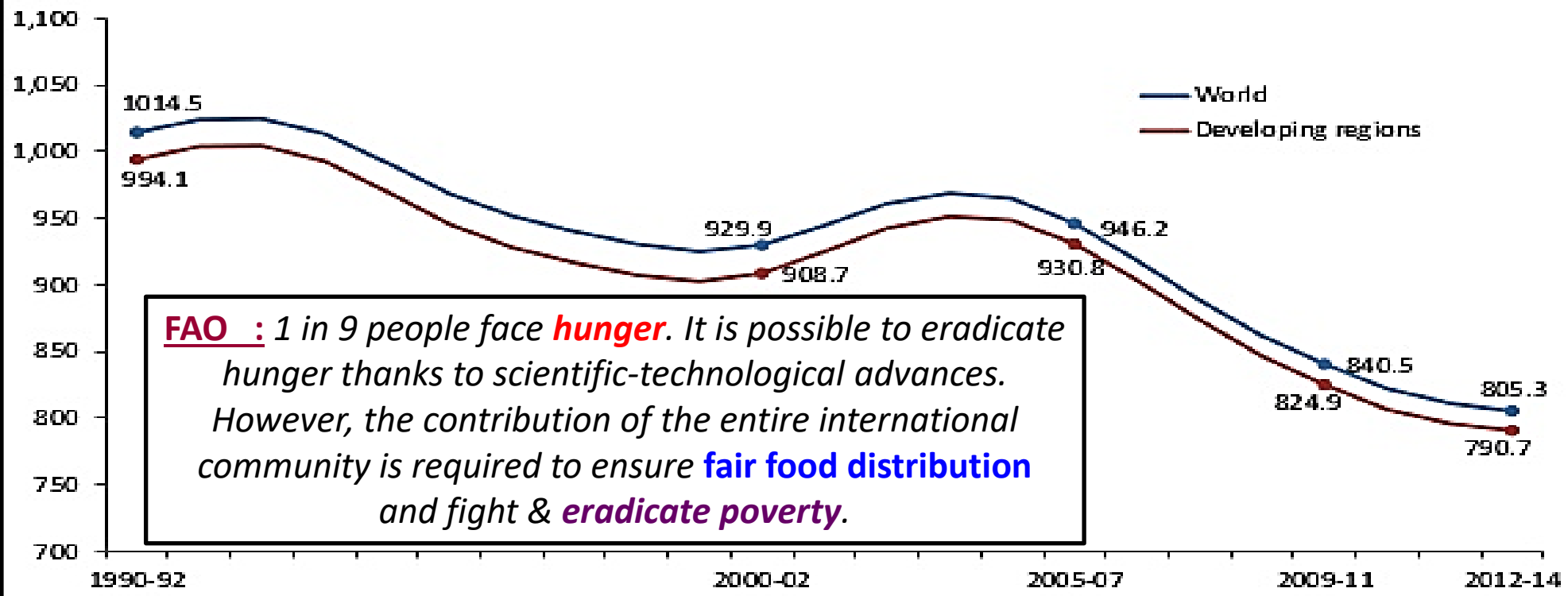


828 million HUNGER, >1 billion obes! «A strange bi-polarity!!



Undernourishment around the world

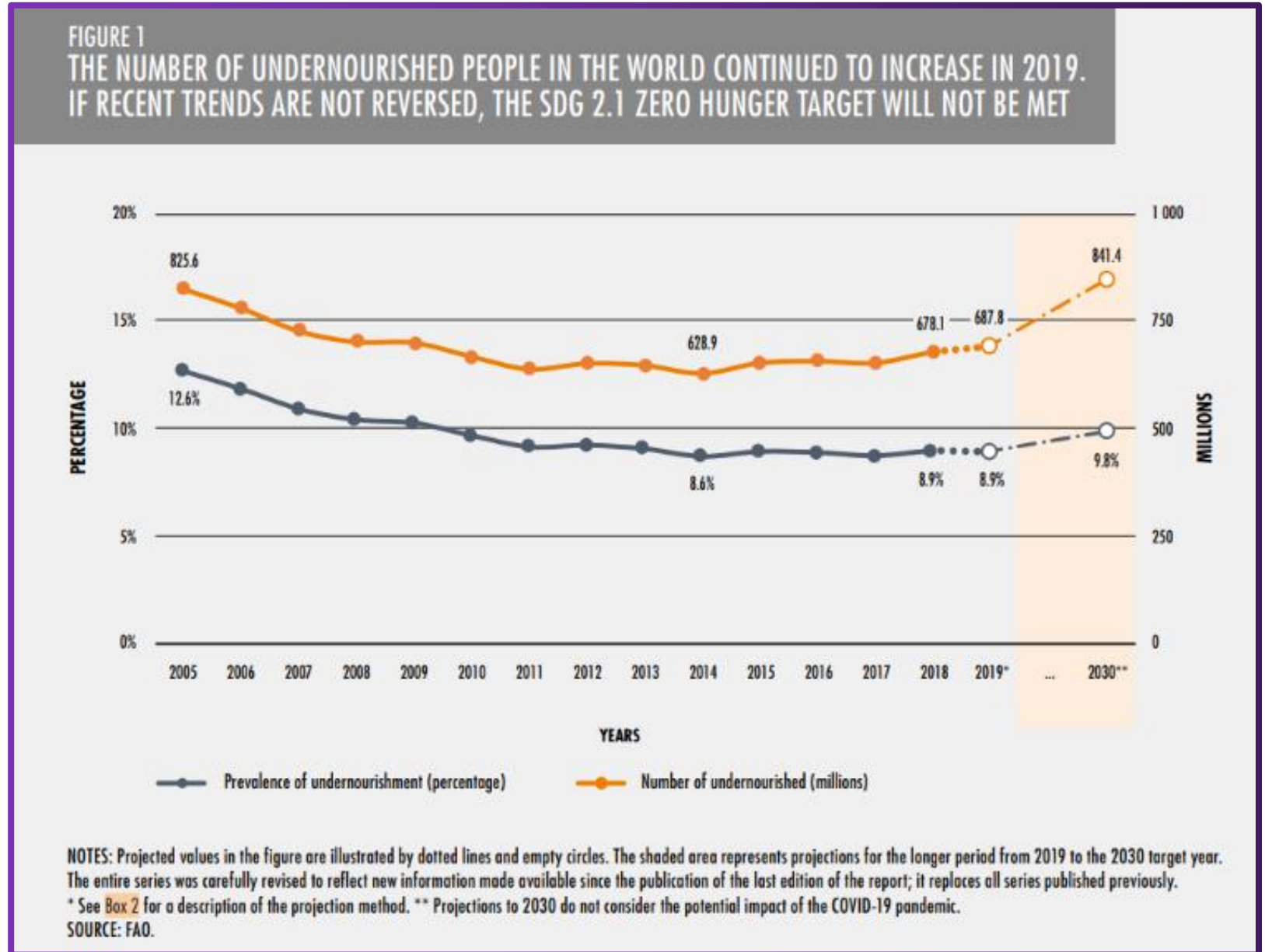
- ◆ **805 million people** estimated to be suffering from chronic hunger in 2012–14, down 100 million in the last decade.
- ◆ The vast majority, **791 million**, live in **developing countries**.



FAO : 1 in 9 people face **hunger**. It is possible to eradicate hunger thanks to scientific-technological advances. However, the contribution of the entire international community is required to ensure **fair food distribution** and fight & **eradicate poverty**.

Global hunger fell for decades, but it's rising again!

- ✓ **Almost 690 million people in the world were undernourished in 2019 – that's 8.9% of the world population, a new UN report says.**
- ✓ **This figure could exceed 840 million by 2030, if current trends continue.**
- ✓ **Factors increasing global hunger include economic slowdowns and extreme weather events.**
- ✓ **The UN warns that without efforts to reform global food systems, its target of zero hunger by 2030 will be missed.**



<https://www.weforum.org/agenda/2020/07/global-hunger-rising-food-agriculture-organization-report/> 6.9.22

Health care delivery indicators

- Doctor : Population. 1:2500
- Nurse: Population 1:5000
- Health worker: Population 1:3000
- Sub centers: Population 1:3000
- P H C : Population 1:30000

The **crude birth rate** (CBR) is equal to the number of live **births** (b) in a year divided by the total midyear population (p), with the ratio multiplied by 1,000 to arrive at the number of **births** per 1,000 people.

CBR, Turkiye, 2021 = (Number of live birth / country population) x 1000

CBR = 15.408 births per 1000 people, 15,4‰

The CBR for Turkiye in 2020 : 15.665 ‰,

The CBR for Turkiye in 2019 : 15.922 ‰

The birth rate for World in 2021 was 17.9 ‰, a 1.13% decline from 2020.

In 2020, CBR for Democratic Republic of the Congo was 40.1 ‰. CBR fell gradually from 46.‰ in 1971 to 40.1 ‰ in 2020.

CBR for China, in 2021 : 7,52‰.

CBR for Italy, in 2021 : 7,24‰

Almost half Turkiye's CBR..

CBR for Holland, in 2021 : "1.672 ‰"

Indicators of social & mental health

- Rates of crimes--- murder, theft, suicides, Prostitution, gambling, drug abuse....
- Rates of accidents.
- Rate of divorces, family violence

Maternal mortality ratio:
the number of maternal
deaths per *live births*

Numerator: Maternal deaths

Denominator: Live births

Maternal
Death



Health policy indicators

- Proportion of the budget (NGP) spent on...

Health services—

RCH, RNTCP, ICDS, Pulse polio

Health related services—

Water supply

Sanitation.

Nutrition

Housing.

Community development.

The infant mortality rate is the number of deaths under one year of age occurring among the live births in a given geographical area during a given year, per 1,000 live births occurring among the population of the given geographical area during the same year.

Specific Death Rates

- For example: infant mortality

$$\text{Infant mortality rate} = \frac{\text{Number of child deaths less than 1 year old in one year}}{\text{Number of live births in the same year}} \times 1,000$$

$$\text{Infant death rates under one year} = \frac{\text{Number of child deaths less than 1 year old in one year}}{\text{Total population}} \times 100,000$$

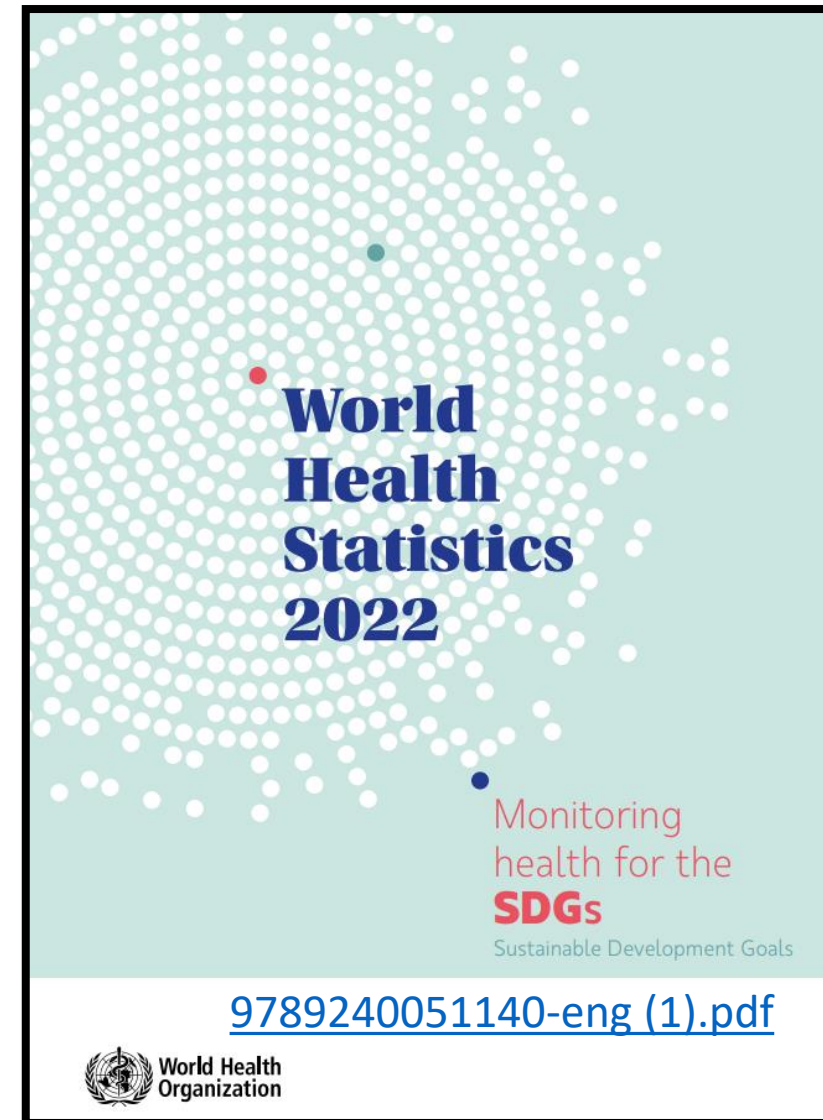
Socioeconomic indicators

- Growth rate of population.
- Per capita income / GNP.
- Percentage of people below poverty line.
- Level of unemployment.
- Dependency ratio.
- Literacy rate.
- Family size.

*The World Health Statistics series is WHO's annual snapshot of the state of the world's health. This 2018 edition contains the latest available data for 36 health-related **Sustainable Development Goal** (SDG) indicators.*

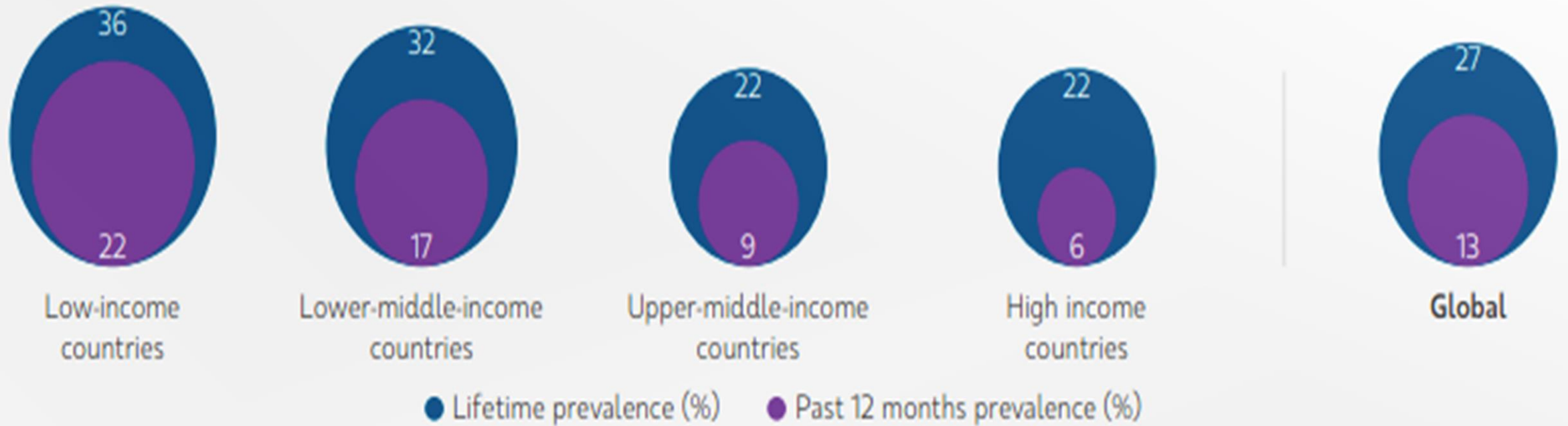
It also links to the three SDG-aligned strategic priorities of the WHO's 13th General Programme of Work:

*Achieving **universal health coverage**, addressing **health emergencies** and promoting healthier populations.*



https://cdn.who.int/media/docs/default-source/qho-documents/world-health-statistic-reports/2021/whs-2021_20may.pdf?sfvrsn=55c7c6f2_8

Fig. 3.11. Prevalence of physical and/or sexual intimate partner violence against ever-partnered women aged 15–49 years, by World Bank country income group and globally, 2018



[9789240051140-eng \(1\).pdf](#) 19.4.23

Notes: The income grouping refers to the World Bank analytical income of economies as of 1 July 2020, based on the 2019 gross national income per capita estimates calculated using the World Bank Atlas method.

Source: Violence against women prevalence estimates, 2018: Global, regional and national prevalence estimates for intimate partner violence against women, and global and regional prevalence estimates for nonpartner sexual violence against women (42).

- Thus there is no single comprehensive indicator to assess or to measure the health status of country.
- Each indicator reflects one aspect of health.
- Ideal indicator is yet to be developed.

Environmental indicators

- Indicators relating pollution of air, water, noise, soil, radiation solid waste...
- Percentage of houses having ..
safe water supply.
adequate sanitary facilities.

Thus there is no single comprehensive indicator to assess or to measure the health status of country.

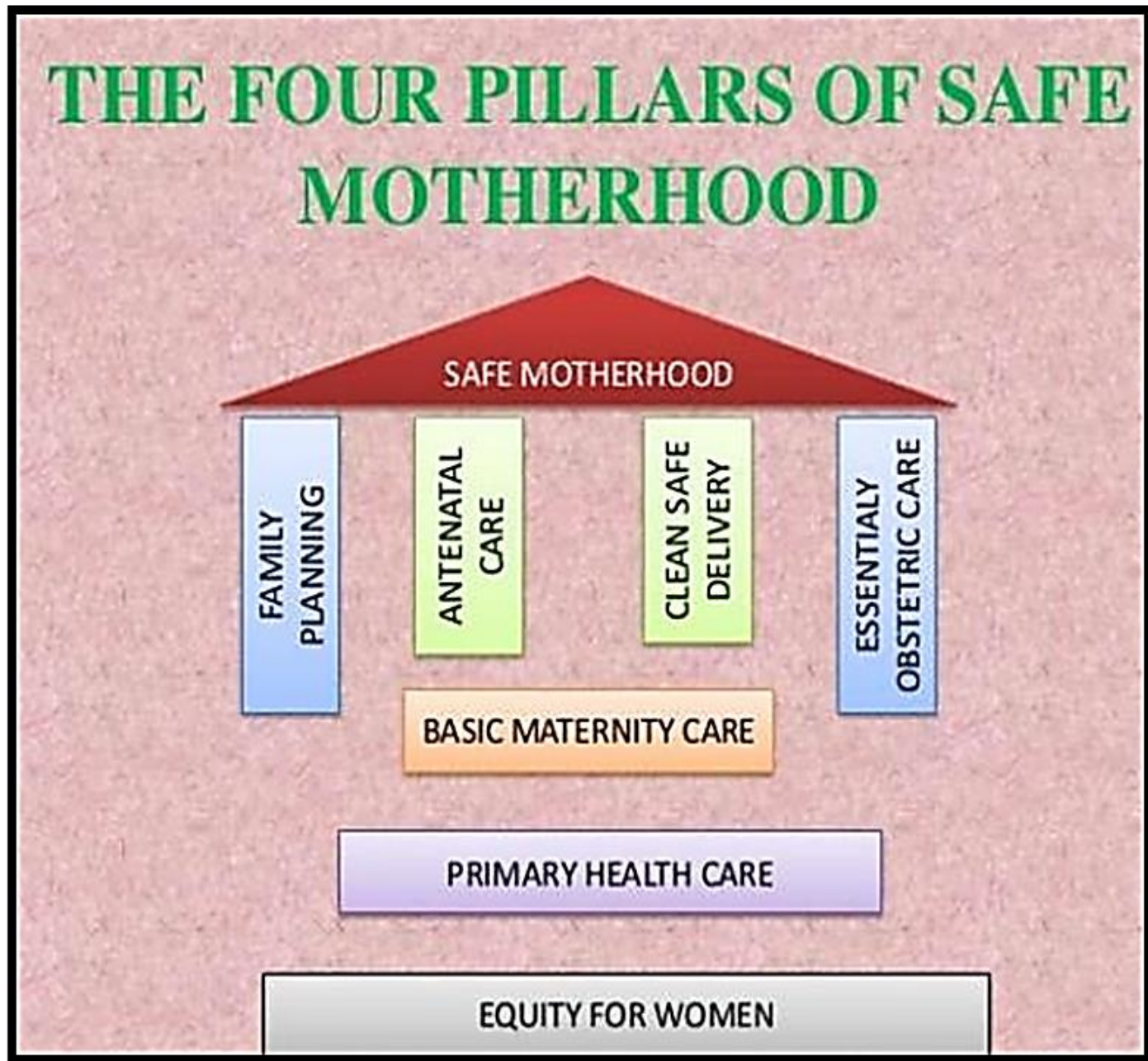
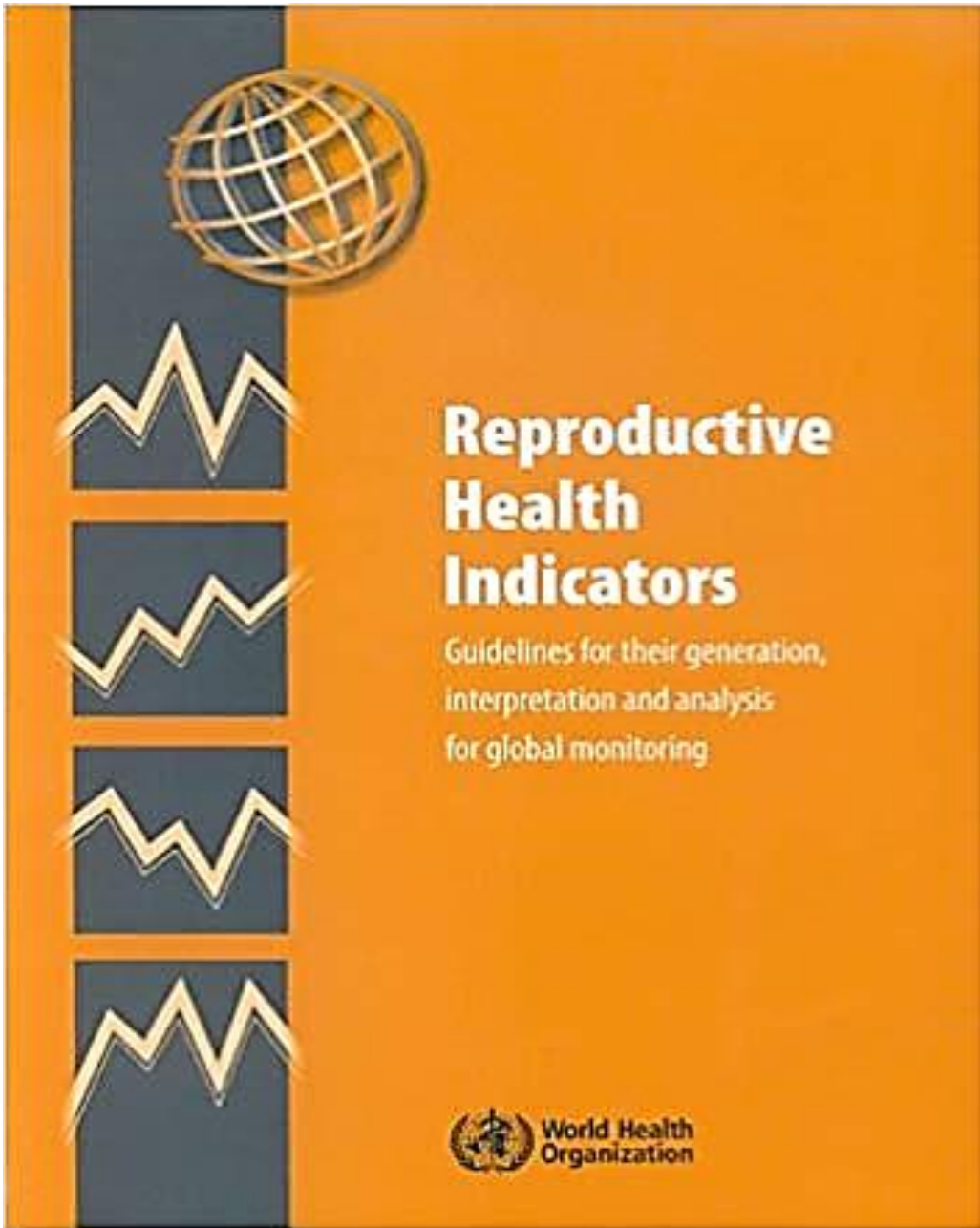
Utilization rates

- Proportion of infants “fully immunized”
- Proportion of mothers with adequate ANC.
- Proportion of Deliveries conducted by TBA.
- “Bed occupancy” rate in the hospital.
- Coverage with insecticidal spraying.

OTHER INDICATORS

❑ Health For All Indicators

- For monitoring the progress towards the goal of Health For All by 2000 , the WHO had listed the following four categories of indicators.
- 1. **Health policy indicators**
 - Political commitment to HFA
 - Resource allocation
 - Degree of equity of distribution of health services
 - Community involvement
 - Organisational framework and managerial process





Data Sources and Collection Methods

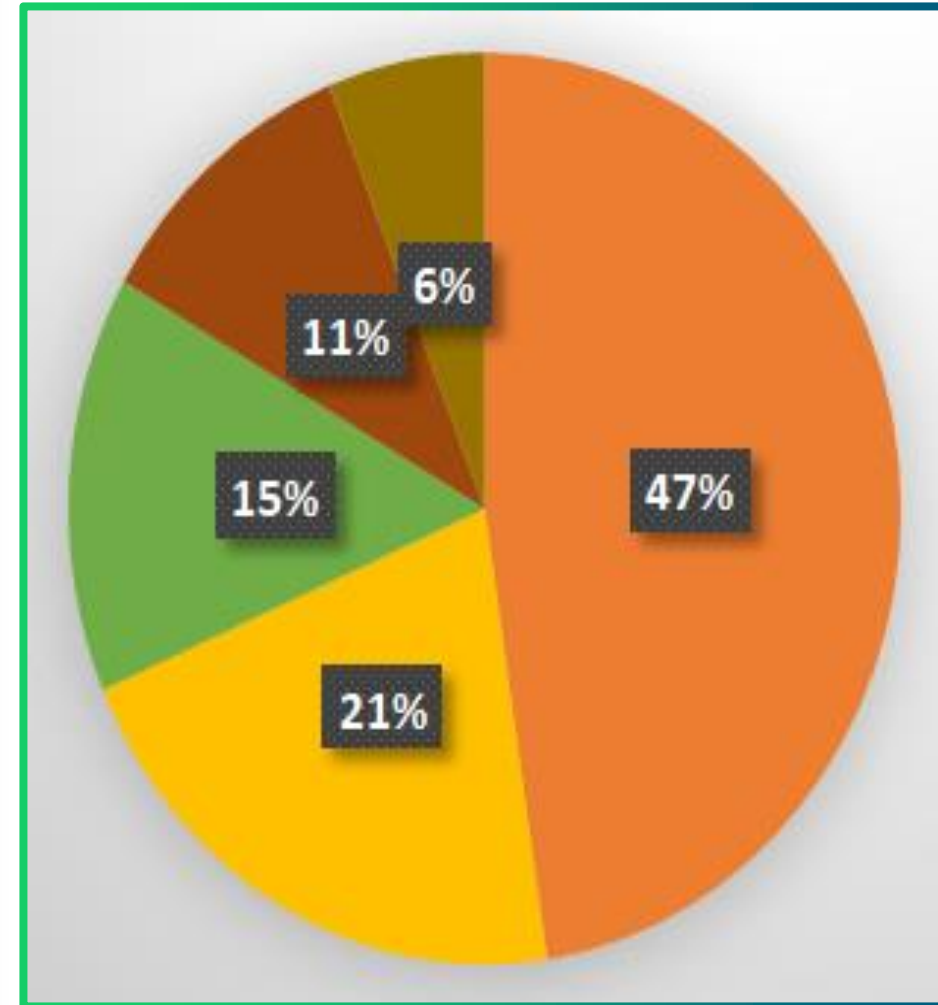
Source	Method	Example
Individual persons	<ul style="list-style-type: none">• Questionnaire• Survey	<ul style="list-style-type: none">• Foodborne illness outbreak• CDC's National Health and Nutrition Examination Survey• Health data on U.S. residents
Environment	<ul style="list-style-type: none">• Samples from the environment (river water, soil)• Sensors for environmental changes	<ul style="list-style-type: none">• Collection of water from area streams — check for chemical pollutants• Air-quality ratings
Health care providers	<ul style="list-style-type: none">• Notifications to health department if cases of certain diseases are observed	<ul style="list-style-type: none">• Report cases of meningitis to health department
Nonhealth-related sources (financial, legal)	<ul style="list-style-type: none">• Sales records• Court records	<ul style="list-style-type: none">• Cigarette sales• Intoxicated driver arrests

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.



Distribution of annual income by types of income (%), 2020.

Income distribution in Turkiye according to 20% quintiles, 2020

1st quintile
The Bottom
The Poorest



%5,9

2nd quintile



%10,9

3rd quintile



%15,2

4th quintile



%21,1

5th quintile
The Top
The Richest



%47,5



Distribution of annual income in Turkiye (%), 2020.

Rate Formula

To calculate a rate, we first need to determine the frequency of disease, which includes

- the number of cases of the illness or condition
- the size of the population at risk
- the period during which we are calculating the rate

$$\text{Rate (\%)} = \frac{\text{number of cases}}{\text{population at risk}} \times 100$$

The Total Fertility Rate (TFR)

is the average number of children that would be born alive to a woman during her lifetime if she were to pass through her childbearing years having births according to the current schedule of age-specific fertility rates. To calculate the TFR, one sums the single year ASFRs.

Social Determinants of Health

RESULT: Increase access and placement to stable and safe housing

INDICATORS:

- » # Homeless in our region
- » % recidivism rate for individuals in housing placement services
- » % Vacancy rate
- » % Rent Burden

STRATEGIES:

- » Diversion Programs
- » Education campaigns for tenant and landlord rights and responsibilities
- » Advocate for mandatory rental inspection criteria
- » Advocate for anti-income discrimination act
- » Link vocational training programs to rehab of old units
- » Target population transitioning out of jail
- » Scale community based care utilizing CHWs and Supportive Housing model

RESULT: Increase opportunities to stabilize income

INDICATORS:

- » % people living under federal 300% poverty level
- » % of adults who increase employment gains or non-employment cash income over time
- » % households with savings account

STRATEGIES:

- » Financial literacy classes in K-12 education
- » Increase opportunities for adult financial education
- » Increase supportive employment opportunities
- » Scale Community Based Care – link folks with a CHW who can navigate

RESULT: Increase access to transportation through innovative partnerships

INDICATORS:

- » % public transportation use
- » # missed appointments due to transportation
- » # traffic related accidents, injuries, and death
- » % streets walkable or bikable
- » % ADA accessible

STRATEGIES:

- » Complete Street road planning which welcomes non-car transportation and ADA accessibility
- » Integrate individual and family transportation assessment at all points of care
- » Collaborate with transit partners across the region to ensure transportation patterns reflect geographical health access

STRATEGIC AIM

Develop strong community systems that link the social determinants to health care, to improve community health.

RESULT: Improve education attainment

INDICATORS:

- » % Graduation rates
- » % School discipline rates
- » # Teacher-to-student representation ratios

STRATEGIES:

- » Champion education for school providers in trauma informed care
- » Place nurses and/or CHWs in school to assess children and families and link to services
- » Increase before and after school supportive services
- » Increase cultural competency trainings in school, and advocate for school leadership that is representative of student population

RESULT: Increase access to healthy, affordable food

INDICATORS:

- » # of people entering hospitals as malnourished
- » % living in food desert
- » % average sugar intake

STRATEGIES:

- » Mobile markets bring healthy food to food deserts
- » Scratch cooking in all schools
- » Increase opportunity for meal prep education, for kids and adults
- » Increase community gardens and greenspaces to integrate food production in urban centers
- » Scale community based care using CHW to link folks to food service and meal support

RESULT: Increase community access to socially supportive peer-groups.

INDICATORS:

- » % with feeling of support (Community Survey)
- » # funding for community events
- » % households close to community gathering space

STRATEGIES:

- » Increase opportunities for "Meet Your Neighbors"
- » Increase community gathering spaces
- » Directory of community support venues and groups
- » Increase civics education to increase community knowledge of policy process

Operational indicators

- lead indicators in their subthemes to monitor progress
- robust & available for min 3 years for most MSs

Headline indicators

- Monitor the overall performance related to key objectives
- widely used indicators with a high communicative and educational value
- robust & available for min 5 years for most MSs

Explanatory indicators

- breakdowns of higher level indicators (e.g. by gender or income group etc.) for both headline and operational indicators
- Useful for monitoring progress in specific subthemes or towards specific objectives
- Intended for a more specialised audience

Level 1 indicator

Level 2 indicator

Level 3 indicator

Contextual indicators

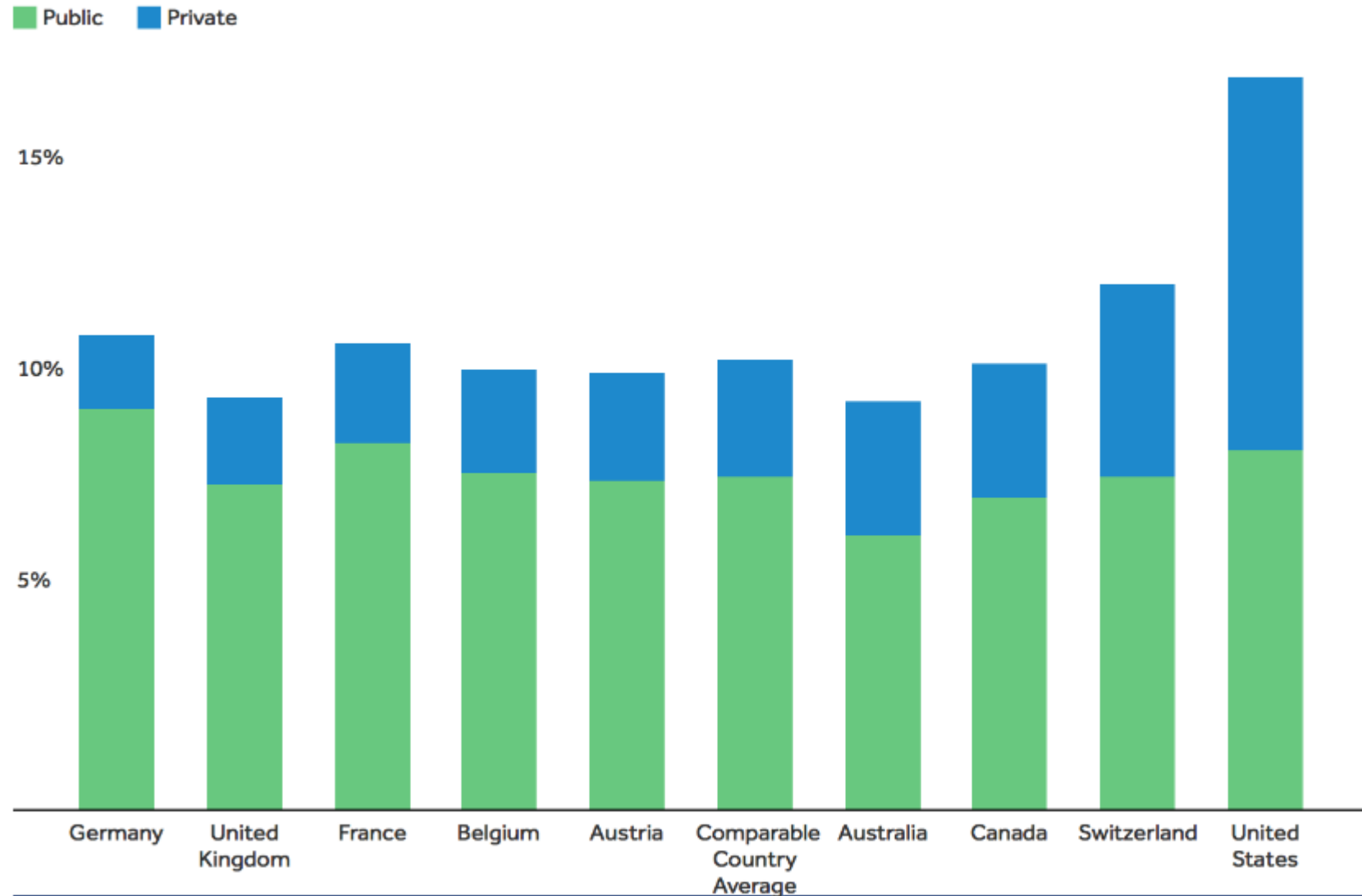
Contextual indicators are part of the set, but either do not monitor directly a particular objectives, or they are not policy responsive.

Indicators under development either already exist, but are of insufficient quality or coverage



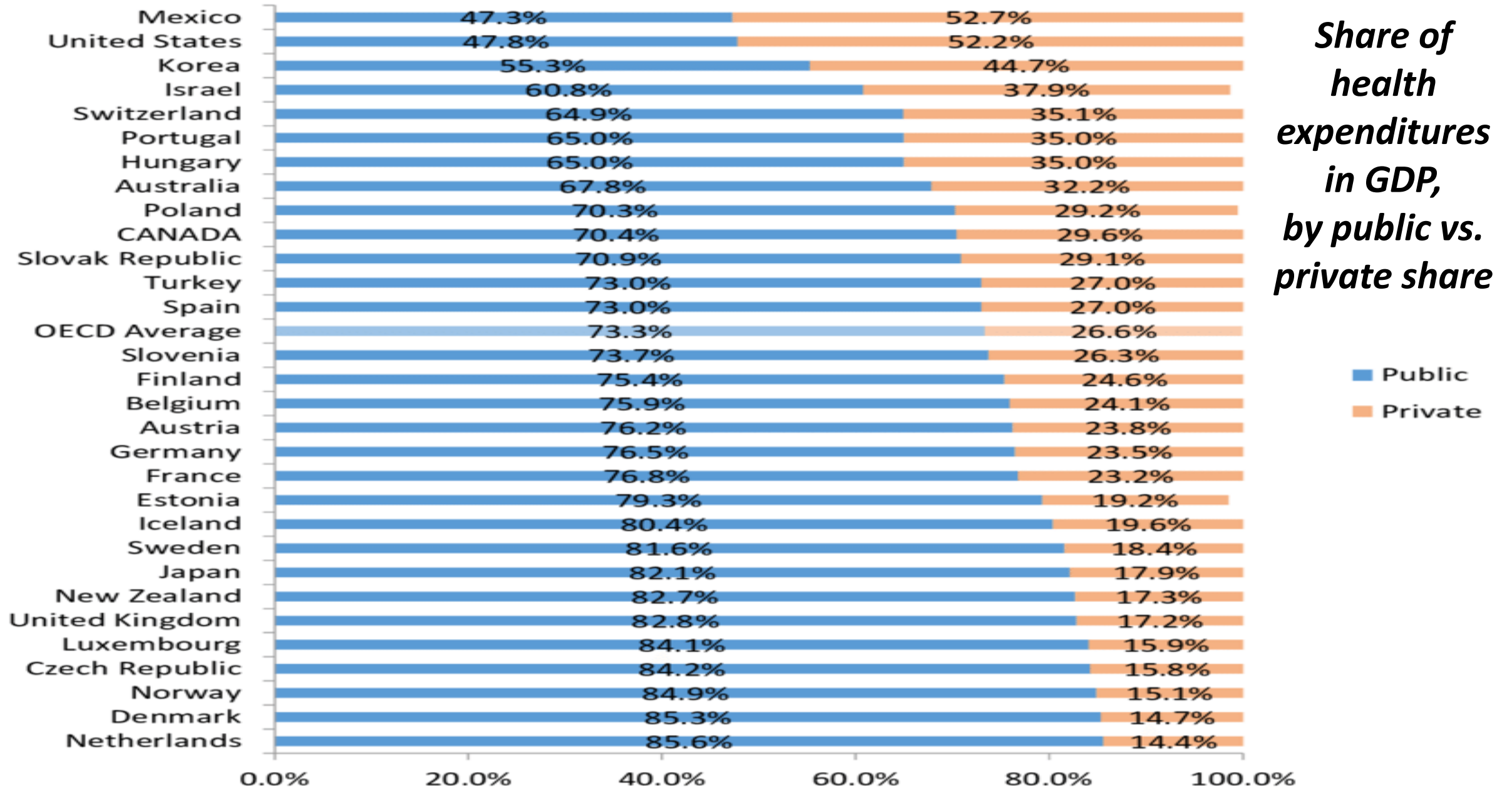
Strategic goals	Fields	Core indicators
Continuously improved population health Key health risk factors under effective control	1. Health level	Life expectancy at birth Infant mortality rate Under-5 mortality rate Maternal mortality rate Proportion of people meeting the national physical fitness standard
Increased capacity for healthcare service delivery	2. Healthy life	Level of health literacy in the population Number of people taking physical exercise
Expanded healthcare industry	3. Health services and security	Premature mortality from main non-communicable diseases Number of registered doctors and nurses per 1000 population Percentage of out-of-pocket expenditure in total health expenditure
Better developed institutional arrangements for health promotion	4. Healthy environment	Percentage of days with good air quality in cities at the prefecture level or above Percentage of surface water at or above level III
	5. Health industry	Total size of the healthcare industry

Total health expenditures as percent of GDP by public vs. private spending, 2016



Source: Kaiser Family Foundation analysis of data from OECD (2017), "OECD Health Data: Health expenditure and financing: Health expenditure indicators", OECD Health Statistics (database) (Accessed on March 20, 2017). • [Get the data](#) • PNG

Peterson-Kaiser
Health System Tracker





<http://www.oecd.org/health/health-systems/health-at-a-glance-19991312.htm>,
13.02.2018

<http://www.euro.who.int/en/data-and-evidence/european-health-report/european-health-report-2015/european-health-report-2015-the-targets-and-beyond-reaching-new-frontiers-in-evidence.-highlights>

4/19/2023

The European health report 2015

Targets and beyond – reaching new frontiers in evidence

The European Health Report is a flagship publication, published every three years.

The 2012 report set the baseline for monitoring progress towards the six targets of the European policy framework, Health 2020. The 2015 report presents the progress made since the baseline. An assessment of the available data on all the targets reveals that the European Region is on track, but much potential remains for further health gains and reductions in

inequalities. → →

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Top 10 Countries with the Highest Human Development Index (HDI)-2019

Norway - .957

Ireland - .955 (tie)

Switzerland - .955 (tie)

Hong Kong (China) - .949 (tie)

Iceland - .949 (tie)

Germany - .947

Sweden - .945

Australia - .944 (tie)

Netherlands .944 (tie)

Denmark - .940

Top 10 Countries with the Lowest Human Development Index (HDI) - 2019

Niger - .394

Central African Republic - .397

Chad - .398

Burundi - .433 (tie)

South Sudan - .433 (tie)

Mali - .434

Burkina Faso - .452 (tie)

Sierra Leone - .452 (tie)

Mozambique - .456

Eritrea - .459



2019 HDI score is .806 for Turkiye which means medium category, ranking 59th.. much lower in 2022.

How many people can you lift out of poverty with 1% of your income?

Poverty is the # 1 causal factor for ill health, short life span, disability, early deaths etc.

Poverty can be eliminated on the World and must be eliminated by ending exploitation.

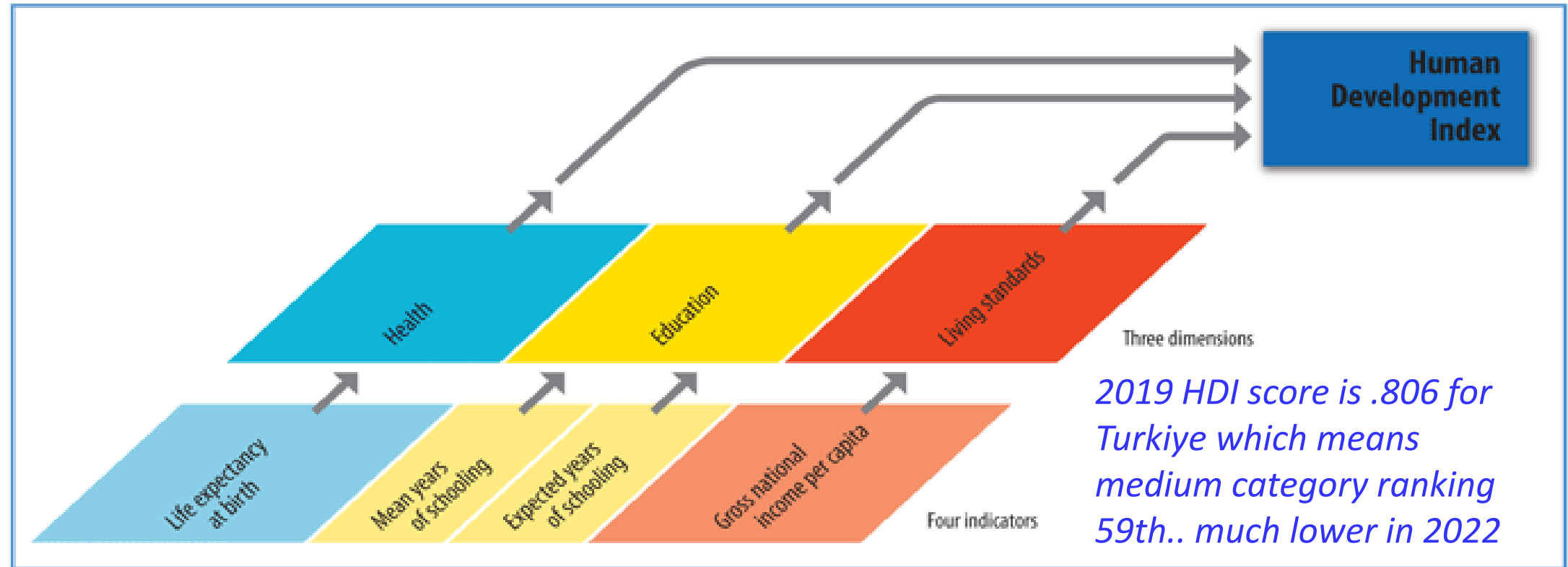
Average income pc/pa is 12K \$ and it's enough to eradicate poverty by fair distribution.

<https://worldpopulationreview.com/country-rankings/hdi-by-country>, 9.5.22

The Human development index looks at three main factors – living standards, health and education

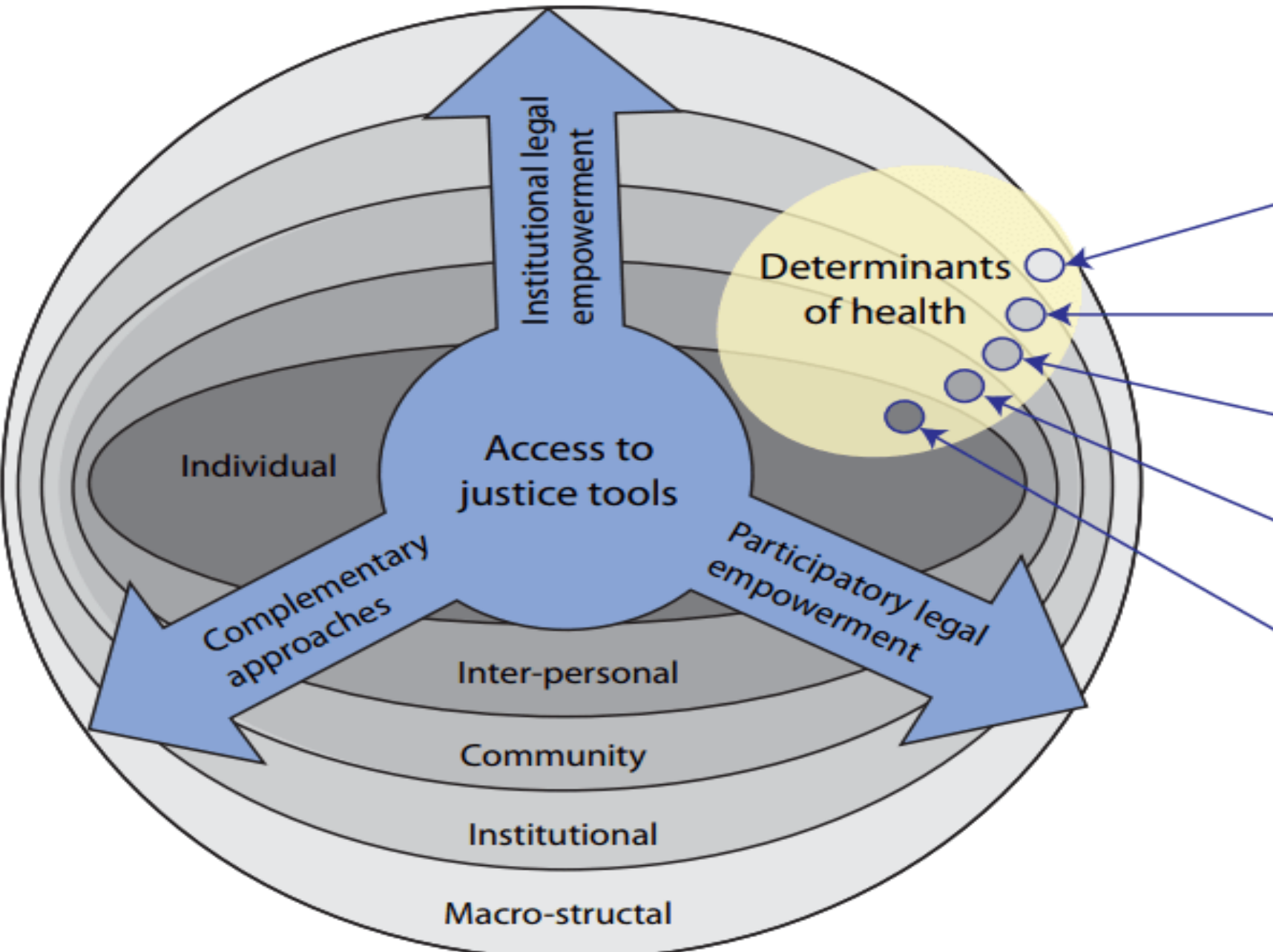
Components of the Human Development Index

The HDI—three dimensions and four indicators



2019 HDI score is .806 for Turkiye which means medium category ranking 59th.. much lower in 2022

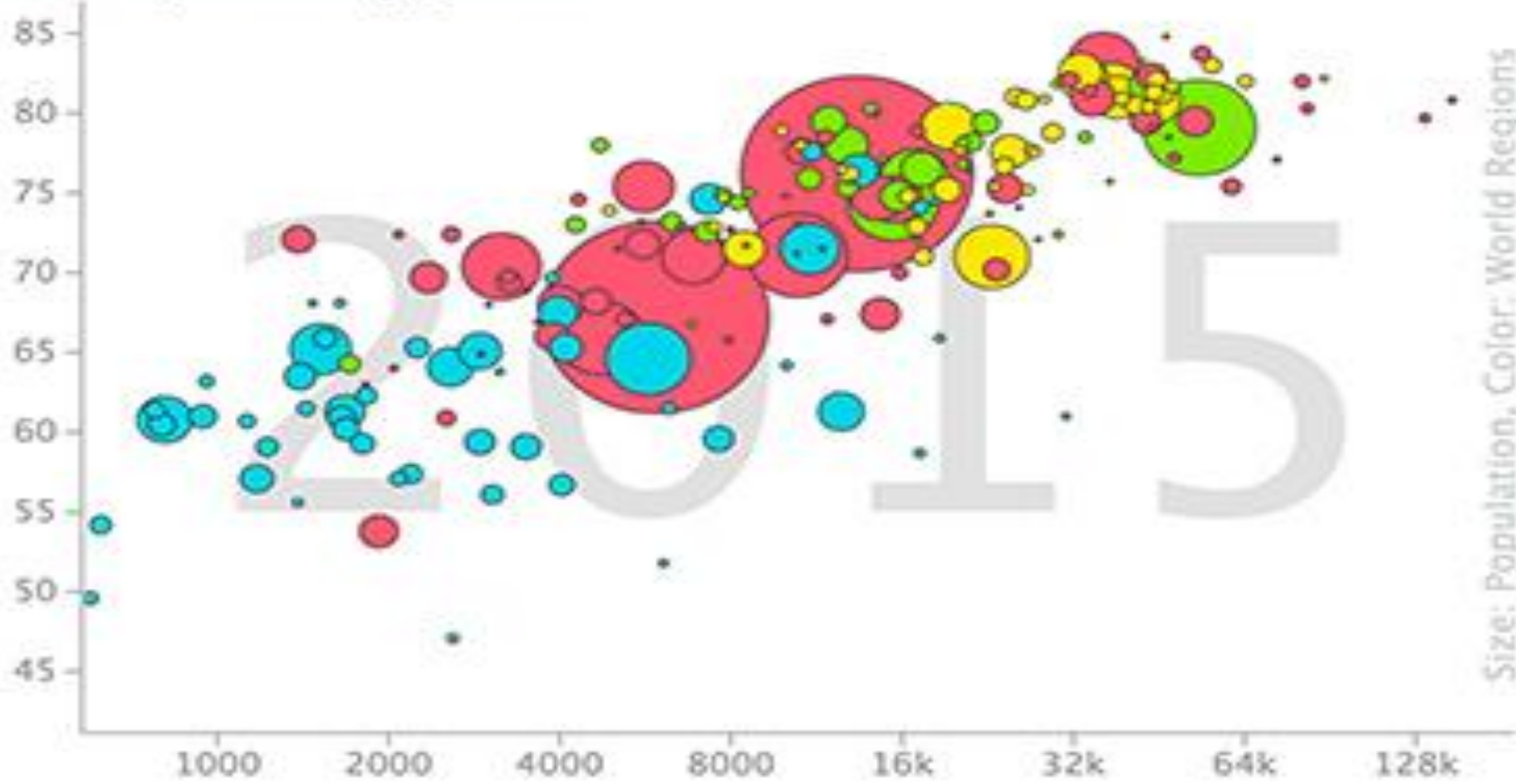
Note: The indicators presented in this figure follow the new methodology, as defined in box 1.2.



Key health indicators

- Education policies (e.g, introducing harm reduction into national curricula); Changes in access to labor market; Cultural and societal values indicators.
- Healthcare access (e.g., medical insurance); Social Service access (e.g., access housing); Institutional discrimination (e.g., in police, health care settings)
- Social cohesion indicators; Social participation indicators
- Occurrence of intimate partner violence
- Illicit Drug use (e.g., reductions in number of overdoses); Individual risk behaviors (e.g., condom use, poor diet); Disease occurrence (e.g., HIV/STI incidence); Occurrence of workplace injury.

Life expectancy, years



Income per person, \$/year (GDP/capita)

Under-five mortality rates

The **under-five mortality rate** is the probability (expressed as a **rate** per 1,000 live births) of a child born in a specified year dying before reaching the age of five if subject to current age-specific **mortality rates**.

Under 5 proportional mortality rate is the proportion of under 5 mortality to total deaths. And **this rate is most precious indicator.**

4. Proportional Mortality Ratio

(a) *Proportional mortality from a specific disease*

$$\frac{\text{Number of deaths from the specific disease in a year}}{\text{Total deaths from all causes in that year}} \times 100$$

- E.g. PMR at age 50 & above

$$\text{PMR} = \frac{\text{No. of deaths of persons aged 50 years and above}}{\text{Total deaths of all age groups in that year}} \times 100$$

- E.g. Under- 5 proportionate mortality rate

$$\text{PMR} = \frac{\text{No. of deaths of under 5 years of age in the given year}}{\text{Total no deaths of during the same period}} \times 100$$

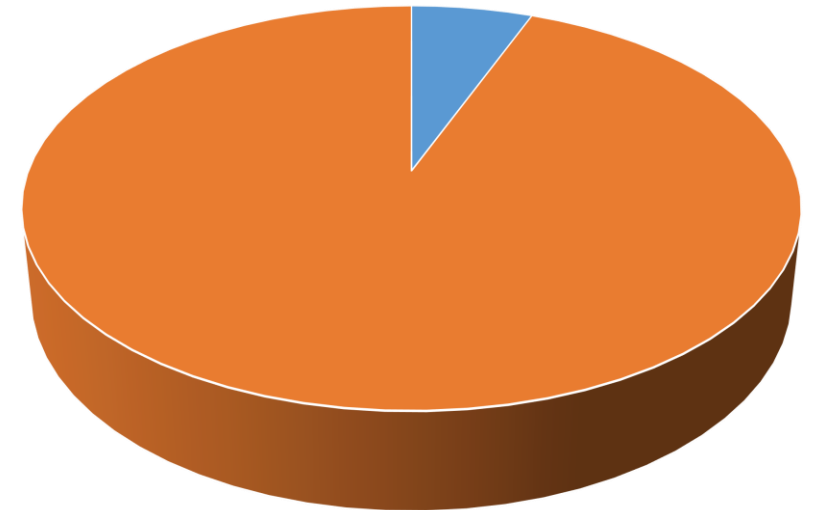
Under-five mortality rates

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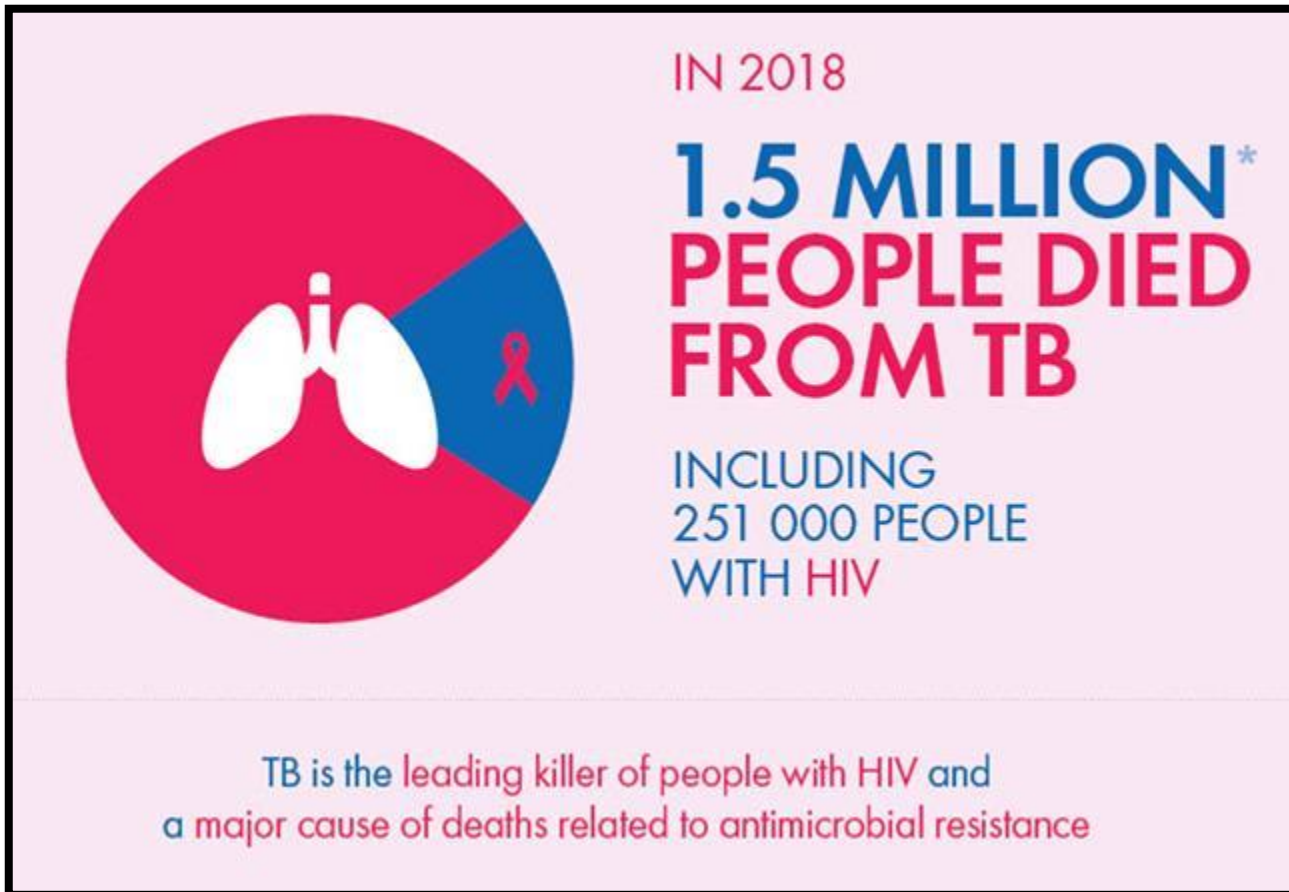
CHILD SURVIVAL INDEX

**1000 - UNDER 5
MORTALITY RATE**





7 million receive lifesaving treatment for TB but 3 million still miss out!



- WHO's **Global Tuberculosis Report**, released today (17.10.19), highlights that a record 7 million people received life-saving treatment for TB in 2018.
- However, around **3 million of people with TB are still not getting the care they need.**

Tackling drug resistance : Drug resistance remains another impediment to ending TB. In 2018, there were an estimated half a million new cases of drug-resistant TB. Only one in three of these people was enrolled in treatment.

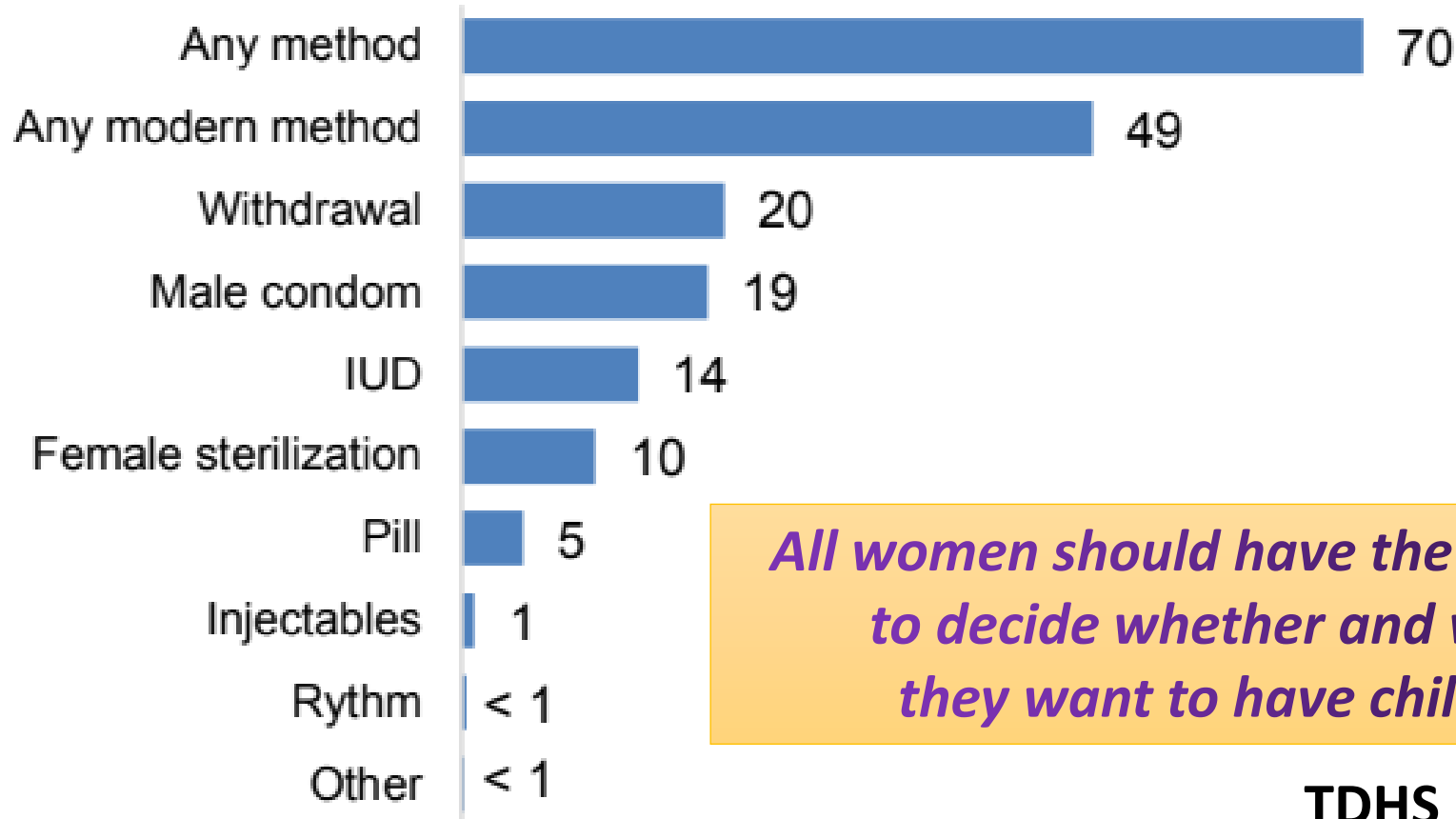
Severe underfunding, lack of access to healthcare jeopardize at-risk populations

17 October 2019 <https://www.who.int/news-room/detail/17-10-2019-7-million-people-receive-record-levels-of-lifesaving-tb-treatment-but-3-million-still-miss-out>



Figure 7.1 Contraceptive use

Percentage of currently married women age 15-49 currently using a contraceptive method

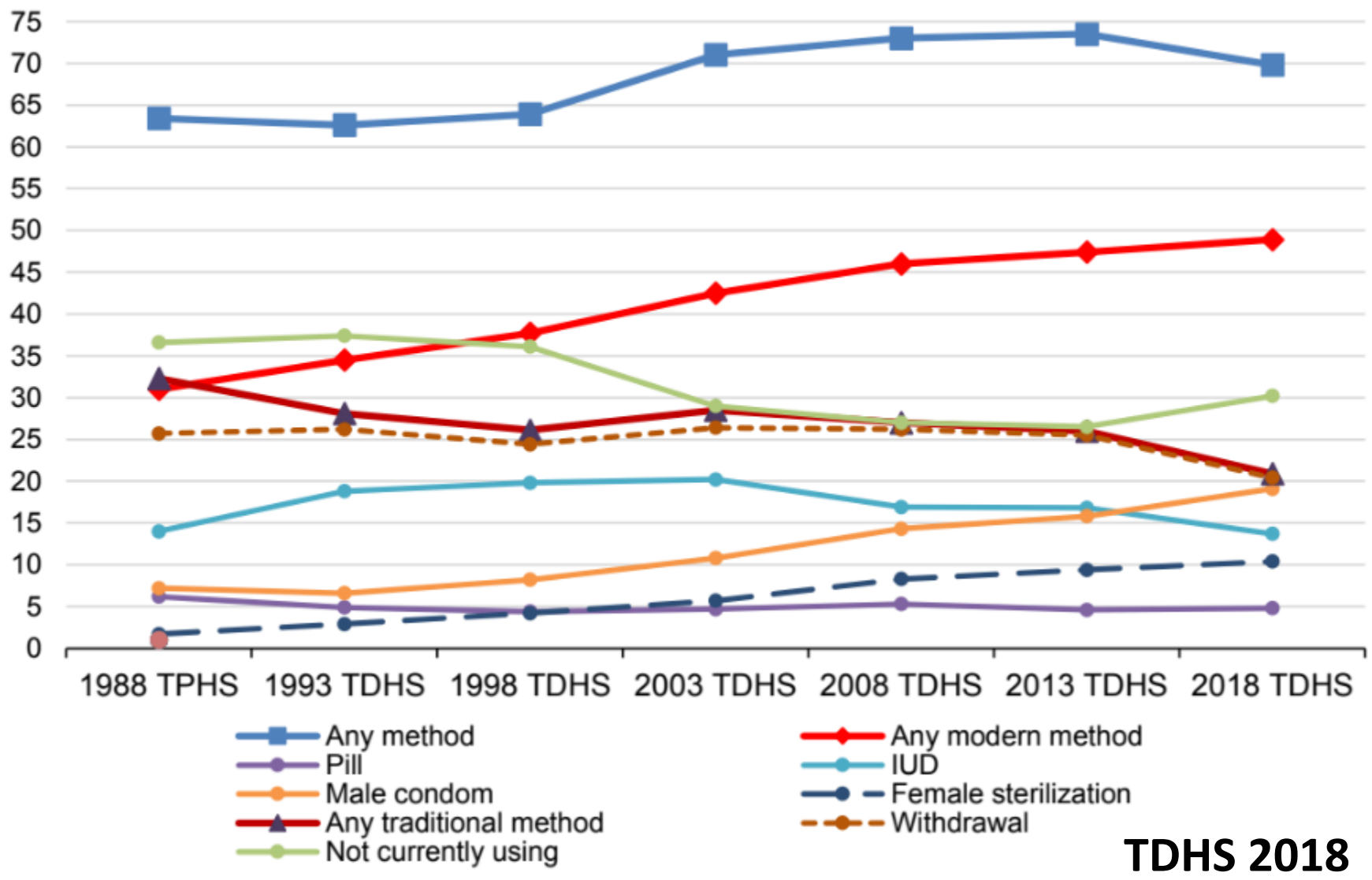


All women should have the right to decide whether and when they want to have children.

TDHS 2018



Figure 7.2 Trends in contraceptive use
Percentage of currently married women currently using a contraceptive method



TDHS 2018

TURKEY HEALTH SURVEY 2019



Background



Turkey Health Survey was carried out in households within the Republic of Turkey



8,166

householders were visited and



23,199

people interviewed

including

17,084

people aged 15 years and older

6,115

young people aged 0 to 14 years



The survey took place between

September and December of 2019

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19.4.23

TURKEY HEALTH SURVEY 2019



The survey includes modules proposed by European Statistical Office (Eurostat) and also questions regarding children in 0-14 age group.

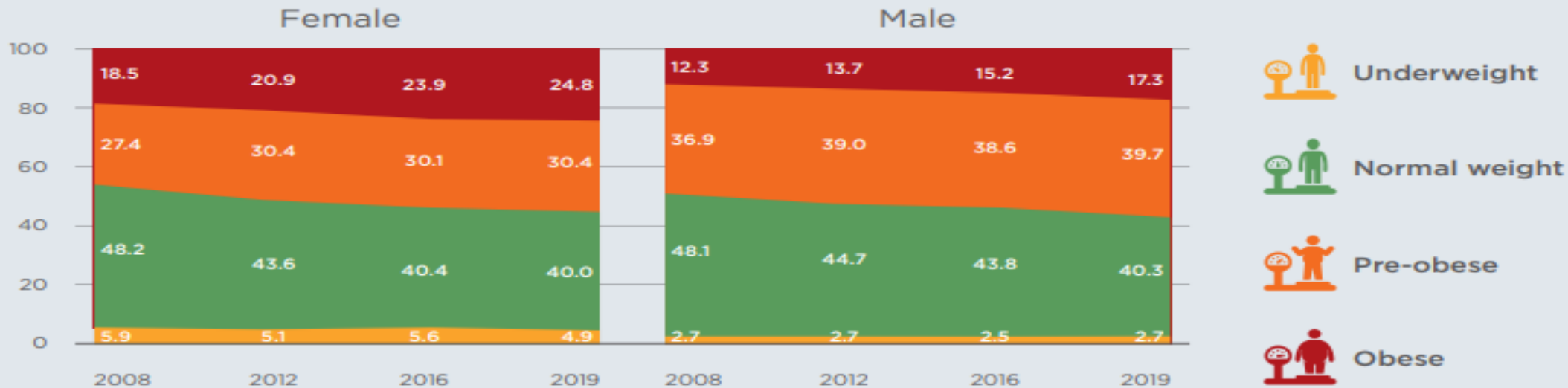
It consists of four modules on:

- Health status
- Health care use
- Health determinants
- Socio-economic background variables

The survey was carried out in



The distribution of body mass index (%), 2008-2019



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[CHMy10wQ=.pdf](#) 19.4.23

Body mass index distribution of individuals by sex (15+ age)

	(%)			% CHANGE OVER 2016
	MALE	FEMALE	TOTAL	
Total	100.0	100.0	100.0	
Underweight	2.7	4.9	3.8	-5.8 ▼
Normal weight	40.3	40.0	40.1	-4.7 ▼
Pre-obese	39.7	30.4	35.0	2.1 ▲
Obese	17.3	24.8	21.1	7.6 ▲

The percentage of individuals' status of smoking tobacco products by sex (15+ age)

	(%)			% CHANGE OVER 2016
	MALE	FEMALE	TOTAL	
Daily smoker	41.3	14.9	28.0	5.4 ▲
Occasional smoker	3.5	3.2	3.4	-17.5 ▼
Ex-smoker	21.3	7.2	14.2	9.7 ▲
Never smoker	33.8	74.7	54.5	-3.5 ▼

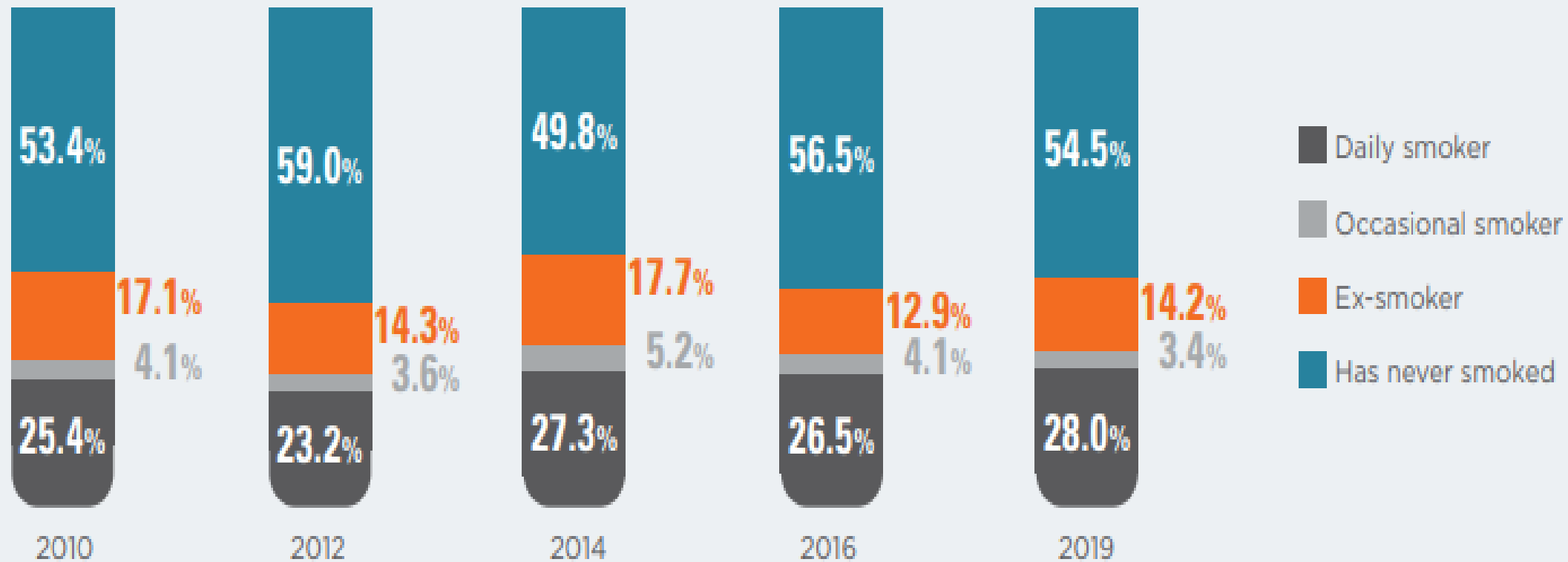
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[4UR0yvY7RO](#)
[paw1aX22Va](#)
[CHMy1OwQ=.pdf](#) 19.4.23

Children with disabilities (Age 2-14)

	(%)		
	MALE	FEMALE	TOTAL
Having difficulty in seeing	2.1	2.4	2.2
Having difficulty in hearing	1.8	2.1	2.0
Having difficulty in walking	1.5	1.4	1.4
Having difficulty in learning	1.7	1.2	1.5
Having difficulty in speaking	1.2	1.0	1.1

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The percentage of individuals who smoke tobacco products by sex and age group, 2010-2019 (15 years +)



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[CHMy1OwQ=.pdf](#) 19.4.23

Community Diagnosis

(community assessment)

is the foundation for improving and promoting the health of **community** members.

The role of **community** assessment is to identify factors that affect the health of a population and determine the availability of resources within the **community** to adequately address these factors.

COMMUNITY DIAGNOSIS: DEFINITION

Identification and quantification of health problems in a community as a whole in terms of mortality and morbidity rates and ratios, and identification of their correlates for the purpose of defining those at risk or those in need of health care.

OBJECTIVES OF COMMUNITY DIAGNOSIS

- Analyze the health status.
- Evaluate the health resources, services, and systems of care.
- Assess attitudes toward community health services and issues.
- Identify priorities, establish goals, and determine courses of action to improve health status.
- Establish epidemiologic baseline for measuring improvement over time.

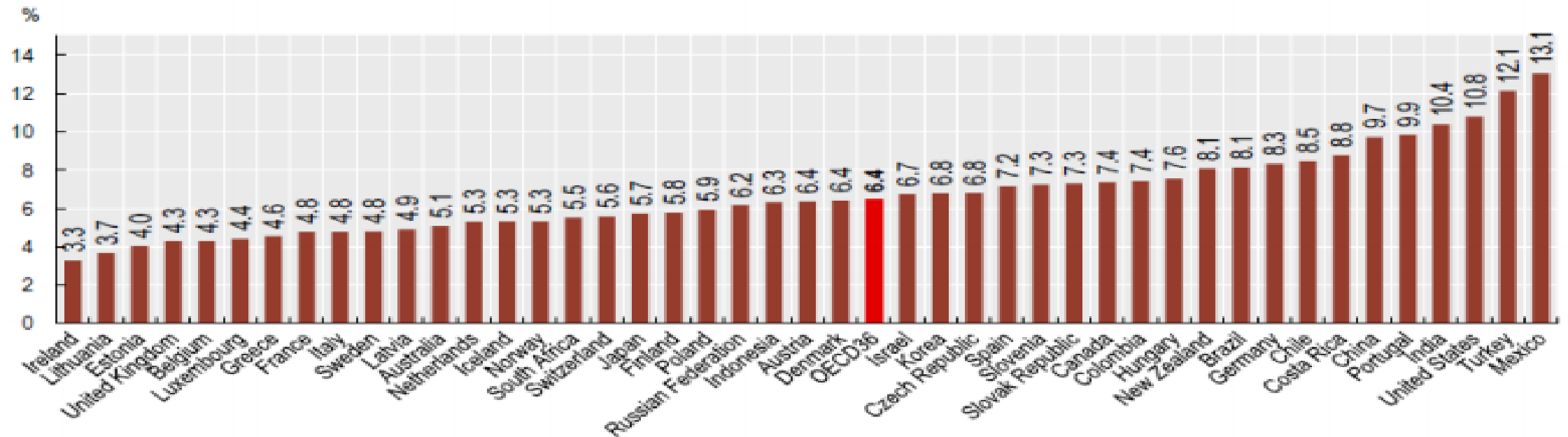
Steps of Conducting Community Diagnosis

- Determine the objective
- Define the study population
- Determine the data to be gathered
- Collect the data
- Develop the instrument
- Actual data gathering
- Data collation
- Data presentation
- Data analysis
- Problem identification
- Health status- mortality, morbidity, fertility
- Health resources- money, manpower, materials, institution
- Health related- environment, culture, economic political
- Prioritization of health problems.



In 2017, about 98 million adults – or 6.4% of the adult population – were living with diabetes across OECD countries

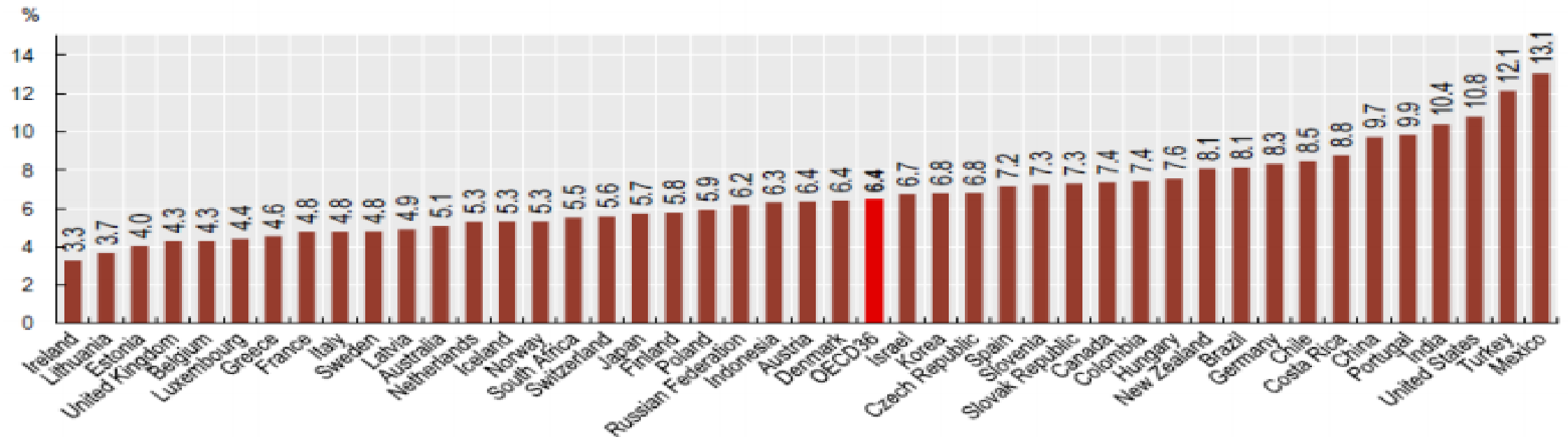
Type I and II diabetes prevalence among adults, 2017 (or nearest year)



Source: Health at a Glance 2019, extracted from IDF Diabetes Atlas, 8th Edition, 2017.

In 2017, about 98 million adults – or 6.4% of the adult population – were living with diabetes across OECD countries

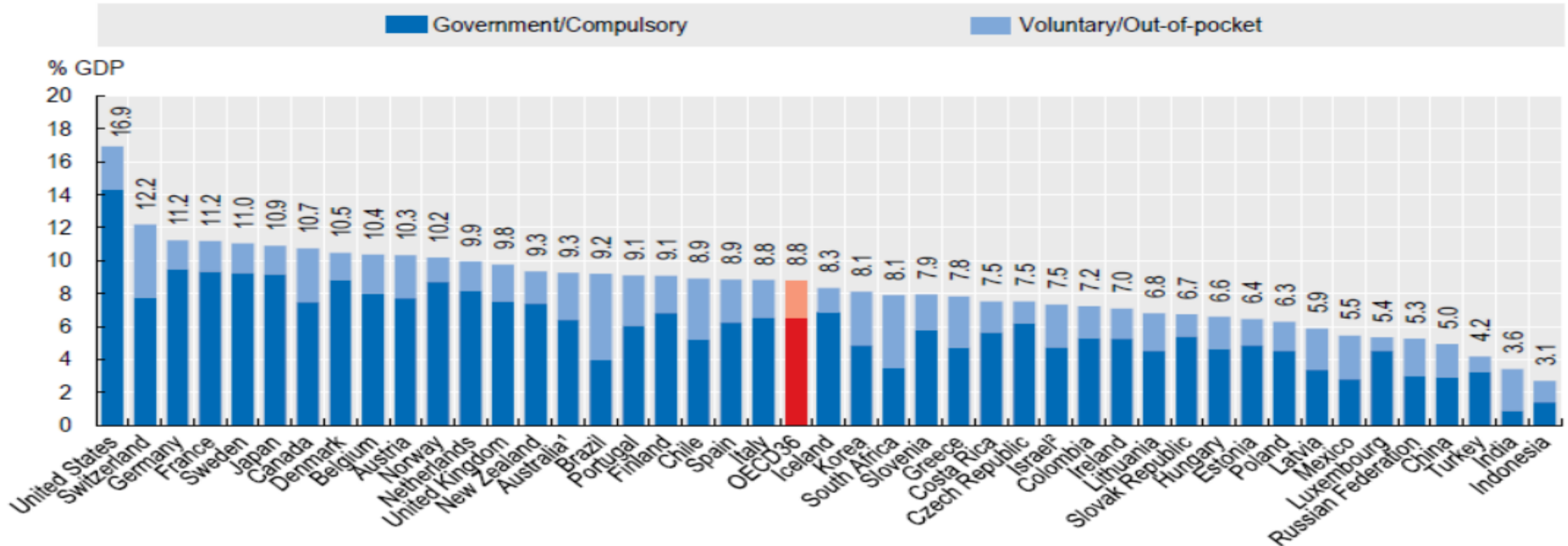
Type I and II diabetes prevalence among adults, 2017 (or nearest year)



Source: Health at a Glance 2019, extracted from IDF Diabetes Atlas, 8th Edition, 2017.

On average, OECD countries are estimated to have spent 8.8% of GDP on health care in 2018, a figure more or less unchanged since 2013. The United States spent by far the most on health care, equivalent to 16.9% of its GDP

Health expenditure as a share of GDP, 2018 (or nearest year)



Note: Expenditure excludes investments, unless otherwise stated.

1. Australia expenditure estimates exclude all expenditure for residential aged care facilities in welfare (social) services.

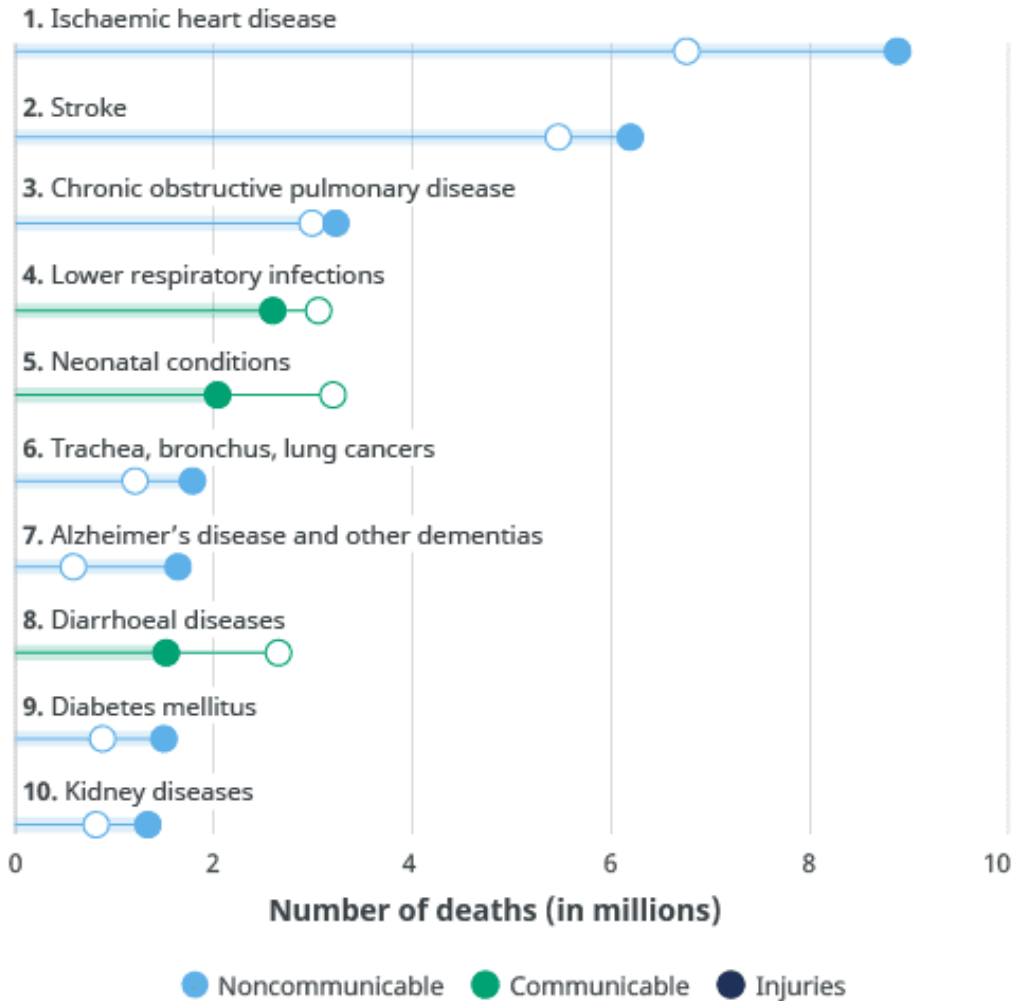
2. Includes investments.

Source: OECD Health Statistics 2019, WHO Global Health Expenditure Database.

Source: Health at a Glance 2019.

Leading causes of death globally

○ 2000 ● 2019



Source: WHO Global Health Estimates.

Top 10 causes of death accounted for 55% of the 55.4 million deaths worldwide

The top global causes of death, in order of total number of lives lost, are associated with three broad topics: cardiovascular (ischaemic heart disease, stroke), respiratory (chronic obstructive pulmonary disease, lower respiratory infections) and neonatal conditions – which include birth asphyxia and birth trauma, neonatal sepsis and infections, and preterm birth complications. Causes of death can be grouped into three categories: communicable (infectious and parasitic diseases and maternal, perinatal and nutritional conditions), noncommunicable (chronic) and injuries.

Leading causes of death globally

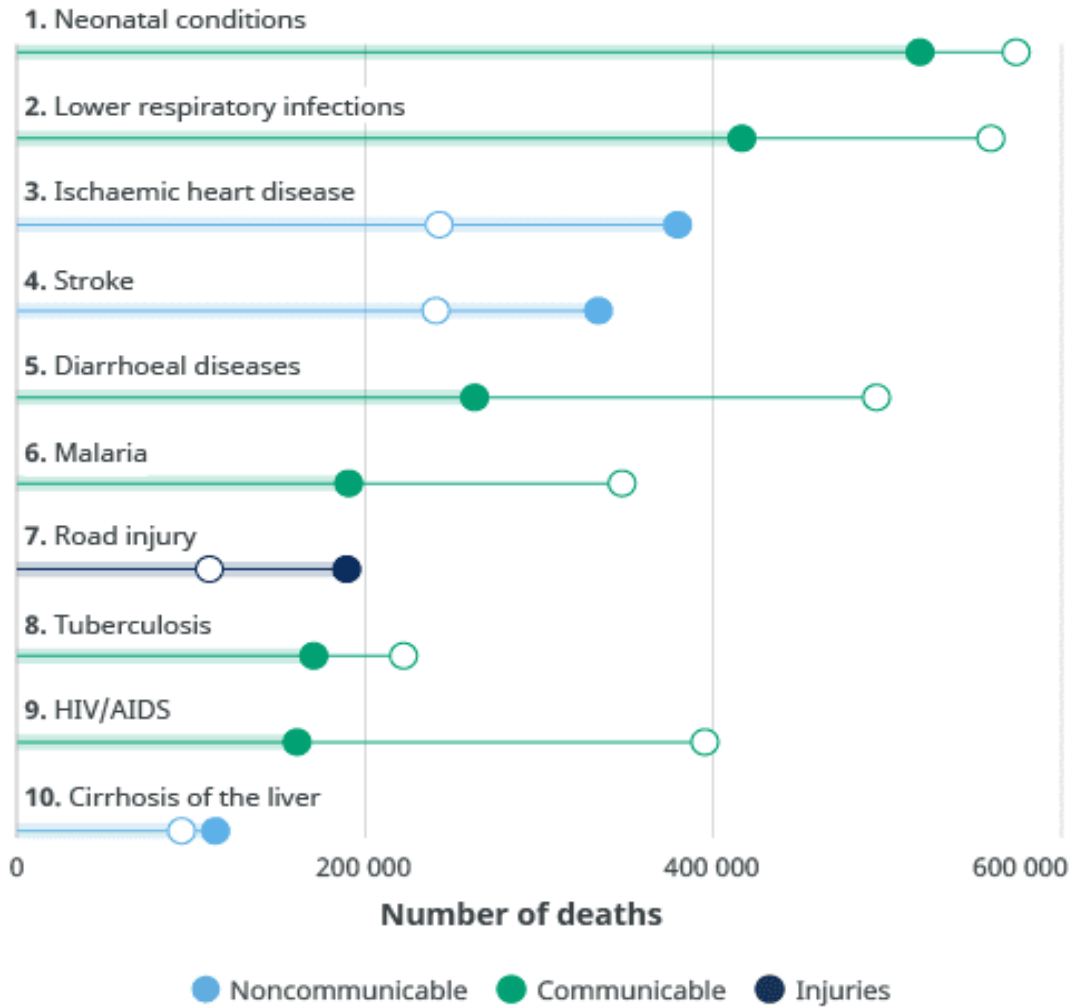
At a global level, 7 of the 10 leading causes of deaths in 2019 were noncommunicable diseases. These seven causes accounted for 44% of all deaths or 80% of the top 10. However, all noncommunicable diseases together accounted for 74% of deaths globally in 2019.

[The top 10 causes of death \(who.int\)](https://www.who.int) 13.12.2020

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Leading causes of death in low-income countries

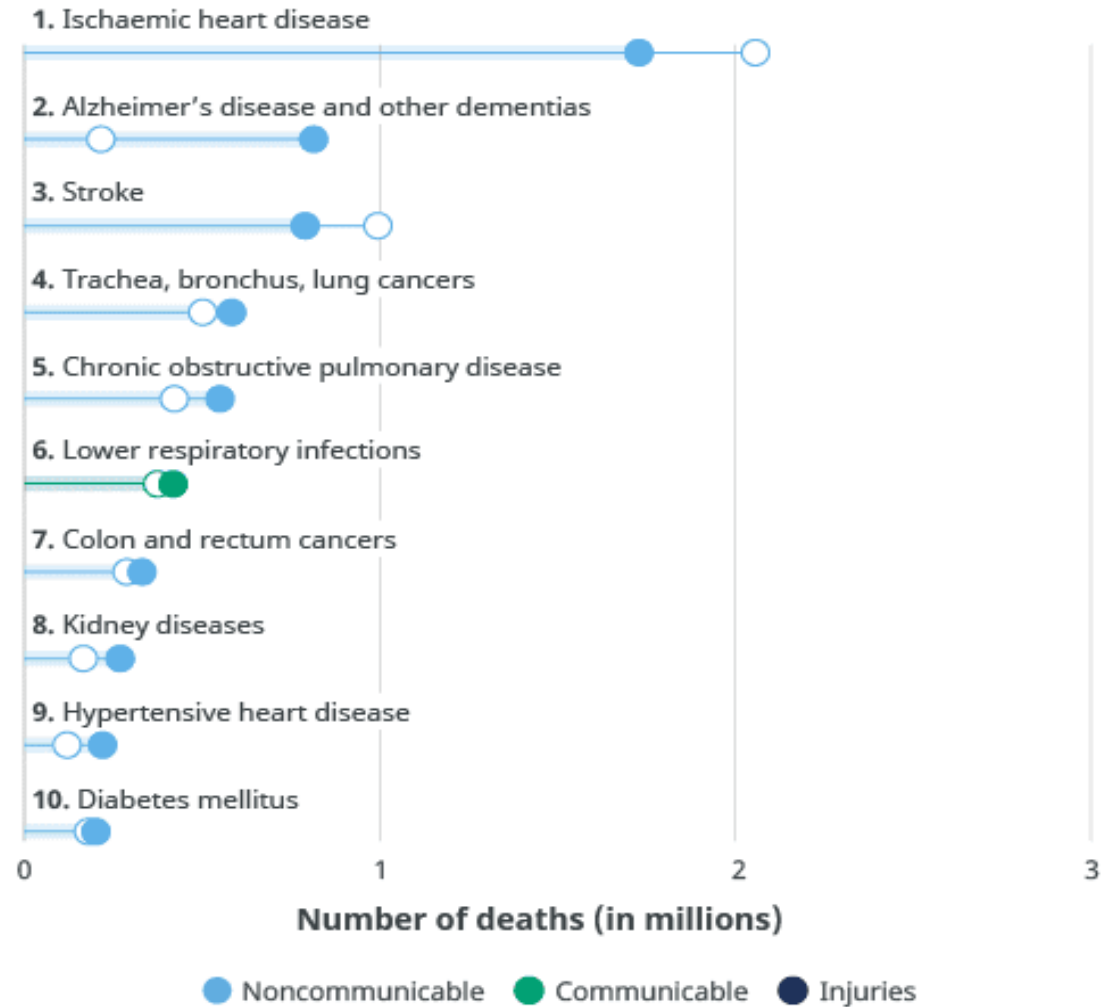
○ 2000 ● 2019



Source: WHO Global Health Estimates. Note: World Bank 2020 income classification.

Leading causes of death in high-income countries

○ 2000 ● 2019



Source: WHO Global Health Estimates. Note: World Bank 2020 income classification.

Table 1. Sources of data for health indicators by domain

	Determinants of Health	Health Systems		Health status
		Inputs and outputs	Outcomes (coverage and use)	
Censuses	●	●		●
Civil Registration	●			●
Population Surveys	●	●	●	●
Individual Records	●	●	●	●
Service Records		●	●	●
Resource Records		●		

Essential Health Benefits



Plans must cover 10 categories of mandated essential health benefits:

Essential Health Benefit Categories

1

Ambulatory patient services

2

Emergency Services

3

Maternity and newborn care

4

Pediatric services including dental and vision care

5

Rehabilitative/habilitative services and devices

6

Mental health and substance use disorder services, including behavioral health treatment

7

Preventive and wellness services and chronic disease management

8

Hospitalization

9

Prescription Drugs

10

Laboratory services



LEAVE NO ONE'S HEALTH BEHIND:

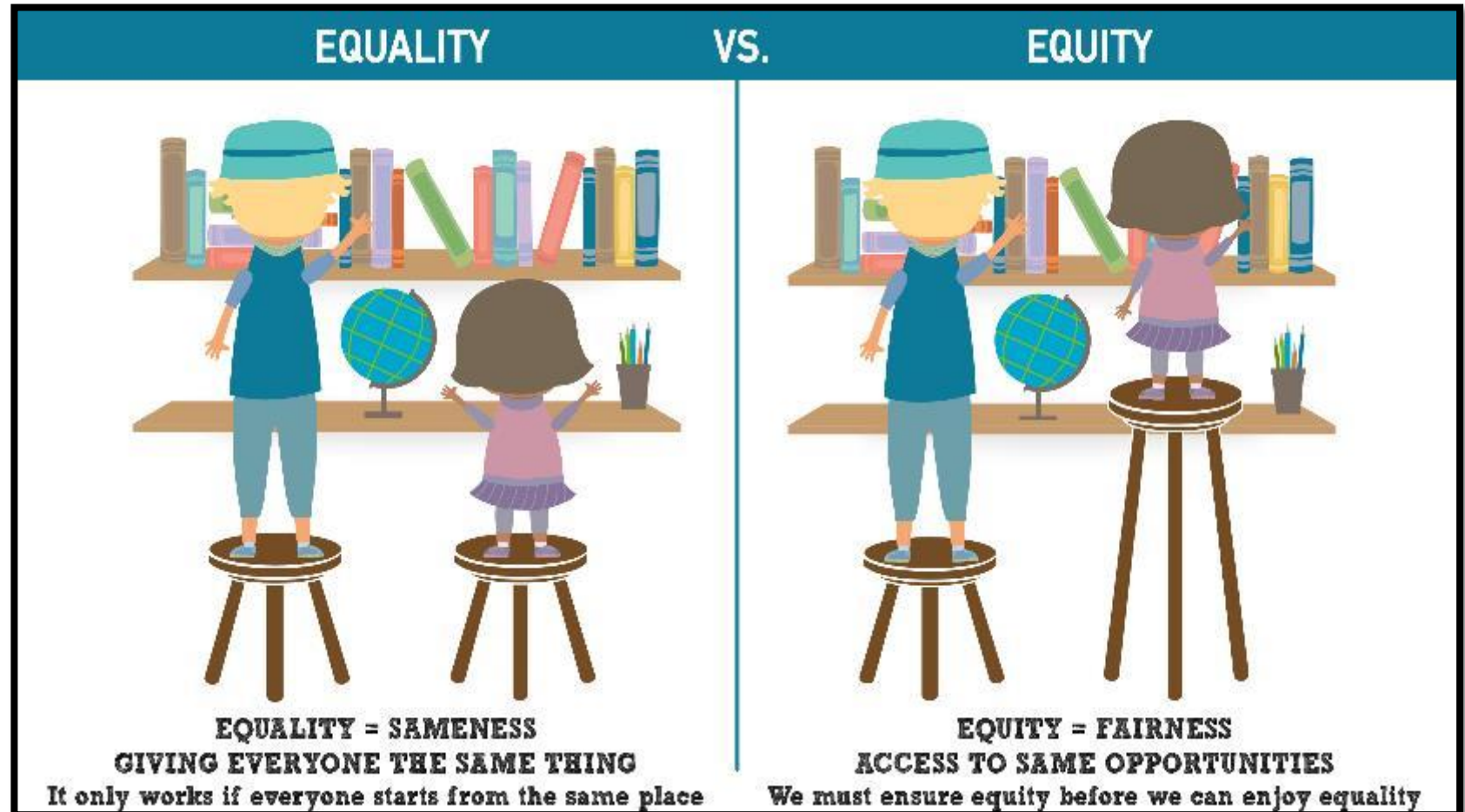
Invest in Health Systems for All

12.12.2021 | UHCDAY.ORG | #HealthForAll | #UHCDay

Thank you for valuable participation...



[TÜİK - Veri Portalı \(tuik.gov.tr\)](http://tuik.gov.tr)



Never forget; HEALTH is a Basic Human RIGHT!