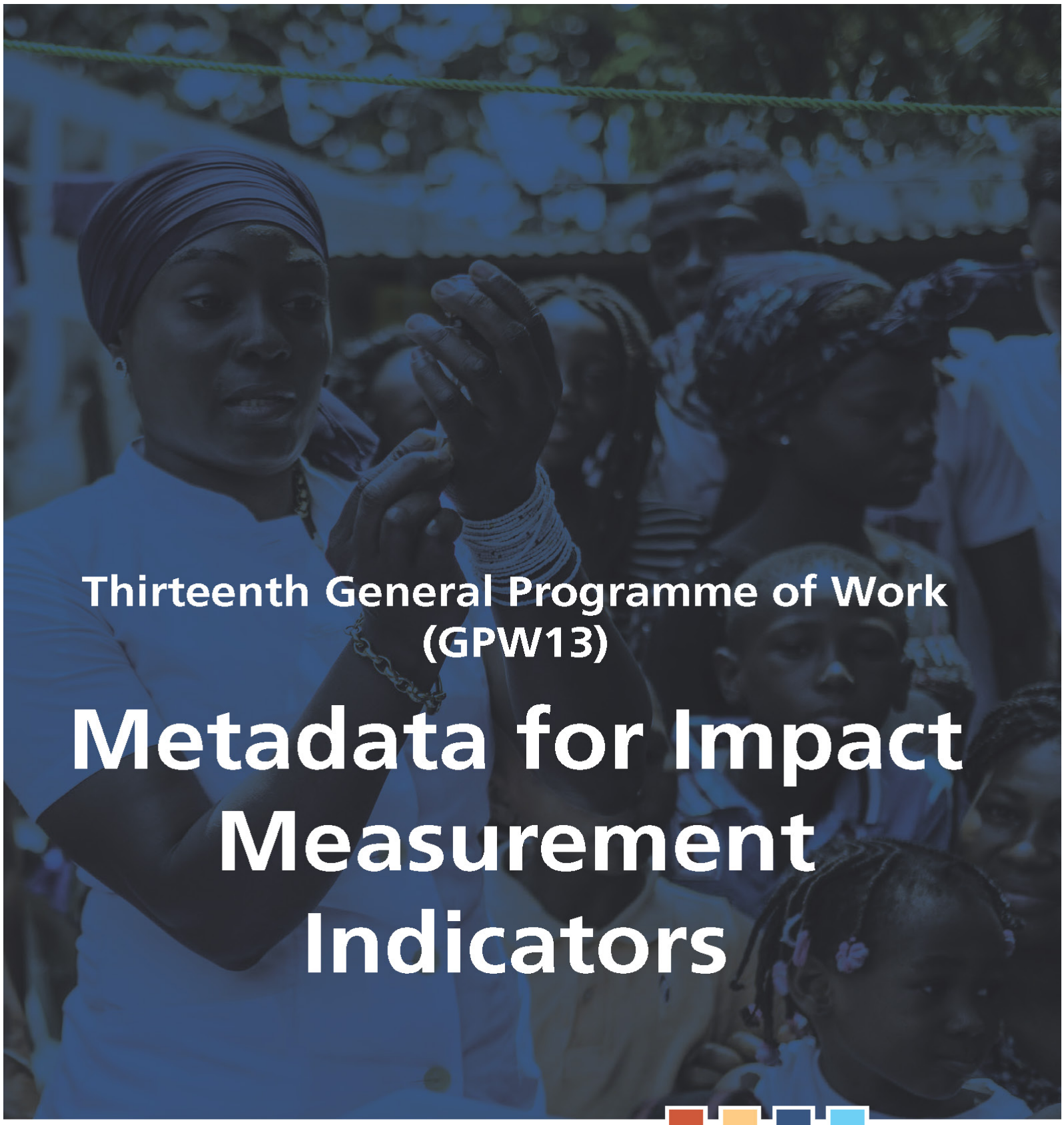

Thirteenth General Programme of Work
(GPW13)

Metadata for Impact Measurement Indicators

World Health Organization

July 2020

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Introduction

The 13th General Programme of Work (GPW13) sets out WHO's strategic direction, outlines how the Organization will proceed with its implementation and provides a framework to measure progress in this effort. It has taken account of the strategic plans of WHO regional offices and has been developed in collaboration with the Regional Directors. GPW13 will cover the period 2019–2023 and will serve as the basis for resource mobilization and for the programme budgets for the bienniums 2020–2021 and 2022–2023.

At the heart of GPW13 are the triple billion goals which are to ensure that by 2023:

- A billion more people have universal health coverage
- A billion more people are protected from health emergencies
- A billion more people are living with better health and wellbeing

The GPW13 impact measurement system makes measurable the triple billion targets of GPW13. The aims of the GPW13 are to make a measurable impact on people's health at country level; increase the likelihood that the triple billion targets will be met; accelerate progress towards the Sustainable Development Goals (SDGs); transform how WHO works by anchoring commitments in measurable results; provide a means of tracking the joint efforts of the Secretariat, Member States and partners; and strengthen country data and information systems for health.

The impact measurement system has three layers:

1. The **46 outcome indicators** cover a range of health issues and provide a set of measurement indicators that will be used to measure outcomes in the programme budget.
2. Each of the **triple billion targets** will be measured using composite indices including:
    a. Universal health coverage index;
    b. Health emergencies protection index;
    c. Healthier populations index.
3. **HALE**, healthy life expectancy, quantifies expected years of life in good health at a particular age and can be considered a summary measure of the overall health of populations. It is proposed to use HALE within GPW13 as an overarching and comparable measure of the impact of the triple billion targets.

There are 40 GPW13 2023 targets (See Annex 1) linked to the 46 outcome indicators. Each target is tracked by a one or more indicators and are aligned to SDGs. Thirty-nine of the 46 outcome indicators are SDG indicators and 7 are from World Health Assembly resolutions. The outcome indicators were developed by WHO technical programmes in consultation with Member States.

Section 1: 46 Outcome Indicators

Table 1. Overview of 46 outcome indicators

SDG #	Outcome Indicators	*Associated Reference Name*
SDG 1.5.1	Number of deaths, missing persons and directly affected persons attributed to disasters per 100 000 population	*Number of persons affected by disasters (per 100 000 population)*
SDG 1.a.2	Proportion of total government spending on essential services (education, health and social protection)	*Domestic general government health expenditure (GGHE-D) (% of general expenditure (GGE))*
SDG 2.2.1	Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age	*Prevalence of stunting in children under 5 (%)*
SDG 2.2.2	Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age (wasting)	*Prevalence of wasting in children under 5 (%)*
SDG 2.2.2	Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age (overweight)	*Prevalence of overweight in children under 5 (%)*
SDG 3.1.1	Maternal mortality ratio	*Maternal mortality ratio (per 100 000 live births)*
SDG 3.1.2	Proportion of births attended by skilled health personnel	*Proportion of births attended by skilled health personnel (%)*
SDG 3.2.1	Under-5 mortality rate	*Under-five mortality rate (per 1000 live births)*
SDG 3.2.2	Neonatal mortality rate	*Neonatal mortality rate (per 1000 live births)*
SDG 3.3.1	Number of new HIV infections per 1 000 uninfected population, by sex, age and key populations	*Number of new HIV infections (per 1 000 uninfected population)*
SDG 3.3.2	Tuberculosis incidence per 100 000 population	*Tuberculosis incidence (per 100 000 population)*
SDG 3.3.3	Malaria incidence per 1 000 population	*Malaria incidence (per 1 000 population at risk)*
SDG 3.3.4	Hepatitis B incidence per 100 000 population	*Hepatitis B incidence (measured by: surface antigen (HBsAg) prevalence among children under 5 years)per 100 000 population*

SDG #	Outcome Indicators	*Associated Reference Name*
SDG 3.3.5	Number of people requiring interventions against neglected tropical diseases	*Number of people requiring interventions against neglected tropical diseases (NTDs)*
SDG 3.4.1	Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory diseases	*Probability of dying from any of CVD, cancer, diabetes, CRD (ages 30 – 70) (%)*
SDG 3.4.2	Suicide mortality rate	*Suicide mortality rate (per 100 000 population)*
SDG 3.5.1	Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders	*Coverage of treatment interventions for substance use disorders (%)*
SDG 3.5.2	Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol	*Total alcohol per capita consumption in adults aged 15+ (litres of pure alcohol)*
SDG 3.6.1	Death rate due to road traffic injuries	*Road traffic mortality rate (per 100 000 population)*
SDG 3.7.1	Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods	*Proportion of women (aged 15-49) having need for family planning satisfied with modern methods (%)*
SDG 3.8.1	Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, noncommunicable diseases and service capacity and access, among the general and the most disadvantaged population)	*UHC Service Coverage Index*
SDG 3.8.2	Proportion of population with large household expenditures on health as a share of total household expenditures or income	*Proportion of population with large household expenditures on health > 10%of total household expenditure or income (%)*
SDG 3.9.1	Mortality rate attributed to household and ambient air pollution	*Mortality rate attributed to air pollution (per 100 000 population)*
SDG 3.9.2	Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)	*Mortality rate attributed to exposure to unsafe WASH services (per 100 000 population)*
SDG 3.9.3	Mortality rate attributed to unintentional poisoning	*Mortality rate from unintentional poisoning (per 100 000 population)*

SDG #	Outcome Indicators	*Associated Reference Name*
SDG 7.1.2	Proportion of population with primary reliance on clean fuels and technology	*Proportion of population with primary reliance on clean fuels (%)*
SDG 11.6.2	Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)	*Annual mean concentrations of fine particulate matter (PM2.5) in urban areas (µg/m3)*
SDG 3.a.1	Age-standardized prevalence of current tobacco use among persons aged 15 years and older	*Prevalence of tobacco use in adults 15+ (%)*
SDG 3.b.1	Proportion of the target population covered by all vaccines included in their national programme	*Proportion of the target population covered by all vaccines included in national programmes (DTP3, MCV2, PCV3,) (%)*
SDG 3.b.3	Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis	*Proportion of health facilities with essential medicines available and affordable on a sustainable basis (%)*
SDG 3.c.1	Health worker density and distribution	*Density of health workers (doctors; nurse and midwife; pharmacists; dentists per 10 000 population)*
SDG 3.d.1	International Health Regulations (IHR) capacity and health emergency preparedness	*International Health Regulations (IHR) capacity and health emergency preparedness*
SDG 3.d.2	Percentage of bloodstream infections due to antimicrobial resistant organisms.	*Percentage of bloodstream infections due to antimicrobial resistant organisms (%)*
SDG 4.2.1	Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being, by sex	*Proportion of children under 5 developmentally on track (health, learning and psychosocial well-being) (%)*
SDG 5.2.1	Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age	*Proportion of women (15-49) subjected to violence by current or former intimate partner (%)*
SDG 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	*Proportion of women (15-49) who make their own decisions regarding sexual relations, contraceptive use and reproductive health care (%)*

SDG #	Outcome Indicators	*Associated Reference Name*
SDG 6.1.1	Proportion of population using safely managed drinking water services	*Proportion of population using safely managed drinking water services (%)*
SDG 6.2.1	Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water	*Proportion of population using safely managed sanitation services and hand-washing facility (%)*
SDG 16.2.1	Proportion of children aged 1–17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month	*Proportion of children (aged 1-17) experiencing physical or psychological aggression (%)*
Health Emergencies	Vaccine coverage of at-risk groups for epidemic or pandemic prone diseases	*Vaccine coverage for epidemic prone diseases*
Health Emergencies	Proportion of vulnerable people in fragile settings provided with essential health services	*Proportion of vulnerable people in fragile settings provided with essential health services (%)*
WHA68.3	Number of cases of poliomyelitis caused by wild poliovirus (WPV)	*Number of cases of poliomyelitis caused by wild poliovirus (WPV)*
WHA68.7	Patterns of antibiotic consumption at national level	*Patterns of antibiotic consumption at national level*
WHA66.10	Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure of >140 mmHg and/or diastolic blood pressure >90 mmHg) and mean systolic blood pressure	*Prevalence of raised blood pressure in adults aged 18+*
WHA66.10	Protection of the population of a country by effective policy/regulation on industry produced trans-fatty acids (TFA)	*Effective policy/regulation for industrially produced trans-fatty acids (TFA) (Y/N)*
WHA66.10	Prevalence of obesity	*Prevalence of obesity*

SDG 1.5.1 Number of persons affected by disasters (per 100 000 population)

Indicator	**Number of deaths, missing persons and directly affected persons attributed to disasters per 100 000 Population**
Definition	The estimated number of deaths due to natural disasters per 100 000 population averaged over the period.
Method of estimation/calculation	$\frac{\text{Number of deaths attributed to disasters}}{Global\ population} * 100\ 000$
Numerator	Number of deaths attributed to disasters: The number of people who died during the disaster, or directly after, as a direct result of the hazardous event. The Sendai Framework and SDG 1.5.1 do not include deaths that are conflict-related, or violent deaths.
Denominator	Global population
Preferred data sources	Data are available from the Sendai Framework monitoring platform, overseen by UNISDR (https://sendaimonitor.unisdr.org/). Data provider at national level is appointed Sendai Framework Focal Points. In most countries disaster data are collected by line ministries and national disaster loss databases are established and managed by special purpose agencies including national disaster management agencies, civil protection agencies, and meteorological agencies. The Sendai Framework Focal Points in each country are responsible of data reporting through the Sendai Framework Monitoring System.
Other possible data sources	Disaster loss data for Sustainable Development Goals and Sendai Framework Monitoring System (DesInventar Sendai; https://www.desinventar.net/); Global Health Observatory; International Disaster Database (EM-DAT; https://www.emdat.be/)
Disaggregation	Country (country population as denominator); Hazard type
Expected frequency of data collection	Annual
Limitations	Currently data from UNIDSR and UNSD are available for only 73 countries in 2017. Data availability are expected to increase during the period. Data disaggregated by hazard type (e.g., biological, climatological, hydrological) will be available in future years allowing for narrowing the scope to hazards pertinent to health emergencies. responses.
Data type	Rate
Related links	Official SDG Metadata URL: https://unstats.un.org/sdgs/metadata/files/Metadata-01-05-01.pdf <to be updated with new docs> Internationally agreed methodology and guideline URL: Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction (UNISDR 2017) https://www.preventionweb.net/files/54970_collectionoftechnicalguidancenoteso.pdf Other references: Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction (OEIWG). *Endorsed by UNGA on 2nd February 2017.* Available at: https://www.preventionweb.net/publications/view/51748

SDG 1.a.2 Domestic general government health expenditure (GGHE-D) (% of general government expenditure (GGE))*

Indicator	**Proportion of total government spending on essential services (education, health and social protection)**
Definition	Share of government health expenditures from domestic sources in general government expenditures
Method of estimation/calculation	The share of domestic general government health expenditures in general government expenditure indicates the priority of health in government budget allocation. It expresses this priority by comparing the size of current government health expenditures relative to the total size of government expenditure. The indicator is calculated as (GGHED%GGE_t+5 - GGHED%GGE_t)/GGHED%GGE_t
Numerator	Domestic General Government Health Expenditure
Denominator	General Government Expenditure
Preferred data sources	Global Health Expenditure Database (GHED)
Other possible data sources	Global Health Observatory (GHO)
Disaggregation	No
Expected frequency of data collection	Annual
Limitations	As per metadata for each country in GHED
Data type	Percentage
Related links	http://www.who.int/health-accounts/

* only covers health aspect of indicator

SDG 2.2.1 Prevalence of stunting in children under 5 (%)

Indicator	**Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age**
Definition	Percentage of stunting (length- or height-for-age less than -2 standard deviations of the WHO Child Growth Standards median) among children aged 0-4 years. Children's length and height are measured using standard technology, training and standardization procedures for anthropometry is essential for accurate measurements. Determination of the exact child's age is the first and most important step in this anthropometric assessment. Recumbent length should be measured for children less than 24 months of age and standing height should be measured for children 24 months and above.
Method of estimation/calculation	Prevalence of stunted children aged <5 years = $\frac{Number\ of\ children\ aged\ 0-4\ years\ that\ fall\ below\ minus\ two\ standard\ deviations\ from\ the\ median\ length-or\ height-for-age\ of\ the\ WHO\ Child\ Growth\ Standards}{Total\ number\ of\ children\ aged\ 0-4\ years\ that\ were\ measured} \times 100\%$
Numerator	Number of children aged 0-4 years that fall below minus two standard deviations from the median length- or height-for-age of the WHO Child Growth Standards.
Denominator	Total number of children aged 0–4 years who were measured.
Preferred data sources	National nutrition surveys, any other nationally-representative population-based surveys with nutrition modules, and national surveillance systems.
Other possible data sources	
Disaggregation	By age, sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g. mother's education, wealth quintile).
Expected frequency of data collection	Annual or every 3-5 years based on survey availability in countries
Limitations	Survey estimates come with levels of uncertainty due to both sampling and non-sampling error (e.g. measurement technical error, recording error etc.
Data type	Prevalence
Related links	WHO: http://apps.who.int/gho/data/node.wrapper.imr?x-id=72; http://www.who.int/childgrowth/en/; http://www.who.int/nutgrowthdb/en/; http://apps.who.int/bookorders/anglais/detart1.jsp?sesslan=1&codlan=1&codcol=15&codcch=660.

SDG 2.2.2 Prevalence of wasting in children under 5 (%)

Indicator	**Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age (wasting)**
Definition	Percentage of wasting (weight-for-length or height less than -2 standard deviations of the WHO Child Growth Standards median) among children aged 0-4 years. Children's weight and height are measured using standard technology, e.g. children less than 24 months are measured lying down, while standing height is measured for children 24 months and older.
Method of estimation/calculation	Prevalence of wasted children aged <5 years = $\frac{Number\ of\ children\ aged\ 0-4\ years\ that\ fall\ below\ minus\ two\ standard\ deviations\ from\ the\ median\ weight-for-length\ or\ height\ of\ the\ WHO\ Child\ Growth\ Standards}{Total\ number\ of\ children\ aged\ 0-4\ years\ that\ were\ measured} \times 100\%$
Numerator	Number of children aged 0-4 years that fall below minus two standard deviations from the median weight-for- length or height of the WHO Child Growth Standards
Denominator	Total number of children aged 0-4 years that were measured
Preferred data sources	National nutrition surveys, any other nationally-representative population-based surveys with nutrition modules, and national surveillance systems.
Other possible data sources	
Disaggregation	By age, sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g. mother's education, wealth quintile).
Expected frequency of data collection	Annual or every 3-5 years based on survey availability in countries.
Limitations	Survey estimates come with levels of uncertainty due to both sampling and non-sampling error (e.g. measurement technical error, recording error etc.).
Data type	Prevalence
Related links	WHO: http://apps.who.int/gho/data/node.wrapper.imr?x-id=302; http://www.who.int/childgrowth/en/; http://www.who.int/nutgrowthdb/en/; http://apps.who.int/bookorders/anglais/detart1.jsp?sesslan=1&codlan=1&codcol=15&codcch=660.

SDG 2.2.2 Prevalence of overweight in children under 5 (%)

Indicator	**Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age (overweight)**
Definition	For 0-4 years, overweight is defined as weight-for-length or height above two standard deviations of the WHO Child Growth Standards median.
Method of estimation/calculation	Prevalence of overweight = $\frac{Number\ of\ children\ aged\ 0{-}4\ years\ that\ fall\ above\ two\ standard\ deviations\ from\ the\ median\ weight{-}for{-}length\ or\ height\ of\ the\ WHO\ Child\ Growth\ Standards}{Number\ of\ children\ aged\ 0{-}4\ years\ in\ the\ survey\ \ that\ were\ measured} \times 100\%$
Numerator	Number of children aged 0-4 years that fall above two standard deviations from the median weight-for-length or height of the WHO Child Growth Standards.
Denominator	Total number of children aged 0-4 years in the survey that were measured.
Preferred data sources	Nationally representative population-based household or school-based surveys with height and weight measurements of 0-4-year-old children. Other sources of data include national nutrition surveillance systems.
Other possible data sources	Data sets of FAO and UN Statistical office
Disaggregation	By age, sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g., mother's education, wealth quintile).
Expected frequency of data collection	Annual or at least every 3-5 years based on survey availability in countries.
Limitations	Survey estimates come with levels of uncertainty due to both sampling and non-sampling error (e.g. measurement technical error, recording error etc.). Another limitation, especially for the school-age children and adolescent age group is the representativeness of the sample.
Data type	Prevalence
Related links	WHO: http://who.int/chp/gshs/en/; http://www.who.int/dietphysicalactivity/childhood/en/

SDG 3.1.1 Maternal mortality ratio (per 100 000 live births)

Indicator	**Maternal mortality ratio**
Definition	**The maternal mortality ratio (MMR)** is the number of maternal deaths during a given time period per 100,000 live births during the same time-period. **Maternal death** refers to the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management (from direct or indirect obstetric death), but not from accidental or incidental causes. **Pregnancy-related death** refers to the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death. **Live birth** refers to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life - e.g. beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles - whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.
Method of estimation/calculation	**MMR** = $\frac{Total\ number\ of\ maternal\ deaths}{Total\ number\ of\ live\ births} \times 100{,}000$
Numerator	Total number of maternal deaths
Denominator	Total number of live births
Preferred data sources	Civil registration vital statistics (CRVS), health service records, household surveys, census.
Other possible data sources	Sample registration systems; verbal autopsy.
Disaggregation	By age, parity, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g., education level, wealth quintile).
Expected frequency of data collection	Annual (for CRVS and health service records).
Limitations	Maternal death is, from an epidemiological perspective, a relatively rare event and mortality is difficult to measure accurately. Many low-income countries have no, incomplete or unusable death registry data. Modelling may be used to obtain a national estimate.
Data type	Ratio
Related links	WHO: http://www.who.int/healthinfo/statistics/indmaternalmortality/en/ WHO: https://www.who.int/reproductivehealth/publications/monitoring/maternal-mortality-2015/en/. WHO: https://www.who.int/reproductivehealth/publications/monitoring/9789241548458/en/. UNSDG: https://unstats.un.org/sdgs/metadata/files/Metadata-03-01-01.pdf

SDG 3.1.2 Proportion of births attended by skilled health personnel (%)

Indicator	**Proportion of births attended by skilled health personnel**
Definition	Percentage of live births for women aged 15-49 years attended by skilled health personnel (doctor, nurse or midwife). Skilled health personnel, as referenced by SDG indicator 3.1.2, are competent maternal and newborn health (MNH) professionals educated, trained and regulated to national and international standards. They are competent to: (i) provide and promote evidence-based, human-rights-based, quality, socioculturally sensitive and dignified care to women and newborns; (ii) facilitate physiological processes during labour and delivery to ensure a clean and positive childbirth experience; and (iii) identify and manage or refer women and/or newborns with complications. In addition, as part of an integrated team of MNH professionals (including midwives, nurses, obstetricians, paediatricians and anaesthetists, they perform all signal functions of emergency maternal and newborn care to optimize the health and well-being of women and newborns. Within an enabling environment, midwives trained to international Confederation of Midwives (ICM), standards can provide nearly all of the essential care needed for women and newborns. (In different countries, these competencies are held by professionals with varying occupational titles).
Method of estimation/calculation	The number of women aged 15-49 years with a live birth attended by a skilled health personnel (doctor, nurse or midwife) during childbirth is expressed as a percentage of women aged 15-49 years with a live birth in the same period.
Numerator	Number of live births attended by skilled health personnel (doctor, nurse or midwife) trained in providing life-saving obstetric care, including giving the necessary supervision, care and advice to women during pregnancy, childbirth and the postpartum period, to conduct deliveries on their own, and to care for newborns.
Denominator	The total number of live births of women aged 15-49 years in the same period.
Preferred data sources	National population-based surveys.
Other possible data sources	Routine facility information systems.
Disaggregation	Age, parity, place of residence, socioeconomic status.
Expected frequency of data collection	3-5 years for national population-based surveys, annual for routine facility information systems.
Limitations	Discrepancies possible if national figures are from health facilities rather than household level data. Institutional births may underestimate percentage of births with skilled attendant.
Data type	Percentage
Related links	https://unstats.un.org/sdgs/metadata/files/Metadata-03-01-02.pdf https://data.unicef.org/topic/maternal-health/delivery-care/# https://www.who.int/reproductivehealth/publications/statement-competent-mnh-professionals/en/

SDG 3.2.1 Under-five mortality rate (per 1000 live births)

Indicator	**Under-five mortality rate**
Definition	**The under-5 years mortality rate (U5MR) is** the probability of a child born in a specific year or period dying before reaching the age of five, if subject to the age-specific mortality rates of that period, expressed per 1000 live births. It is, strictly speaking, not a rate (i.e. the number of deaths divided by the number of population at risk during a certain period of time) but a probability of death derived from a life table and expressed as rate per 1000 live births. **Live birth** refers to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life - e.g. beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles - whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.
Method of estimation/calculation	The UN Inter-agency Group for Child Mortality Estimation (UN IGME) estimates are derived from national data from censuses, surveys or vital registration systems. The UN IGME does not use any covariates to derive its estimates. It only applies a curve fitting method to good-quality empirical data to derive trend estimates after data quality assessment. In most cases, the UN IGME estimates are close to the underlying data. The UN IGME aims to minimize the errors for each estimate, harmonize trends over time and produce up-to-date and properly assessed estimates. The UN IGME applies the Bayesian B-splines bias-reduction model to empirical data to derive trend estimates of under-five mortality for all countries. See references for details. For the underlying data mentioned above, the most frequently used methods are as follows: Civil registration: The under-five mortality rate can be derived from a standard period abridged life table using the age-specific deaths and mid-year population counts from civil registration data to calculate death rates, which are then converted into age-specific probabilities of dying. Census and surveys: An indirect method is used based on a summary birth history, a series of questions asked of each woman of reproductive age as to how many children she has ever given birth to and how many are still alive. The Brass method and model life tables are then used to obtain an estimate of under-five and infant mortality rates. Censuses often include questions on household deaths in the last 12 months, which can be used to calculate mortality estimates. Surveys: A direct method is used based on a full birth history, a series of detailed questions on each child a woman has given birth to during her lifetime. Neonatal, post-neonatal, infant, child and under-five mortality estimates can be derived from full birth history module.
Numerator	Total number of deaths among children aged 0-4 years (the total number is actually the probability of death derived from a life table)
Denominator	Total number of live births
Preferred data sources	Civil registration and vital statistics,
Other possible data sources	censuses; and household surveys.
Disaggregation	By sex, place of residence, wealth quintile and mother's education
Expected frequency of data collection	Annual updates from the UN-IGME revisions

Limitations	The preferred source of data is a civil registration system that records births and deaths on a continuous basis. If registration is complete and the system functions efficiently, the resulting estimates will be accurate and timely. However, many countries do not have well-functioning vital registration systems. In such cases, household surveys, such as the UNICEF-supported Multiple Indicator Cluster Surveys (MICS), the USAID-supported Demographic and Health Surveys (DHS) and periodic population censuses have become the primary sources of data on under-five mortality. These surveys ask women about the survival of their children, and it is these reports that provide the basis of child mortality estimates for a majority of low- and middle- income countries. These data, however, are often subject to sampling or non-sampling errors (such as misreporting of age and survivor selection bias; underreporting of child deaths is also common) These under-five mortality rates have been estimated by applying methods to the available data from all Member States to ensure comparability across countries and time; hence they are not necessarily the same as the official national data.
Data type	Mortality estimate: probability of death derived from a life table and expressed as rate per 1000 live births.
Related links	WHO: http://apps.who.int/gho/data/node.wrapper.imr?x-id=1; http://www.who.int/whosis/whostat2006InfantAndUnder5MortalityRate.pdf?ua=1; http://apps.who.int/gho/data/node.wrapper.imr?x-id=4717 UNICEF: https://www.unicef.org/infobycountry/stats_popup1.html

SDG 3.2.2 Neonatal mortality rate (per 1000 live births)

Indicator	**Neonatal mortality rate**
Definition	Probability that a child born in a specific year or period will die in the first 28 days of life (0-27 days), if subject to the age-specific mortality rates of that period, expressed per 1000 live births. Neonatal deaths (deaths among live births during the first 28 days of life)
Method of estimation/calculation	The UN Inter-Agency Group for Child Mortality Estimation (UN IGME) estimates are derived from national data from censuses, surveys or vital registration systems. The UN IGME does not use any covariates to derive its estimates. It only applies a curve fitting method to good-quality empirical data to derive trend estimates after data quality assessment. In most cases, the UN IGME estimates are close to the underlying data. The UN IGME aims to minimize the errors for each estimate, harmonize trends over time and produce up-to-date and properly assessed estimates. The UN IGME produces neonatal mortality rate estimates with a Bayesian spline regression model which models the ratio of neonatal mortality rate / (under-five mortality rate - neonatal mortality rate). Estimates of NMR are obtained by recombining the estimates of the ratio with UN IGME-estimated under-five mortality rate. See the references for details. For the underlying data mentioned above, the most frequently used methods are as follows: Civil registration: Number of children who died during the first 28 days of life and the number of births used to calculate neonatal mortality rates. Census and surveys: Census often includes questions on household deaths in the last 12 months, which can be used to calculate mortality estimates. Surveys: A direct method is used based on a full birth history, a series of detailed questions on each child a woman has given birth to during her lifetime. Neonatal, post-neonatal, infant, child and under-five mortality estimates can be derived from full birth history module.
Numerator	Number of children who died in the first 28 days (0-27) of life (the total number is actually the probability of death derived from a life table)
Denominator	Number of live births
Preferred data sources	Data from civil registration and vital statistics.
Other possible data sources	Censuses and household surveys.
Disaggregation	By sex, place of residence, wealth quintile and mother's education
Expected frequency of data collection	Annual updates from the UN-IGME revisions

Limitations	The preferred source of data is a civil registration system that records births and deaths on a continuous basis. If registration is complete and the system functions efficiently, the resulting estimates will be accurate and timely. However, many countries do not have well-functioning vital registration systems. In such cases, household surveys, such as the UNICEF-supported Multiple Indicator Cluster Surveys (MICS), the USAID-supported Demographic and Health Surveys (DHS) and periodic population censuses have become the primary sources of data on under-five mortality. These surveys ask women about the survival of their children, and it is these reports that provide the basis of child mortality estimates for a majority of low- and middle- income countries. These data, however, are often subject to sampling or non-sampling errors (such as misreporting of age and survivor selection bias; underreporting of child deaths is also common) These under-five mortality rates have been estimated by applying methods to the available data from all Member States to ensure comparability across countries and time; hence they are not necessarily the same as the official national data.
Data type	Mortality estimate: probability of death derived from a life table and expressed as rate per 1000 live births.
Related links	WHO: http://apps.who.int/gho/data/node.wrapper.imr?x-id=1; http://www.who.int/whosis/whostat2006InfantAndUnder5MortalityRate.pdf?ua=1; http://apps.who.int/gho/data/node.wrapper.imr?x-id=4717 UNICEF: https://www.unicef.org/infobycountry/stats_popup1.html

SDG 3.3.1 New HIV infections (per 1000 uninfected population)

Indicator	**Number of new HIV infections per 1000 uninfected population, by sex, age and key populations**
Definition	The number of new HIV infections per 1000 uninfected population, by sex, age and key populations as defined as the number of new HIV infections per 1000 person-years among the uninfected population.
Method of estimation/calculation	Longitudinal data on individuals are the best source of data but are rarely available for large populations. Special diagnostic tests in surveys or from health facilities can be used to obtain data on HIV incidence. HIV incidence is thus modelled using the Spectrum software.
Numerator	Number of new HIV infections by sex, age and key populations
Denominator	Total uninfected population by sex, age and key populations
Preferred data sources	Spectrum modelling, household or key population surveys with HIV incidence-testing
Other possible data sources	Other possible data sources: Regular surveillance system among key populations.
Disaggregation	General population, key populations (men who have sex with men, sex workers, people who inject drugs, transgender people, prisoners), age groups (0-14, 15-24, 15-49, 50+ years), for key populations (< 25, 25+ years), mode of transmission (including mother-to-child transmission), place of residence, sex
Expected frequency of data collection	Data sources are compiled all year long. The spectrum models are created in the first three months of every year and finalized by June.
Limitations	
Data type	Rate
Related links	https://www.unaids.org/en/dataanalysis/datatools/spectrum-epp UNAIDS Global AIDS Monitoring: Indicators for monitoring the 2016 United Nations Political Declaration on Ending AIDS Political Declaration on HIV and AIDS: On the Fast Track to Accelerating the Fight against HIV and to Ending the AIDS Epidemic by 2030 http://www.unaids.org/sites/default/files/media_asset/2017-Global-AIDS-Monitoring_en.pdf . UNAIDS website for relevant data and national Spectrum files http://aidsinfo.unaids.org/ Consolidated Strategic Information Guidelines for HIV in the Health Sector. Geneva: World Health Organization; https://www.who.int/hiv/pub/guidelines/en/ A description of the methodology is available at: http://www.unaids.org/sites/default/files/media_asset/Estimates_methods_2018.pdf

SDG 3.3.2 Tuberculosis incidence (per 100 000 population)

Indicator	**Tuberculosis incidence per 100 000 population**
Definition	Tuberculosis incidence is defined as the estimated number of new and relapse TB cases (all forms of TB, including cases in people living with HIV) arising in a given year, expressed as a rate per 100 000 population.
Method of estimation/calculation	Estimates of incidence for each country are derived using one or more of the following approaches, depending on available data: (i) incidence = case notifications/estimated proportion of cases detected; (ii) capture-recapture modelling; (iii) incidence = prevalence/duration of condition.
Numerator	Estimated number of new and relapse TB cases (all forms of TB, including cases in people living with HIV) arising in a given year
Denominator	Total population
Preferred data sources	High-quality surveillance systems in which underreporting is negligible, and strong health systems so that under-diagnosis is also negligible
Other possible data sources	Annual case notifications, assessments of the quality and coverage of TB notification data, national surveys of the prevalence of TB disease and information from death (vital) registration systems
Disaggregation	By country, sex, age (children vs adults).
Expected frequency of data collection	Annual
Limitations	Uncertainty in indicator values
Data type	Rate
Related links	https://unstats.un.org/sdgs/metadata/files/Metadata-03-03-02.pdf

SDG 3.3.3 Malaria incidence (per 1000 population at risk)

Indicator	**Malaria incidence per 1 000 population**
Definition	The number of new cases of malaria per 1,000 people at risk each year.
Method of estimation/calculation	The number of malaria cases was estimated by one of the following two methods: Method 1: Method 1 was used for countries and areas outside Africa and for low-transmission countries and areas in Africa: Afghanistan, Bangladesh, Bolivia (Plurinational State of), Botswana, Brazil, Cambodia, Colombia, Dominican Republic, Eritrea, Ethiopia, French Guiana, Gambia, Guatemala, Guyana, Haiti, Honduras, India, Indonesia, Lao People's Democratic Republic, Madagascar, Mauritania, Myanmar, Namibia, Nepal, Nicaragua, Pakistan, Panama, Papua New Guinea, Peru, Philippines, Rwanda, Senegal, Solomon Islands, Timor-Leste, Vanuatu, Venezuela (Bolivarian Republic of), Viet Nam, Yemen and Zimbabwe. Estimates were made by adjusting the number of reported malaria cases for completeness of reporting, the likelihood that cases were parasite positive, and the extent of health service use. The procedure, which is described in the World malaria report 2008 (5), combines data reported by NMPs (reported cases, reporting completeness and likelihood that cases are parasite positive) with data obtained from nationally representative household surveys on health service use. Briefly: T = (a + (c x e))/d x (1+f/g+(1−g−f)/2/g) where: a is malaria cases confirmed in public sector b is suspected cases tested c is presumed cases (not tested but treated as malaria) d is reporting completeness e is test positivity rate (malaria positive fraction) = a/b f is fraction seeking treatment in private sector g is fraction seeking treatment in public sector No treatment seeking factor: (1-g-f) Cases in public sector: (a + (c x e))/d Cases in private sector: (a + (c x e))/d x f/g Method 2 was used for high-transmission countries in Africa and for some countries in the WHO Eastern Mediterranean Region in which the quality of surveillance data did not permit a robust estimate from the number of reported cases: Angola, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Malawi, Mali, Mozambique, Niger, Nigeria, Sierra Leone, Somalia, South Sudan, Sudan, Togo, Uganda, United Republic of Tanzania and Zambia. In this method, estimates of the number of malaria cases were derived from information on parasite prevalence obtained from household surveys. First, data on parasite prevalence from nearly 60 000 survey records were assembled within a spatiotemporal Bayesian geostatistical model, along with environmental and sociodemographic covariates, and data distribution on interventions such as insecticide-treated mosquito net (ITNs), antimalarial drugs and indoor residual spraying (IRS). The geospatial model enabled predictions of Plasmodium falciparum prevalence in children aged 2–10 years, at a resolution of 5 × 5 km2 , throughout all malaria endemic African countries for each year from 2000 to 2018.1 Second, an ensemble model was developed to predict malaria incidence as a function of parasite prevalence. The model was then applied to the estimated parasite prevalence in order to obtain estimates of the malaria case incidence at 5 × 5 km2 resolution for each year from 2000 to 2018.1 Data for each 5 × 5 km2 area were then aggregated within country and regional 1 For methods on the development of maps by the Malaria Atlas Project, see https://www.map.ox.ac.uk/making-maps/. boundaries, to obtain both national and regional estimates of malaria cases For more details see World Malaria Report 2019 as referenced in links below.
Numerator	Total estimated number of new cases of malaria
Denominator	Total population
Preferred data sources	Country surveillance systems (number of suspected cases, number of tested cases, number of positive cases by method of detection and by species as well as number of health facilities that report those cases)

Other possible data sources	Representative household surveys
Disaggregation	Country
Expected frequency of data collection	Annual
Limitations	The estimated incidence can differ from the incidence reported by a Ministry of Health which can be affected by (1) completeness of reporting (2) extent of malaria diagnostic testing, (3) use of private health facilities not included in reporting systems, and (4) estimation only where malaria transmission occurs.
Data type	Rate
Related links	https://www.who.int/publications-detail/world-malaria-report-2019 https://unstats.un.org/sdgs/metadata/files/Metadata-03-03-03.pdf

SDG 3.3.4 Hepatitis B incidence (measured by surface antigen (HBsAg) prevalence among children under 5 years)

Indicator	**Hepatitis B incidence per 100 000 population**
Definition	The number of new hepatitis B infections per 100,000 population in a given year is estimated from the prevalence of total antibodies against hepatitis B core antigen (Total anti-HBc) and hepatitis B surface antigen (HBsAg) positive among children 5 years of age, adjusted for sampling design.
Method of estimation/calculation	$\frac{\text{Number of survey participants with Total anti} - \text{HBc and HBsAg positive test}}{\text{Number in survey with Total anti} - \text{Hc/HBsAg result}}$
Numerator	Number of survey participants with Total anti-HBc and HBsAg positive test
Denominator	Number in survey with Total anti-Hc/HBsAg result
Preferred data sources	Serosurvey
Other possible data sources	Routinely collected hepatitis B vaccine administrative coverage data including the proportion newborn infants given the first dose within 24 hours of birth (HepB0%) and the percentage of infants having received three doses of hepatitis B vaccine (HepB3 %)
Disaggregation	By sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g., education, wealth quintile).
Expected frequency of data collection	Intermittent, dependent on population seroprevalence of HBsAg before hepatitis B immunization and infant hepatitis B vaccination coverage.
Limitations	
Data type	Rate
Related links	Hepatitis B Control Through Immunization: a Reference Guide http://iris.wpro.who.int/bitstream/10665.1/10820/3/9789290616696_eng.pdf Documenting the Impact of Hepatitis B Immunization: best practices for conducting a serosurvey http://whqlibdoc.who.int/hq/2011/WHO_IVB_11.08_eng.pdf Sample design and procedures for Hepatitis B immunization surveys: A companion to the WHO cluster survey reference manual http://whqlibdoc.who.int/hq/2011/WHO_IVB_11.12_eng.pdf

SDG 3.3.5 Number of people requiring interventions against NTDs

Indicator	**Number of people requiring interventions against neglected tropical diseases**
Definition	Number of people requiring treatment and care for any one of the neglected tropical diseases (NTDs) targeted by the WHO NTD Roadmap, World Health Assembly resolutions and reported to WHO
Method of estimation/calculation	Some estimation is required to aggregate data across interventions and diseases. There is an established methodology that has been tested and an agreed international standard. [http://www.who.int/wer/2012/wer8702.pdf?ua=1] 1) Average annual number of people requiring mass treatment known as preventive care (PC) for at least one PC-NTD: People may require PC for more than one PC-NTD. The number of people requiring PC is compared across the PC-NTDs, by age group and implementation unit (e.g. district). The largest number of people requiring PC is retained for each age group in each implementation unit. The total is considered to be a conservative estimate of the number of people requiring PC for at least one PC-NTD. Prevalence surveys determine when an NTD has been eliminated or controlled and PC can be stopped or reduced in frequency, such that the average annual number of people requiring PC is reduced. 2) Number of new cases requiring individual treatment and care for other NTDs: The number of new cases is based on country reports, whenever available, of new and known cases of Buruli ulcer, Chagas disease, cysticercosis, dengue, guinea-worm disease, echinococcosis, human African trypanosomiasis (HAT), leprosy, the leishmaniases, rabies and yaws. Where the number of people requiring and requesting surgery for PC-NTDs (e.g. trichiasis or hydrocele surgery) is reported, it can be added here. Similarly, new cases requiring and requesting rehabilitation (e.g. leprosy or lymphoedema) can be added whenever available. Populations referred to under 1) and 2) may overlap; the sum would overestimate the total number of people requiring treatment and care. The maximum of 1) or 2) is therefore retained at the lowest common implementation unit and summed to get conservative country, regional and global aggregates. By 2030, improved co-endemicity data and models will validate the trends obtained using this simplified approach. A reduction of 400 million is calculated by subtracting current year numerator by baseline year numerator (2017)
Numerator	Number of people requiring interventions against neglected tropical diseases
Denominator	NA
Preferred data sources	The number of people requiring treatment and care for NTDs is measured by existing country systems, and reported through joint request and reporting forms for donated medicines, the integrated NTD database, and other reports to WHO.
Other possible data sources	Develop a standard protocol for systematic data collection for NTDs through World Health Survey Plus (WHS+).

Disaggregation	Disaggregation by age is required for PC: pre-school-aged children (1-4 years), school-aged (5-14 years) and adults (= 15 years).
Expected frequency of data collection	Annual
Limitations	Country reports may not be perfectly comparable over time. Improved surveillance and case-finding may lead to an apparent increase in the number of people known to require treatment and care. Some further estimation may be required to adjust for changes in surveillance and case-finding. Missing country reports may need to be imputed for some diseases in some years.
Data type	Absolute number
Related links	https://unstats.un.org/sdgs/metadata/?Text=&Goal=3&Target=3.3 http://www.who.int/neglected_diseases/mediacentre/resolutions/en/ http://www.who.int/neglected_diseases/resources/NTD_Generic_Framework_2015.pdf

SDG 3.4.1 Probability of dying from any of CVD, cancer, diabetes, CRD (ages 30-70) (%)

Indicator	**Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory**
Definition	Probability of dying between the exact ages 30 and 70 years from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases. Deaths from these four causes will be based on the following ICD-10 codes: I00-I99, C00-C97, E10-E14, and J30-J98.
Method of estimation/calculation	Age-specific death rates for the combined four cause categories (typically in terms of 5-year age groups30-34, 65-69). A life table method allows calculation of the risk of death between exact ages30 and70 from any of these causes, in the absence of other causes of death. The ICD codes to be included in the calculation are: cardiovascular disease: I00-I99, Cancer: C00-C97, Diabetes: E10-E14, or Chronic respiratory diseases: J30-J98. To calculate age-specific mortality rate for each 5-year age group and country, for each 5-year age range between 30 and 70: $${}^{*}_{5}M_x = \frac{Total\ deaths\ from\ four\ major\ NCD\ causes\ between\ exact\ age\ x\ and\ exact\ age\ x+5}{Total\ population\ between\ exact\ age\ x\ and\ exact\ age\ x+5}$$ Then translate the 5-year death rate to the probability of death in each 5-year age range: $${}^{*}_{5}q_x = \frac{{}^{*}_{5}M_x * 5}{1 + {}^{*}_{5}M_x * 2.5}$$ The probability of death from age 30 to 70 years, independent of other causes of death can be calculated as: $${}^{*}_{40}q_{30} = 1 - \prod_{x=30}^{65}(1 - {}^{*}_{5}q_x)$$
Numerator	See above
Denominator	See above
Preferred data sources	Vital registration systems which record deaths with sufficient completeness to allow estimation of all-cause death rates.
Other possible data sources	Sample registration systems; verbal autopsy.
Disaggregation	By sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g., education, wealth quintile).
Expected frequency of data collection	Annual
Limitations	- incomplete or unusable death registration data
Data type	Probability
Related links	WHO: http://www.who.int/gho/ncd/mortality_morbidity/ncd_premature_text/en/; http://www.who.int/healthinfo/statistics/LT_method.pdf.

SDG 3.4.2 Suicide mortality rate (per 100 000 population)

Indicator	**Suicide mortality rate**
Definition	Number of suicide deaths divided by the population and multiplied by 100,000 in a country in a given period of time. Suicide deaths will be based on the following ICD-10 codes: X60-X84, Y87.0.
Method of estimation/calculation	Suicide mortality rate = $\frac{Number\ of\ deaths\ from\ suicide}{Total\ population} \times 100{,}000$
Numerator	Number of suicide deaths in a given period of time
Denominator	Total population in a given period of time
Preferred data sources	Vital registration systems which record deaths with sufficient completeness to allow estimation of cause-specific death rates.
Other possible data sources	Sample registration systems; verbal autopsy.
Disaggregation	By sex, age.
Expected frequency of data collection	Annual
Limitations	- incomplete or unusable death registration data
Data type	Rate
Related links	WHO: http://www.who.int/gho/mental_health/mental_health_indicatorbook.pdf?ua=1.

SDG 3.5.1 Coverage of treatment interventions for substance-use disorders (%)

Indicator	**Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders**
Definition	Substance use disorders include substance dependence and harmful pattern of substance use. Severe substance use disorders include substance dependence only.
Method of estimation/calculation	There are two approaches currently under development and testing towards the indicator report: 1) Estimation based on actual service utilization: $\text{Treatment coverage} = \frac{\text{Treatment demands (Number of people in contact with treatment services)}}{\text{Treatment needs (Number of people with substance use disorders)}} \times 100\%$ 2) Estimation based on composite indicator of service development: proxy-data reflecting major components of treatment systems for substance use disorders.
Numerator	Number of people with substance use disorders/substance dependence in contact with treatment services in a given year
Denominator	Total number of people with substance use disorders/substance dependence in the population in a given year
Preferred data sources	WHO ATLAS on Substance Use (ATLAS-SU) and associated data collection activities; WHO Global Information System on Alcohol and Health (GISAH) and associated data collection activities; UNODC data generated through Annual Report Questionnaire (ARQ) surveys; WHO-UNODC Facility surveys; data collected through National statistical systems and health system data; population-based household surveys; GBD data for substance use dosor availability and utilization.
Other possible data sources	Other sources of information available from different international organizations and member states, such as administrative, project data, expert opinions, country-level targeted activities to generate and impute data.
Disaggregation	By type of substances, substance use disorders and treatment modalities
Expected frequency of data collection	The frequency of data collection will remain the same: -annual data collection for illicit drugs component; -annual or at least biennial for alcohol and other substance use component; -every 3-5 years for WHO ATLAS on Substance Use collects data.
Limitations	Effective coverage estimation may not feasible or limited to few predominantly high-income countries; In case of poor or unavailable data, country estimations may be limited to the level of availability
Data type	Percentage
Related links	ATLAS-SU: http://www.who.int/gho/substance_abuse/en/ GISAH: http://www.who.int/gho/alcohol/en/ UNODC World Drug Report: https://www.unodc.org/wdr2018/ http://www.who.int/mental_health/publications/action_plan/en/ http://www.who.int/mental_health/evidence/atlas/mental_health_atlas_2017/en/

SDG 3.5.2 Total alcohol per capita consumption in adults aged 15+ (litres of pure alcohol)

Indicator	**Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in liters of pure alcohol**
Definition	Consumption of pure alcohol (ethanol) in litres per person aged 15+ years during one calendar year.
Method of estimation/calculation	Recorded alcohol per capita (15+) consumption of pure alcohol is calculated as the sum of beverage-specific alcohol consumption of pure alcohol (beer, wine, spirits, other) based on data collection by WHO from different sources. The first priority in the decision tree is given to government statistics ; second are country-specific data in the public domain from data providers supported by the alcohol industry based on results of the field work at country level or data from the International Organisation of Vine and Wine (OIV); third is the Food and Agriculture Organization of the United Nations' statistical database (FAOSTAT); and fourth is data from industry-supported data in the public domain based on desk reviews. To make the conversion into litres of pure alcohol, the alcohol content (% alcohol by volume) is as follows: Beer (barley beer 5%), Wine (grape wine 12%; must of grape 9%, vermouth 16%), Spirits (distilled spirits 40%; spirit-like 30%), and Other (sorghum, millet, maize beers 5%; cider 5%; fortified wine 17% and 18%; fermented wheat and fermented rice 9%; other fermented beverages 9%). Unrecorded alcohol consumption refers to alcohol which is not taxed and is outside the usual system of governmental control, such as home or informally produced alcohol (legal or illegal), smuggled alcohol, surrogate alcohol (which is alcohol not intended for human consumption), or alcohol obtained through cross-border shopping (which is recorded in a different jurisdiction). Unrecorded alcohol consumption was estimated as a percentage of total alcohol consumption. Country-level proportions of unrecorded alcohol consumption were estimated using a regression analysis with input data collected by WHO from different sources. Data sources included expert judgements from a WHO survey, nominal expert group Delphi surveys, and WHO STEPS surveys. Tourist consumption takes into consideration alcohol purchased and consumed by tourists to a country and alcohol purchased and consumed when people are visiting countries other than their home country. For total alcohol per capita consumption by sex, the proportion of alcohol consumed by men versus women (from surveys) and the demographics (from UN population data) were used. Population data came from the UN World Population Prospects. Total alcohol per capita consumption = $\frac{Sum\ of\ recorded\ and\ unrecorded\ alcohol\ consumed\ in\ a\ population\ during\ a\ calendear\ year}{Midyear\ resident\ population\ aged\ 15{+}years\ in\ the\ same\ calendar\ year}$
Numerator	Sum of recorded and unrecorded alcohol consumed in a population during a calendar year, adjusted for tourist consumption, in litres.
Denominator	Midyear resident population aged 15+ for the same calendar year.
Preferred data sources	Administrative reporting systems for recorded APC and survey data for unrecorded APC. The priority of data sources for recorded alcohol per capita consumption should be given to government statistics on sales/taxation of alcoholic beverages during a calendar year or data on production, export and import of alcohol in different beverage categories. For countries, where the governmental sales or production data is not available, the preferred data source would be country specific and publicly available data from the private sector, including alcohol producers or country specific data from the Food and Agriculture Organization of the United Nations statistical database (FAOSTAT), which may also include the estimates of unrecorded alcohol consumption. Data sources for unrecorded alcohol consumption include survey data, customs or police data, and expert opinions.
Other possible data sources	Data sets of FAO and UN Statistical office

Disaggregation	By age, sex.
Expected frequency of data collection	Annual
Limitations	- gaps in administrative records of sales or production, import, export of alcoholic beverages - surveys may be subject to under-reporting of alcohol consumption, - mis-interpretation of questions and/or size of a standard drink, or associated with validity of the survey instruments
Data type	Volume (litres per capita)
Related links	WHO: http://apps.who.int/gho/data/node.gisah.GISAH?showonly=GISAH

SDG 3.6.1 Road traffic mortality rate (per 100 000 population)

Indicator	**Death rate due to road traffic injuries**
Definition	Death rate due to road traffic injuries as defined as the number of road traffic fatal injury deaths per 100,000 population.
Method of estimation/calculation	Our model is based on the quality of data we received. As a health organization, we rely primarily on the submission of vital registration data from countries' Ministries of Health to WHO (through the official channels). These data, on all causes of death, are then analysed by our colleagues in the Health Information Systems department to decide on how good the data are, that is, determining if there is good completeness and coverage of deaths for all causes. We classified the countries on 4 categories or groups namely, Group1: Countries with death registration data (good vital/ death registration data) Group2: Countries with other sources of information on causes of death Group3: Countries with population less than 150 000 Group4: Countries without eligible death registration data.
Numerator	Number of deaths due to road traffic crashes
Denominator	Total population
Preferred data sources	For the road traffic deaths, we have two sources of data. Data from Global Status Report on Road Safety survey and Vital registration or certificate deaths data that WHO receive every year from member states (ministries of health).
Other possible data sources	
Disaggregation	Types of road users, age, sex, income groups and WHO regions
Expected frequency of data collection	Biennial
Limitations	There are no vital registration data for all countries to make comparison against the data received on the survey. We published only confidence intervals for countries that have poor completeness of vital registration data. Also, we cannot collect road traffic data every year using this methodology outlined in the Global status report.
Data type	Rate
Related links	http://www.who.int/violence_injury_prevention http://www.who.int/violence_injury_prevention/road_safety_status/2015/en/

SDG 3.7.1 Proportion of women (aged 15-49) having need for family planning satisfied with modern methods (%)

Indicator	**Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods**
Definition	The percentage of women of reproductive age (15-49 years) who desire either to have no (additional) children or to postpone the next child and who are currently using a modern contraceptive method.
Method of estimation/calculation	The numerator is the percentage of women of reproductive age (15-49 years old) who are currently using, or whose sexual partner is currently using, at least one modern contraceptive method. The denominator is the total demand for family planning (the sum of contraceptive prevalence (any method) and the unmet need for family planning).
Numerator	Percentage of women of reproductive age (15-49 years old) who are currently using, or whose sexual partner is currently using, at least one modern contraceptive method.
Denominator	Total demand for family planning (the sum of contraceptive prevalence (any method) and the unmet need for family planning).
Preferred data sources	This indicator is calculated from nationally-representative household survey data. Multi-country survey programmes that include relevant data for this indicator are: Contraceptive Prevalence Surveys (CPS), Demographic and Health Surveys (DHS), Fertility and Family Surveys (FFS), Reproductive Health Surveys (RHS), Multiple Indicator Cluster Surveys (MICS), Performance Monitoring and Accountability 2020 surveys (PMA), World Fertility Surveys (WFS), other international survey programmes and national surveys.
Other possible data sources	
Disaggregation	Age, geographic location, marital status, socioeconomic status and other categories, depending on the data source and number of observations.
Expected frequency of data collection	Annual
Limitations	Differences in the survey design and implementation, as well as differences in the way survey questionnaires are formulated and administered can affect the comparability of the data. The most common differences relate to the range of contraceptive methods included and the characteristics (age, sex, marital or union status) of the persons for whom contraceptive prevalence is estimated (base population). The time frame used to assess contraceptive prevalence can also vary. In most surveys, there is no definition of what is meant by “currently using” a method of contraception. In some surveys, the lack of probing questions, asked to ensure that the respondent understands the meaning of the different contraceptive methods, can result in an underestimation of contraceptive prevalence, for traditional methods. Sampling variability can also be an issue, especially when contraceptive prevalence is measured for a specific subgroup (according to method, age-group, level of educational attainment, place of residence, etc.) or when analyzing trends over time.
Data type	Percentage
Related links	https://www.un.org/en/development/desa/population/publications/pdf/family/ContraceptiveUseByMethodDataBooklet2019.pdf https://www.un.org/en/development/desa/population/publications/pdf/popfacts/PopFacts_2019-3.pdf

SDG 3.8.1 UHC Service Coverage Index

Indicator	**Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)**
Definition	Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population). The indicator is an index reported on a unitless scale of 0 to 100, which is computed as the geometric mean of 14 tracer indicators of health service coverage.
Method of estimation/calculation	The index is computed with geometric means, based on the methods used for the Human Development Index. The calculation of the 3.8.1 indicator requires first preparing the 14 tracer indicators so that they can be combined into the index, and then computing the index from those values. The 14 tracer indicators are first all placed on the same scale, with 0 being the lowest value and 100 being the optimal value. For most indicators, this scale is the natural scale of measurement, e.g., the percentage of infants who have been immunized ranges from 0 to 100 percent. However, for a few indicators additional rescaling is required to obtain appropriate values from 0 to 100, as follows: • Rescaling based on a non-zero minimum to obtain finer resolution (this "stretches" the distribution across countries): prevalence of non-raised blood pressure and prevalence of nonuse of tobacco are both rescaled using a minimum value of 50%. rescaled value = (X-50)/(100-50)*100 • Rescaling for a continuous measure: mean fasting plasma glucose, which is a continuous measure (units of mmol/L), is converted to a scale of 0 to 100 using the minimum theoretical biological risk (5.1 mmol/L) and observed maximum across countries (7.1 mmol/L). rescaled value = (7.1 - original value)/(7.1-5.1)*100 Note that in countries with, the tracer indicator for use of insecticide-treated nets is dropped from the calculation. • Maximum thresholds for rate indicators: hospital bed density and health workforce density are both capped at maximum thresholds, and values above this threshold are held constant at 100. These thresholds are based on minimum values observed across OECD countries. rescaled hospital beds per 10,000 = minimum(100, original value / 18*100) rescaled physicians per 1,000 = minimum(100, original value / 0.9*100) rescaled psychiatrists per 100,000 = minimum(100, original value / 1*100) rescaled surgeons per 100,000 = minimum(100, original value / 14*100) Once all tracer indicator values are on a scale of 0 to 100, geometric means are computed within each of the four health service areas, and then a geometric mean is taken of those four values. If the value of a tracer indicator happens to be zero, it is set to 1 (out of 100) before computing the geometric mean.
Numerator	This indicator is based on aggregate estimates.
Denominator	This indicator is based on aggregate estimates.
Preferred data sources	Many of the tracer indicators of health service coverage are measured by household surveys. However, administrative data, facility data, facility surveys, and sentinel surveillance systems are utilized for certain indicators.

Other possible data sources	
Disaggregation	Geographic location, household wealth. Equity is central to the definition of UHC, and therefore the UHC service coverage index should be used to communicate information about inequalities in service coverage within countries. This can be done by presenting the index separately for the national population vs disadvantaged populations to highlight differences between them.
Expected frequency of data collection	Data collection varies from every 1 to 5 years across tracer indicators. For example, country data on immunizations and HIV treatment are reported annually, whereas household surveys to collect information on child treatment may occur every 3-5 years, depending on the country.
Limitations	The tracer indicators are meant to be indicative of service coverage, not a complete or exhaustive list of health services and interventions that are required for universal health coverage. The 14 tracer indicators were selected because they are well-established, with available data widely reported by countries (or expected to become widely available soon). Therefore, the index can be computed with existing data sources and does not require initiating new data collection efforts solely to inform the index.
Data type	Index
Related links	https://unstats.un.org/sdgs/metadata/files/Metadata-03-08-01.pdf. Individual tracer indicators are available here: http://www.who.int/healthinfo/universal_health_coverage/UHC_Tracer_Indicators_Metadata.pdf

SDG 3.8.2 Population with household expenditures on health > 10% of total household expenditure or income (%)

Indicator	**Proportion of population with large household expenditures on health as a share of total household expenditures or income**
Definition	Proportion of the population with large household expenditure on health as a share of total household expenditure or income. Two thresholds are used to define "large household expenditure on health": greater than 10% and greater than 25% of total household expenditure or income.
Method of estimation/calculation	Population weighted average number of people with large household expenditure on health as a share of total household expenditure or income $$\frac{\sum_i m_i \omega_i 1\left(\frac{health\ expenditure\ of\ the\ household\ i}{total\ expenditure\ of\ the\ household\ i} > \tau\right)}{\sum_i m_i\ \omega_i}$$ where *i* denotes a household, 1() is the indicator function that takes on the value 1 if the bracketed expression is true, and 0 otherwise, m_i corresponds to the household size (number of household members of *i)*, ω_i corresponds to the sampling weight of household *i*. Household's sample weight ω_i multiplied by the household size m_i is used to obtain representative numbers per person. If the sample is self-weighting t only the household size is used as the weight. τ is a threshold identifying large household expenditure on health as a share of total household consumption or income (i.e. 10% and 25%).
Numerator	Total number of people with large household expenditure on health as a share of total household expenditure or income (i.e. greater than 10% and 25%). Household expenditure on health is defined as any expenditure incurred at the time of service use to get any type of care (promotive, preventive, curative, rehabilitative, palliative or long-term care) including all medicines, vaccines and other pharmaceutical preparations as well as all health products, from any type of provider and for all members of the household. These health expenditures are characterized by ***a direct payment*** that are financed by a household's income (including remittances), savings or loans but do not include any third-party payer reimbursement. They are labelled ***Out-Of-Pocket (OOP) payments*** in the classification of health care financing schemes (HF) of the international Classification for Health Accounts (ICHA). The components of a household expenditure on health so defined should be consistent with division 06 of the UN Classification of Individual Consumption According to Purpose (COICOP-2018) and include expenditures on medicines and medical products (06.1), outpatient care services (06.2) and, inpatient care services (06.3) and other health services (06.4). Expenditure on household consumption and household income are both monetary welfare measures. The former is generally defined as the sum of the monetary values of all items (goods and services) consumed by the household during a reference period. It includes the imputed values of goods and services that are not purchased but procured otherwise for consumption. The most relevant measure of household income is disposable income as it is close to the maximum available to the household for consumption expenditure during the accounting period. Disposable income is defined as total income less direct taxes (net of refunds), compulsory fees and fines. Total income is generally composed of income from employment, property income, income from household production of services for own consumption, transfers received in cash and goods, transfers received as services. Expenditure on household consumption is the recommended monetary welfare measure.
Denominator	Total number of people

Preferred data sources	Key requirements for the selection of a data source is the availability of information on both ***household expenditures on health and household total expenditure or income***, from a population based survey nationally representative; the three most common data sources are household budget surveys (HBS), household income and expenditure surveys (HIES), socio-economic or living standards surveys. These surveys are typically implemented by or in close collaboration with national statistical bureaus.
Other possible data sources	Health surveys with a module collecting expenditure data on *both* household total expenditure (including on food, housing and utilities) and household expenditure on health
Disaggregation	Subnational variables available in survey data. Information on household location (urban vs rural); the gender, age and education of the head of the household; household characteristics; and other socio-economic variables are useful for equity analysis.
Expected frequency of data collection	Every 1–5 years depending on implementation of population-based household expenditure surveys led by national statistics offices
Limitations	This indicator attempts to identify financial hardship that individuals face when using their income, savings or taking loans to pay for health care. However, most household surveys fail to identify the source of funding used by a household who is reporting health expenditure. In countries where there is no retrospective reimbursement of household spending on health this is not a problem. But in those countries where there is retrospective reimbursement – for example, via a contributory health insurance scheme - the amount reported by a household on health expenditures might be totally or partially reimbursed at some later point, perhaps outside the recall period of the household survey. This indicator relies on a single cut-off point to identify what constitutes 'large health expenditure as a share of total household expenditure or income'. People just below or above such thresholds are not taken into account, which is always the problem with measures based on cut-offs. By plotting the cumulative distribution function of the health expenditure ratio, it is possible to identify the proportion of the population that is devoting any share of its household's budget to health for any threshold. Low values of these indicators can be driven by people's inability to spend anything at all on health. For this reason financial hardship needs to be monitored jointly with indicators of service coverage. There are other indicators used to monitor financial hardship. Within the GPW monitoring framework the definition adopted is consistent with the SDG definition of catastrophic health expenditures based on a budget share metric (indicator 3.8.2). Catastrophic health expenditures can be measured in different ways to enrich the analysis and provide policy advice tailored to individual countries. For an overview of different approaches to monitor catastrophic health expenditures using different versions of capacity-to-pay approaches (deducting for meeting basic needs) based on relevant global and regional resolutions see box 2.2 in chapter 2 of the 2017 WHO/WB Global UHC Monitoring Report as well as Cylus et al 2018 and Xu et al 2003. Financial hardship can also be monitored by estimating the proportion of the population with impoverishing health expenditure to link SDG goal 3.8 on Universal health coverage directly to the first SDG goal on poverty eradication. Different poverty lines can be used for monitoring at global, regional and country level. For more information see chapter 2 of the 2017 WHO/WB Global UHC
Data type	Percentage

Related links	*Metadata* SDG indictor 3.8.2 metadata Global reference list of 100 core indicator list - page 136 *Data portal on financial protection* UHC financial protection data portal *WHO webpages* WHO financial protection WHO-EURO financial protection *Reports* 2018 WHO-EURO country reviews on financial protection 2017 UHC global monitoring report 2017 regional reports on financial protection 2015 PAHO/WB report on UHC *COICOP-2018 division on health* UN Statistics Division. Division 06 of the UN Classification of Individual Consumption According to Purpose (COICOP-2018). New York. Internet site: https://unstats.un.org/unsd/class/revisions/coicop_revision.asp *Scientific papers (by year of publication)* Jonathan Cylus, Sarah Thomson,Tamás Evetovits ,Catastrophic health spending in Europe: equity and policy implications of different calculation methods. WHO bulletin 2018. http://dx.doi.org/10.2471/BLT.18.209031 Hui Wang, Lluis Vinyals Torres, Phyllida Travis. Financial protection analysis in eight countries in the WHO South-East Asia Region. WHO bulletin 2018. http://dx.doi.org/10.2471/BLT.18.209858 Hsu J, Flores G, Evans D et al. Measuring financial protection against catastrophic health expenditures: methodological challenges for global monitoring. 2017. International Journal for Equity in Health 2018, 17:69. https://doi.org/10.1186/s12939-018-0749-5 Wagstaff A, Flores G, Hsu J et al. Progress on catastrophic health spending: results for 133 countries. A retrospective observational study. Lancet Global Health. 2017. http://dx.doi.org/10.1016/S2214-109X(17)30429-1 Wagstaff A, Flores G, Smitz M-F et al. Progress on impoverishing health spending: results for 122 countries. A retrospective observational study. 2017. http://dx.doi.org/10.1016/S2214-109X(17)30486-2 Saksena P, Hsu J, Evans DB. Financial risk protection and universal health coverage: evidence and measurement challenges. PLoS Med. 2014;11(9):e1001701. https://doi.org/10.1371/journal.pmed.1001701 Xu K, Evans DB, Carrin G, Aguilar-Rivera AM, Musgrove P, Evans T. Protecting households from catastrophic health spending. Health Aff (Millwood). 2007;26(4):972-83. https://doi.org/10.1377/hlthaff.26.4.972 Xu K, Evans DB, Kawabata K et al. Household catastrophic health expenditure: a multicountry analysis. Lancet. 2003;362(9378):111-7. https://doi.org/10.1016/S0140-6736(03)13861-5 Wagstaff A, van Doorslaer E. Catastrophe and impoverishment in paying for health care: with applications to Vietnam 1993- 1998. Health Economics. 2003;12(11):921-34. https://doi.org/10.1002/hec.776

SDG 3.9.1 Mortality rate attributed to air pollution (per 100 000 population)

Indicator	**Mortality rate attributed to household and ambient air pollution**
Definition	Evidence from epidemiological studies have shown that exposure to ambient air pollution is linked, among others, to the important diseases taken into account in this estimate: acute respiratory infections in young children (estimated under 5 years of age); cerebrovascular diseases in adults (estimated above 25 years); ischemic heart diseases in adults (estimated above 25 years); chronic obstructive pulmonary disease in adults (estimated above 25 years); and lung cancer in adults (estimated above 25 years).
Method of estimation/calculation	Burden of disease attributed to air pollution is calculated by first combining information on the increased (or relative) risk of a disease resulting from exposure, with information on how widespread the exposure is in the population (in this case, the annual mean concentration of particulate matter to which the population is exposed). This allows calculation of the 'population attributable fraction' (PAF), which is the fraction of disease seen in a given population that can be attributed to the exposure, in this case the annual mean concentration of particulate matter. Applying this fraction to the total burden of disease (e.g. cardiopulmonary disease expressed as deaths or DALYs), gives the total number of deaths or DALYs that results from ambient air pollution. Population Attributed Fraction (PAF) = $\frac{\sum_{i=1}^{n} P_i \times RR_i - \sum_{i=1}^{n} P_i' \times RR_i}{\sum_{i=1}^{n} P_i \times RR_i}$ P_i = proportion of population at exposure level *i*, current exposure P_i' = proportion of population at exposure level *i*, counterfactual or ideal level of exposure RR = the relative risk at exposure level *i* *n* = the level of exposure levels Mortality rate attributed to household and ambient air pollution = $\frac{Total\ number\ of\ deaths\ attributed\ to\ household\ and\ ambient\ air\ pollution}{Total\ population} \times 100{,}000$
Numerator	Total number of deaths attributed to household and ambient air pollution
Denominator	Total population
Preferred data sources	Civil registration with complete coverage and medical certification of cause of death; Special studies
Other possible data sources	Sample Registration Systems and Verbal Autopsy
Disaggregation	By age, sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g., education, wealth quintile).
Expected frequency of data collection	Annual or every 5 years
Limitations	- incomplete or unusable death registration data - measurement errors
Data type	Rate
Related links	WHO: http://apps.who.int/gho/data/node.wrapper.imr?x-id=2259; http://www.who.int/healthinfo/global_burden_disease/metrics_paf/en/.

SDG 3.9.2 Mortality rate attributed to exposure to unsafe WASH services (per 100 000 population)

Indicator	**Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)**
Definition	Deaths attributable to unsafe water, sanitation and hygiene focusing on inadequate WASH services, expressed per 100,000 population. Death rates are calculated by dividing the number of deaths by the total population. Evidence from epidemiological studies have shown that exposure to unsafe water, sanitation and hygiene habits is, among others, directly linked to diarrhoeal diseases and intestinal nematode infections and other diseases. Repeated diarrhoea episodes are linked to protein-energy malnutrition. In this estimate, only the impact of diarrhoeal diseases, intestinal nematode infections, and protein-energy malnutrition are taken into account. The included diseases are the WASH attributable portions of diarrhoea (ICD-10 code A00, A01, A03, A04, A06-A09), intestinal nematode infections (ICD-10 code B76-B77, B79) and protein-energy malnutrition (ICD-10 code E40-E46).
Method of estimation/calculation	Attributable diarrhoea deaths are calculated by first combining information on the increased (or relative) risk of a disease resulting from exposure, with information on how widespread the exposure is in the population (in this case, the percentage of the population with exposure to unsafe water, sanitation and lack of hygiene). This allows calculation of the 'population attributable fraction' (PAF), which is the fraction of disease seen in a given population that can be attributed to the exposure, in this case lack of access to improved water, sanitation and hygiene. Applying this fraction to the total deaths from diarrhoea results in the number of diarrhoea deaths that results from inadequate water, sanitation and hygiene. Deaths from protein-energy malnutrition attributable to inadequate water, sanitation and hygiene are estimated by evaluating the impacts of repeated infectious diarrhoea episodes on nutritional status (in particular stunting). All deaths from intestinal nematode infections are attributed to inadequate water, sanitation and hygiene due to their transmission pathway.
Numerator	Total number of deaths attributed to unsafe water, unsafe sanitation and lack of hygiene
Denominator	Total population
Preferred data sources	Civil registration with complete coverage and medical certification of cause of death
Other possible data sources	Household surveys, special studies, sample or sentinel registration systems, population census, surveillance systems
Disaggregation	By age, sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g., education, wealth quintile).
Expected frequency of data collection	
Limitations	- incomplete or unusable death registration data - measurement errors
Data type	Rate
Related links	http://www.who.int/water_sanitation_health/diseases-risks/gbd_poor_water/en http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4255749/

SDG 3.9.3 Mortality rate from unintentional poisoning (per 100 000 population)

Indicator	**Mortality rate attributed to unintentional poisoning.**
Definition	The mortality rate attributed to unintentional poisoning is defined as the number of deaths of unintentional poisonings in a year, divided by the population, and multiplied by 100 000.
Method of estimation/calculation	Mortality rate in the country attributed to unintentional poisoning per year is estimated. The ICD-10 codes corresponding to the indicator includes X40, X43-X44, X46-X49. The estimates for number of deaths attributed to unintentional poisoning are derived from the WHO Global Health Estimates (GHE), and the corresponding population estimates are derived from the UN World Population Prospects. Mortality rate attributed to unintentional poisoning = $$\frac{Total\ number\ of\ deaths\ attributed\ to\ \text{unintentional poisoning}}{Total\ population} \times 100{,}000$$
Numerator	Total number of deaths attributed to unintentional poisoning
Denominator	Total population
Preferred data sources	Civil registration with complete coverage and medical certification of cause of death; Special studies
Other possible data sources	Household surveys, special studies, sample or sentinel registration systems, population census, surveillance systems
Disaggregation	By age, sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g., education, wealth quintile).
Expected frequency of data collection	Every 2-3 years
Limitations	- incomplete or unusable death registration data - measurement errors
Data type	Rate
Related links	WHO: http://apps.who.int/gho/data/node.wrapper.imr?x-id=2259; http://www.who.int/healthinfo/global_burden_disease/metrics_paf/en/.

SDG 7.1.2 Proportion of population with primary reliance on clean fuels (%)

Indicator	**Proportion of population with primary reliance on clean fuels and technology**
Definition	The percentage of the population that relies on clean fuels and technologies as the primary source of domestic energy for cooking. “Clean” is defined by the emission rate targets and specific fuel recommendations (i.e. against unprocessed coal and kerosene) included in the normative guidance WHO guidelines for indoor air quality: household fuel combustion.
Method of estimation/calculation	The indicator is calculated as the number of people using clean fuels and technologies divided by total population, expressed as percentage. Household energy use data are routinely collected at the national and sub national levels in most countries using censuses and surveys. Household surveys used include: United States Agency for International Development (USAID)-supported Demographic and Health Surveys (DHS); United Nations Children’s Fund (UNICEF)-supported Multiple Indicator Cluster Surveys (MICS); WHO-supported World Health Surveys (WHS); national population and housing censuses and other reliable and nationally representative country surveys.
Numerator	The number of people using clean fuels and technologies for cooking, heating and lighting
Denominator	Total population
Preferred data sources	National survey, population census, household surveys
Other possible data sources	
Disaggregation	Location (urban/rural)
Expected frequency of data collection	Annual
Limitations	The indicator uses clean fuels and technologies use as a proxy for indoor air pollution, as it is not currently possible to obtain nationally representative samples of indoor concentrations of criteria pollutants, such as small particles and carbon monoxide. The indicator is based on the main type of fuel used for cooking as cooking occupies the largest share of overall household energy needs. However, many households use more than one type of fuel for cooking and, depending on climatic and geographical conditions, heating with solid fuels can also be a contributor to indoor air pollution levels.
Data type	Percentage
Related links	https://www.who.int/airpollution/data/HAP_exposure_results_final.pdf?ua=1 https://www.who.int/indoorair/publications/burning-opportunities/en/

SDG 11.6.2 Annual mean concentrations of fine particulate matter (PM2.5) in urban areas (µg/m3)

Indicator	**Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)**
Definition	The mean annual concentration of fine suspended particles of less than 2.5 microns in diameters (PM2.5) is a common measure of air pollution. The mean is a population-weighted average for urban population in a country, and is expressed in micrograms per cubic meter [µg/m3].
Method of estimation/calculation	Although PM is measured at many thousands of locations throughout the world, the amount of monitors in different geographical areas vary, with some areas having little or no monitoring. In order to produce global estimates at high resolution (0.1° grid-cells), additional data is required. Annual urban mean concentration of PM2.5 is estimated with improved modelling using data integration from satellite remote sensing, population estimates, topography and ground measurements.
Numerator	Sum of the products of the gridded population and the level of fine particulate matter, for a given area
Denominator	Sum of the population for all grids for a given area
Preferred data sources	Special studies
Other possible data sources	
Disaggregation	
Expected frequency of data collection	Every 2-3 years
Limitations	Urban/rural data: while the data quality available for urban/rural population is generally good for high-income countries, it can be relatively poor for some low- and middle income areas. Furthermore, the definition of urban/rural may greatly vary by country. Grid-size: The grid size used for the model is 0.1° x 0.1° (10 x 10 km close to the equator, but smaller towards the poles). This resolution may cause limitations when considering local situations. However finer resolutions are planned for future studies. Conversion from PM10: Where measurements of PM2.5 are not available, PM10 measurements are used after conversion to PM2.5 using country or regional conversion factors. Conversion factors range between 0.3-0.8 depending on location. Localized conversion factors are likely to be more accurate but the ability to calculate them relies on localized data being available. The potential for inaccuracies in conversion factors means that model outputs for areas using large numbers of converted values may be less accurate than those based directly on measurements of PM2.5 and extra care should be taken in their interpretation. Model calibration in data-poor areas: The model produces a calibration equation for each country using country level data as a priority, with regional data being used to supplement local information for countries without ground monitoring data. It is acknowledged that the estimates for data-poor countries may be relatively imprecise and this imprecision can result in apparently abrupt changes in air pollution levels at borders with data-poor countries. For enhanced accuracy of modelled data it is important that countries continue and/or improve their ground measurements.
Data type	Mean
Related links	www.who.int/gho/phe

SDG 3.a.1 Prevalence of tobacco use in adults aged 15+ (%)

Indicator	**Age-standardized prevalence of current tobacco use among persons aged 15 years and older**
Definition	The indicator is defined as the percentage of the population aged 15 years and over who currently use any tobacco product (smoked and/or smokeless tobacco) on a daily or non-daily basis. Tobacco use means use of smoked and/or smokeless tobacco products. "Current use" means use within the previous 30 days at the time of the survey, whether daily or non-daily use. Tobacco products means products entirely or partly made of the leaf tobacco as raw material intended for human consumption through smoking, sucking, chewing or sniffing. "Smoked tobacco products" include cigarettes, cigarillos, cigars, cheroots, bidis, pipes, shisha (water pipes), roll-your-own tobacco, kretek and any other form of tobacco that is consumed by smoking. "Smokeless tobacco product" includes moist snuff, creamy snuff, dry snuff, plug, dissolvables, gul, loose leaf, red tooth powder, snus, chimo, gutkha, khaini, gudakhu, zarda, quiwam, dohra, tuibur, nasway, naas, naswar, shammah, toombak, paan (betel quid with tobacco), iq'mik, mishri, tapkeer, tombol and any other tobacco product that consumed by sniffing, holding in the mouth or chewing.
Method of estimation/calculation	Prevalence of current tobacco use = $\frac{Number\ of\ respondents\ aged\ 15+\ years\ currently\ using\ any\ tobacco\ product\ (smoked\ or\ smokeless)}{Number\ of\ survey\ respondents\ aged\ 15+\ years} \times 100\%$
Numerator	Number of current tobacco users aged 15+ years. "Current users" includes both daily and non-daily users and smoked or smokeless tobacco.
Denominator	All respondents of the survey aged 15+ years.
Preferred data sources	Population-based (preferably nationally representative) survey.
Other possible data sources	
Disaggregation	By age, sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g., education, wealth quintile).
Expected frequency of data collection	Annual or at least every 5 years

Limitations	- Bias through self-report, including under-reporting of tobacco use - Misunderstanding/ -interpretation of questions - Limited validity of survey instruments - Representativeness of the sample Raw data collected through nationally representative population-based surveys in the countries are used to calculate comparable estimates for this indicator. Information from subnational surveys are not used. In some countries, all tobacco use and tobacco smoking may be equivalent, but for many countries where other forms of tobacco are also being consumed, smoking rates will be lower than tobacco use rates to some degree.
Data type	Prevalence
Related links	WHO: http://www.who.int/tobacco/surveillance/survey/gats/en/; http://www.who.int/chp/steps/en/index.html.

SDG 3.b.1 Proportion of population covered by all vaccines included in national programmes (DTP3, MCV2, PCV3) (%)

Indicator	**Proportion of the target population covered by all vaccines included in their national programme**
Definition	This indicator aims to measure access to vaccines, including the newly available or underutilized vaccines, at the national level Coverage of DTP containing vaccine (3rd dose): Percentage of surviving infants who received the 3 doses of diphtheria and tetanus toxoid with pertussis containing vaccine in a given year. Coverage of Measles containing vaccine (2nd dose): Percentage of children who received two dose of measles containing vaccine according to nationally recommended schedule through routine immunization services in a given year. Coverage of Pneumococcal conjugate vaccine (last dose in the schedule): Percentage of surviving infants who received the nationally recommended doses of pneumococcal conjugate vaccine in a given year. Coverage of HPV vaccine (last dose in the schedule): Percentage of 15 years old girls received the recommended doses of HPV vaccine.
Method of estimation/calculation	WHO and UNICEF jointly developed a methodology to estimate national immunization coverage from selected vaccines in 2000. The methodology has been refined and reviewed by expert committees over time. The methodology was published and reference is available under web site. Estimates time series for WHO recommended vaccines produced and published annually since 2001. The methodology uses data reported by national authorities from countries administrative systems as well as data from immunization or multi indicator household surveys.
Numerator	Number of children vaccinated in the target group. (12-23 months or other age group depending on recommended national immunization schedule).
Denominator	Number of 2 years old children globally
Preferred data sources	National Health Information Systems or National Immunization systems National immunization registries
Other possible data sources	High quality household surveys with immunization module (e.g. DHS, MICS, national in-country surveys)
Disaggregation	Geographical location, i.e. regional and national and potentially subnational estimates
Expected frequency of data collection	Annual data collection Annual data collection March-May each year. Country consultation June each year Data release: 15 July each year for time series 1980 – release year -1. (in July 2018 estimates from 1980-2017) 15 July each year for time series 1980 – release year -1. (in July 2017 estimates from 1980-2016)
Limitations	Time series of coverage are subject to change when new data becomes available.
Data type	Percentage
Related links	WHO: http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index4.html

SDG 3.b.3 Proportion of health facilities with essential medicines available and affordable on a sustainable basis (%)

Indicator	**Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis**
Definition	Percentage of public and private primary health care facilities who at least have all the following available essential medicines - aspirin, a statin, an angiotensin converting enzyme inhibitor, thiazide diuretic, a long acting calcium channel blocker, metformin, insulin, a bronchodilator and a steroid inhalant.
Method of estimation/calculation	% availability = $\frac{Number\ of\ facilities\ that\ have\ all\ essential\ medicines\ from\ the\ minimum\ list\ available}{Number\ of\ serveyed\ facilities} \times 100\%$
Numerator	Number of facilities that have available during assessment the minimum list of essential medicines. The minimum list is: Medicines - at least aspirin, a statin, an angiotensin converting enzyme inhibitor, thiazide diuretic, a long acting calcium channel blocker, metformin, insulin, a bronchodilator and a steroid inhalant.
Denominator	Number of surveyed facilities.
Preferred data sources	Nationally-representative health facility assessment
Other possible data sources	
Disaggregation	Public, private
Expected frequency of data collection	Annual or every 5 years
Limitations	
Data type	Percentage
Related links	WHO: http://www.who.int/healthinfo/systems/sara_introduction/en/

SDG 3.c.1 Density of health workers (doctors; nurse and midwives; pharmacists; dentists per 10 000 population)

Indicator	**Health worker density and distribution**
Definition	**Density of medical doctors**: The density of medical doctors is defined as the number of medical doctors , including generalists and specialist medical practitioners per 10,000 population in the given national and/or subnational area. The International Standard Classification of Occupations (ISCO) unit group codes included in this category are 221, 2211 and 2212 of ISCO-08. **Density of nursing and midwifery personnel**: The density of nursing and midwifery personnel is defined as the number of nursing and midwifery personnel per 10,000 population in the given national and/or subnational area. The ISCO-08 codes included in this category are 2221, 2222, 3221 and 3222. **Density of dentists**: The density of dentists is defined as the number of dentists per 10,000 population in the given national and/or subnational area. The ISCO-08 codes included in this category are 2261. **Density of pharmacists**: The density of pharmacists is defined as the number of pharmacists per 10,000 population in the given national and/or subnational area. The ISCO-08 codes included in this category are 2262.
Method of estimation/calculation	The figures for number of medical doctors (including generalist and specialist medical practitioners) depending on the nature of the original data source may include practising medical doctors only or all registered medical doctors. The figures for number of nursing and midwifery include nursing personnel and midwifery personnel, whenever available. In many countries, nurses trained with midwifery skills are counted and reported as nurses. This makes the distinction between nursing personnel and midwifery personnel difficult to draw. The figures for number of dentists include dentists in the given national and/or subnational area. Depending on the nature of the original data source may include practising (active) only or all registered in the health occupation. The ISCO -08 codes included here are 2261. The figures for number of pharmacists include in the given national and/or subnational area. Depending on the nature of the original data source may include practising (active) only or all registered in the health occupation. The ISCO -08 codes that relate to this occupation is 2262.
Numerator	Numerator is defined as the number of health workers, defined in headcounts.
Denominator	Denominator data for workforce density (i.e. national population estimates) are obtained from the United Nations Population Division's World Population Prospects database.
Preferred data sources	This indicator will be reported by WHO using the National Health Workforce Accounts (NHWA). In response to WHA69.19, an online National Health Workforce Accounts (NHWA) data platform was developed to facilitate national reporting. In addition to the reporting, the platform also serves as an analytical tool at the national/regional and global levels. Since Its launch in November 2017, Member States are called to use the NHWA data platform to report health workforce data. Complementing the national reporting through the NHWA data platform, additional sources such as the National Census, Labour Force Surveys and key administrative national and regional sources are also employed. Most of the data from administrative sources are derived from published national health sector reviews and/or official country reports to WHO offices.
Other possible data sources	
Disaggregation	National level data, subnational level data

Expected frequency of data collection	Annual
Limitations	Data on health workers tend to be more complete for the public health sector and may underestimate the active workforce in the private, military, nongovernmental organization and faith-based health sectors. In many cases, information maintained at the national regulatory bodies and professional councils are not updated. As data is not always published annually for each country, the latest available data has been used. Due to the differences in data sources, considerable variability remains across countries in the coverage, periodicity, quality and completeness of the original data. Densities are calculated using national population estimates from the United Nations Population Division's World Population Prospects database and may vary from densities produced by the country.
Data type	Rate
Related links	https://www.who.int/hrh/statistics/en/

SDG 3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness

Indicator	**International Health Regulations (IHR) capacity and health emergency preparedness**
Definition	Percentage of attributes of 13 core capacities that have been attained at a specific point in time. The 13 core capacities are: (1) National legislation, policy and financing; (2) Coordination and National Focal Point communications; (3) Surveillance; (4) Response; (5) Preparedness; (6) Risk communication; (7) Human resources; (8) Laboratory; (9) Points of entry; (10) Zoonotic events; (11) Food safety; (12) Chemical events; (13) Radionuclear emergencies.
Method of estimation/calculation	*IHR (2005) Capacity Level (Annual)* = $\frac{Sum\ of\ Self-Reported\ IHR\ Capacity\ Averages}{13}$
Numerator	State Party self-reported average of 13 IHR (2005) capacities, as measured by the SPAR.
Denominator	Total number of reported capacities (i.e., 13).
Preferred data sources	SPAR reports (available on the Global Health Observatory); Strategic Partnership for International Health Regulations (2005) and Health Security (https://extranet.who.int/sph/)
Other possible data sources	Joint external evaluation (JEE; available at https://extranet.who.int/sph/); Current Health Expenditure (CHE; available on Global Health Observatory); previous years' IHR (2005) self-assessment annual reporting data (available on Global Health Observatory).
Disaggregation	Country; capacity.
Expected frequency of data collection	Annual
Limitations	Data are self-reported from Member States; analysis of self-report of capacities using the SPAR (2018) identified that there was a strong correlation between self-reported capacities and externally evaluated capacities. Although self-assessment annual reporting is mandated under IHR (2005), it is possible that not all Member States will submit a report in time for calculating the baseline. In this event, which is anticipated to be rare, previous years' annual reporting data, validated against other existing IHR (2005) monitoring and evaluation framework components, will be used to estimate a baseline value.
Data type	Self-reported assessment data, using a standardized tool. Average value (0–100) of indicator capacity levels, each expressed as an integer value from 0–5.
Related links	Global Health Observatory: http://www.who.int/gho/ihr/en/; SPH: https://extranet.who.int/sph/

SDG 3.d.2 Proportion of bloodstream infections due to antimicrobial resistant organisms (%)

Indicator	**Percentage of bloodstream infections due to antimicrobial resistant organisms**
Definition	Frequency of bloodstream infection among hospital patients' due to methicillin-resistant *Staphylococcus aureus* (MRSA) and *Escherichia coli* resistant to 3rd-generation cephalosporin (e.g., ESBL- *E. coli*). Rational for selecting these two types of AMR: (i) *E. coli* and *S. aureus* are among the most common human fast-growing bacteria causing acute human infections; (ii) *E. coli* is highly frequent in both humans, animals and environment, being an excellent indicator for monitoring AMR across the sectors in line with the One Health approach; (iii) both MRSA and ESBL- *E. coli* are largely disseminated and frequently in high frequency in hospital settings all over the world. Infections with these types of AMR lead to increase in use of the last resort drugs (e.g., vancomycin for MRSA infections, and carbapenems for ESBL- *E. coli*) against which new types of AMR are emerging. WHO has defined global infection prevention and control standards and strategies. Effective control of these two types of AMR will ultimately preserve the capacity to treat infections with available antimicrobials while new prevention and treatment solutions can be developed.
Method of estimation/calculation	The WHO Global AMR Surveillance System (GLASS) supports countries to implement an AMR standardized surveillance system. At national level cases are found among patients from whom routine clinical samples have been collected for blood culture at surveillance sites according to local clinical practices, and antimicrobial susceptibility tests (AST) are performed for the isolated blood pathogens. The microbiological results (bacteria identification and AST) are combined with the patient data and related to population data from the surveillance sites. GLASS does collect information on the origin of the infection either community origin (less than 2 calendar days in hospital) or hospital origin (patients hospitalized for more than 2 calendar days). Data are collated and validated at national level and reported to GLASS where epidemiological statistics and metrics are generated.
Numerator	Number of patients presenting with blood stream infection due to MRSA and ESBL- *E. coli* among patients seeking hospital care
Denominator	Number of patients seeking hospital care and from whom the blood specimen was taken due to suspected bloodstream infection and from whom blood specimens have been submitted for blood culture and AST.
Preferred data sources	National AMR data collected through the national AMR surveillance system and reported to GLASS.
Other possible data sources	Published and non-published data from national centers and research/academic institutions and from others regional surveillance networks.
Disaggregation	Data will be aggregated at the country level. Data will be analyzed and reported according to whether specimen is within 2 calendar days of admission (community origin) or after 2 calendar days of
Expected frequency of data collection	Annual
Limitations	Constraints associated with in national AMR surveillance systems (number and distribution of surveillance sites and representativeness of surveillance data, sampling bias, poor diagnostic capacity, measurements errors, issues with data management).
Data type	Percentage
Related links	http://www.who.int/glass/en/

SDG 4.2.1 Proportion of children under 5 developmentally on track (health, learning and psychosocial well-being) (%)

Indicator	**Proportion of children under 5 who are developmentally on track in health, learning and psychosocial well-being, by sex**
Definition	The proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being is currently being measured by the percentage of children aged 36-59 months who are developmentally on-track in at least three of the following four domains: literacy-numeracy, physical, socio-emotional and learning.
Method of estimation/calculation	The number of children under the age of five who are developmentally on track in health, learning and psychosocial well-being divided by the total number of children under the age of five in the population multiplied by 100.
Numerator	The number of children under the age of five who are developmentally on track in health, learning and psychosocial well-being multiplied by 100
Denominator	Total number of children under the age of five in the population
Preferred data sources	The UNICEF-supported MICS surveys have been collecting data on this indicator and converting it into the Early Childhood Development Index or ECDI in selected low- and middle-income countries since 2010. Many of the individual items included in the ECDI are collected through other mechanisms in high-income (OECD) countries as well.
Other possible data sources	
Disaggregation	Age, sex, place of residence, wealth, geographic location, caregiver education and other background characteristics.
Expected frequency of data collection	Annual
Limitations	Comparable data are available for 58 low- and middle-income countries since 2010
Data type	Percentage
Related links	UNICEF: https://data.unicef.org/topic/early-childhood-development/development-status/

SDG 5.2.1 Proportion of women (15-49) subjected to violence by current or former intimate partner (%)

Indicator	**Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age**
Definition	This indicator measures the percentage of ever-partnered women and girls aged 15-49 years who have experienced physical, sexual or psychological violence by a current or former intimate partner, in the previous 12 months. Intimate partner violence is the most common form of violence against women and girls globally. Given prevailing social norms that sanction male dominance over women, violence between intimate partners is often perceived as ordinary, particularly in the context of marriage, cohabitation or any formal or informal union. Violence against women and girls is an extreme form of gender inequality.
Method of estimation/calculation	This indicator calls for breakdown by form of violence and by age group. Countries are encouraged to compute prevalence data for each form of violence, disaggregated by age as detailed below to assist comparability at regional and global levels: 1. Physical violence: Number of ever-partnered women and girls (aged 15-49 years who experience physical violence by a current or former intimate partner in the previous 12 months divided by the number of ever-partnered women and girls (aged 15 years and above) in the population multiplied by 100. 2. Sexual violence: Number of ever-partnered women and girls (aged 15-49 years) who experience sexual violence by a current or former intimate partner in the previous 12 months divided by the number of ever-partnered women and girls (aged 15 years and above) in the population multiplied by 100. 3. Any form of physical and/or sexual violence: Number of ever-partnered women and girls (aged 15-49 years) who experience physical and/or sexual violence by a current or former intimate partner in the previous 12 months divided by the number of ever-partnered women and girls (aged 15-49 years) multiplied by 100.
Numerator	*See method of estimation / calculation*
Denominator	*See method of estimation / calculation*
Preferred data sources	The main sources of intimate partner violence prevalence data for SDG Indicator 5.2.1 comprises data from internationally comparable population-based surveys that are (1) specialized national surveys dedicated to measuring violence against women and (2) international household surveys that include a module on experiences of violence by women, such as the DHS. Where available, other dedicated surveys are included if the data are deemed comparable. Since 2015, around 135 countries had conducted violence against women national prevalence surveys or have included a module on violence against women in a DHS or other national household survey.
Other possible data sources	

Disaggregation	In addition to form of violence and age, income/wealth, education, ethnicity (including indigenous status), disability status, marital/partnership status, relationship with the perpetrator (i.e. current/former partner), geographic location and frequency of violence are suggested as desired variables for disaggregation for this indicator.
Expected frequency of data collection	
Limitations	Comparability: The availability of comparable data remains a challenge in this area as many data collection efforts have relied on different survey methodologies, used different definitions of partner or spousal violence and of the different forms of violence and different survey question formulations. Furthermore, diverse age groups are often utilized. Willingness to discuss experiences of violence and understanding of relevant concepts may also differ according to the cultural context and this can affect reported prevalence levels. Regularity of data production: Since 1995, only some 40 countries have conducted more than one survey on violence against women. Obtaining data on violence against women is a costly and time-consuming exercise, whether they are obtained through stand-alone dedicated surveys or through modules in other surveys. Feasibility: Psychological partner violence—which may be conceptualised differently across cultures and in different contexts—is still a Tear III sub-indicator. Since it is not yet feasible to report on psychological partner violence, this indicator currently reports on *physical and/or sexual intimate partner violence* only. Efforts are underway, led by WHO, to develop a global standard for measuring and reporting on psychological intimate partner violence. Similarly, this indicator calls for global reporting of violence experienced by ever-partnered women aged 15 years and above. However, most data come from DHS, which typically sample only women aged 15-49, and there is a lack of consistency in the age range of sample populations across other country surveys. For those surveys that interview a sample of women from a different age group, the prevalence for the 15-49 age group is often published or can be calculated from available data. The global indicator therefore currently reports violence experienced by ever-partnered women and girls 15-49 years of age. Efforts are underway to address this issue and to better understand and measure partner violence against women aged 50 and above.
Data type	Percentage
Related links	http://evaw-global-database.unwomen.org/en data.unicef.org http://unstats.un.org/unsd/gender/default.html

SDG 5.6.1 Proportion of women (15-49) who make their own decisions regarding sexual relations, contraceptive use and reproductive health care (%)

Indicator	**Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care**
Definition	Proportion of women aged 15-49 years (married or in union) who make their own decision on all three selected areas i.e. can say no to sexual intercourse with their husband or partner if they do not want; decide on use of contraception; and decide on their own health care. Only women who provide a "yes" answer to all three components are considered as women who make her own decisions regarding sexual and reproductive health. A union involves a man and a woman regularly cohabiting in a marriage-like relationship
Method of estimation/calculation	Proportion = Numerator X 100/Denominator [see numerator and denominator]
Numerator	Number of married or in union women aged 15-49 years old: – who can say "no" to sex; and – for whom the decision on contraception is not mainly made by the husband/partner; and – for whom decision on health care for themselves is not usually made by the husband/partner or someone else Only women who satisfy all three empowerment criteria are included in the numerator.
Denominator	Total number women aged 15-49 years old, who are married or in union.
Preferred data sources	Current data on the indicator are derived from nationally representative demographic and surveys (DHS). Plans are underway to broaden the data sources to include MICs and other country specific surveys.
Other possible data sources	
Disaggregation	Based on available DHS data, disaggregation is possible by age, geographic location, place of residence, education, and wealth quintile.
Expected frequency of data collection	Currently data comes from the DHS which have three to five- year cycles.
Limitations	Until recently, the indicator captured results for married and in-union women and adolescent girls of reproductive age (15–49 years old) who are using any type of contraception. In the phase of the national Demographic and Health Survey (DHS–7) and later rounds, the questionnaire are extended to respondents whether they are using contraception or not. One limitation of the data is that unmarried women and girls are not included. As of early 2020, a total of 57 countries, the majority in sub-Saharan Africa, have at least one survey with data on all three questions necessary for calculating Indicator 5.6.1. Broader data sources are needed and efforts to increase data coverage are underway. Current data on the indicator are mainly derived from the DHS and efforts are being made to include the Multiple Indicator Cluster Surveys (MICS), the Generation and Gender Survey (GGS) and other country-specific surveys. In many national contexts, household surveys, which are the main data source for this indicator, exclude the homeless and are likely to under-enumerate linguistic or religious minority groups.
Data type	Percentage
Related links	

SDG 6.1.1 Proportion of population using safely managed drinking-water services (%)

Indicator	**Proportion of population using safely managed drinking water services**
Definition	Proportion of population using safely managed drinking water services is currently being measured by the proportion of population using an improved basic drinking water source which is located on premises, available when needed and free of faecal (and priority chemical) contamination. 'Improved' drinking water sources include: piped water into dwelling, yard or plot; public taps or standpipes; boreholes or tubewells; protected dug wells; protected springs; packaged water; delivered water and rainwater.
Method of estimation/calculation	Household surveys and censuses currently provide information on types of basic drinking water sources listed above, and also indicate if sources are on premises. These data sources often have information on the availability of water and increasingly on the quality of water at the household level, through direct testing of drinking water for faecal or chemical contamination. These data will be combined with data on availability and compliance with drinking water quality standards (faecal and chemical) from administrative reporting or regulatory bodies. The WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) estimates access to basic services for each country, separately in urban and rural areas, by fitting a regression line to a series of data points from household surveys and censuses. This approach was used to report on use of 'improved water' sources for MDG monitoring. The JMP is evaluating the use of alternative statistical estimation methods as more data become available.
Numerator	Total estimated number of people using safely managed drinking water service
Denominator	Total population
Preferred data sources	Nationally representative household surveys, censuses, and administrative data. Currently the JMP database holds over 1,700 censuses and surveys. In high-income countries where household surveys or censuses do not always collect information on basic access, data are drawn from administrative records.
Other possible data sources	
Disaggregation	Disaggregation by place of residence (urban/rural) and socioeconomic status (wealth, affordability) is possible for all countries. Disaggregation by other stratifiers of inequality (subnational, gender, disadvantaged groups, etc.) will be made where data permit. Drinking water services will be disaggregated by service level (including no services, basic, and safely managed services) following the JMP drinking water ladder
Expected frequency of data collection	Biennial
Limitations	
Data type	Percentage

Related links	JMP website: www.washdata.org. JMP 2017 update and SDG baselines https://washdata.org/report/jmp-2017-report-final Safely managed drinking water thematic report https://washdata.org/report/jmp-2017-tr-smdw WHO Guidelines for Drinking Water Quality: http://www.who.int/water_sanitation_health/dwq/guidelines/en/

SDG 6.2.1 Proportion of population using safely managed sanitation services and hand-washing facility (%)

Indicator	**Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water**
Definition	The proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water is currently being measured by the proportion of the population using a basic sanitation facility which is not shared with other households and where excreta is safely disposed in situ or treated off-site. 'Improved' sanitation facilities include: flush or pour flush toilets to sewer systems, septic tanks or pit latrines, ventilated improved pit latrines, pit latrines with a slab, and composting toilets. Population with a basic handwashing facility: a device to contain, transport or regulate the flow of water to facilitate handwashing with soap and water in the household. Concepts: Improved sanitation facilities include the following: flush or pour flush toilets to sewer systems, septic tanks or pit latrines, ventilated improved pit latrines, pit latrines with a slab, and composting toilets. A handwashing facility with soap and water: a handwashing facility is a device to contain, transport or regulate the flow of water to facilitate handwashing. This indicator is a proxy of actual handwashing practice, which has been found to be more accurate than other proxies such as self-reports of handwashing practices.
Method of estimation/calculation	Household surveys and censuses provide data on use of types of basic sanitation facilities listed above, as well as the presence of handwashing materials in the home. The percentage of the population using safely managed sanitation services is calculated by combining data on the proportion of the population using different types of basic sanitation facilities with estimates of the proportion of faecal waste which is safely disposed in situ or treated off-site.
Numerator	Total estimated number of people using safely managed sanitation services
Denominator	Total population
Preferred data sources	Nationally representative household surveys, censuses, and administrative data. Currently the JMP database holds over 1,700 surveys and censuses. In high-income countries where household surveys or censuses do not always collect information on basic access, data are drawn from administrative records. Estimates of excreta management will be collected from countries and used to adjust the data on use of basic sanitation facilities as needed. Administrative, population and environmental data can also be combined to estimate safe disposal or transport of excreta, when no country data are available. Data on disposal or treatment of excreta are limited but estimates for safe management of faecal wastes can be calculated based on faecal waste flows associated with the use of different types of basic sanitation facility. Since the handwashing with soap survey questions were standardized in 2009, over 70 DHS and MICS surveys have included the module. JMP published handwashing estimates for 12 countries in its 2014 update, for 54 countries in its 2015 update, and for 70 countries in its 2017 update. The population data used by JMP, including the proportion of the population living in urban and rural areas, are those established by the UN Population Division.
Other possible data sources	

Disaggregation	Disaggregation by place of residence (urban/rural) and socioeconomic status (wealth, affordability) is possible for all countries. Disaggregation by other stratifies of inequality (subnational, gender, disadvantaged groups, etc.) will be made where data permit. Sanitation services will be disaggregated by service level (including no services, basic, and safely managed services) following the JMP sanitation ladder.
Expected frequency of data collection	Biennial
Limitations	A framework for measuring faecal waste flows and safety factors has been developed and piloted in 12 countries (World Bank Water and Sanitation Program, 2014), and is being adopted and scaled up within the sanitation sectors. This framework has served as the basis for indicators 6.2.1 and 6.3.1. Data on safe disposal and treatment are not available for all countries. However, sufficient data were available to make global and regional estimates of safely managed sanitation services in 2017. Presence of a handwashing station with soap and water does not guarantee that household members consistently wash hands at key times, but has been accepted as the most suitable proxy. Data were available for 70 countries in 2017.
Data type	Percentage
Related links	www.washdata.org JMP website: www.washdata.org. JMP 2017 update and SDG baselines https://washdata.org/report/jmp-2017-report-final Ram, P., Practical Guidance for Measuring Handwashing Behaviour: 2013 update, World Bank Water Supply and Sanitation Programme, 2013. http://www.wsp.org/sites/wsp.org/files/publications/WSP-Practical-Guidance-Measuring-HandwashingBehavior-2013-Update.pdf"

SDG 16.2.1 Proportion of children (aged 1-17) experiencing physical or psychological aggression (%)

Indicator	**Proportion of children aged 1–17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month**
Definition	Proportion of children aged 1-17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month is currently being measured by the Proportion of children aged 1-14 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month.
Method of estimation/calculation	Number of children aged 1-17 years who are reported to have experienced any physical punishment and/or psychological aggression by caregivers in the past month divided by the total number of children aged 1-17 in the population multiplied by 100
Numerator	Number of children aged 1-17 years who are reported to have experienced any physical punishment and/or psychological aggression by caregivers in the past month multiplied by 100
Denominator	The total number of children aged 1-17 in the population
Preferred data sources	Household surveys such as UNICEF-supported MICS and DHS that have been collecting data on this indicator in low- and middle-income countries since around 2005. In some countries, such data are also collected through other national household surveys.
Other possible data sources	
Disaggregation	Sex, age, income, place of residence, geographic location
Expected frequency of data collection	
Limitations	There is an existing, standardized and validated measurement tool (the Parent-Child version of the Conflict Tactics Scale, or CTSPC) that is widely accepted and has been implemented in a large number of countries, including high-income countries. Definitions of both physical punishment and psychological aggression will need to be very clearly defined for countries but this should not be a problem as there is a wealth of available literature and research on the violent punishment of children and General Comment No.13 on the Convention of the Rights of the Child (CRC) also provides a definition for “corporal” or “physical” punishment as well as "mental violence".
Data type	Percentage
Related links	https://data.unicef.org/topic/child-protection/violence/violent-discipline/

Health Emergencies Vaccine coverage for epidemic prone diseases

Indicator	**Vaccine coverage of at-risk groups for epidemic or pandemic prone diseases**
Definition	The Infectious Hazards Management (IHM) department in the Health Emergencies Programme has identified certain countries as at-risk for yellow fever, cholera, and meningococcal meningitis prevention and control. Sixty-six countries are considered at-risk for at least one of these pathogens. An immunization coverage estimate for routine (yellow fever; meningococcal meningitis) and campaign coverage (yellow fever; meningococcal meningitis; cholera) will be generated for each category of country presented, weighted by the relative sizes of the target populations for routine immunization and vaccination campaigns. Because not all Member States are not at-risk for these diseases, routine immunization estimates for first dose measles-containing vaccine (MCV1) will be used in order to develop estimates for all Member States, and to highlight the importance of a functioning immunizations program for disease prevention. Coverage for all antigens will be weighted equally. An immunization coverage estimate for routine (yellow fever; meningococcal meningitis) and campaign coverage (yellow fever; meningococcal meningitis; cholera) will be generated for each category of country presented, weighted by the relative sizes of the target populations for routine immunization and vaccination campaigns. Because not all Member States are not at-risk for these diseases, routine immunization estimates for first dose measles-containing vaccine (MCV1) will be used in order to develop estimates for all Member States, and to highlight the importance of a functioning immunizations program for disease prevention. Coverage for all antigens will be weighted equally. The indicator is a weighted average of routine and campaign vaccinations for diseases linked with epidemics and pandemics. The indicator will include only the priority infection hazards relevant to each country. The indicator can be adapted to include other mass-vaccination campaigns that are needed (e.g. pandemic influenza, Ebola virus disease). Current vaccinations used in the prevent indicator are: ○ priority infectious hazards: yellow fever, meningococcal meningitis A and cholera – when relevant ○ measles, polio – to emphasize the importance of routine coverage.
Method of estimation/calculation	The indicator is calculated as the population-weighted average of routine and campaign vaccine coverages for the applicable diseases: i.e. measles and polio for all Member States, and yellow fever and/or cholera and/or meningitis where there is a risk. $$\text{Emergency prevent indicator} = \frac{\sum_v \text{Coverage}_v \times \text{relevant population}_v}{\sum_v \text{relevant population}_v}$$ where v represents the relevant vaccines for the country and year of estimation. The coverage estimates are each weighted by the relevant population. For routine vaccination, this is the total population of surviving infants. For campaigns, this is the target population. The rolling/cumulative vaccinated population is used during emergencies or any supplementary campaigns. There are 66 Member States currently considered at risk by the WHO Health Emergencies Programme for at least one of yellow fever, cholera, and meningitis A. Because not all Member States that are at high risk for, or affected by, yellow fever, cholera, and meningitis made or had requests approved by the ICG or conducted other vaccination campaigns, the mean campaign coverage estimate is calculated using the antigen data available (i.e., non-missing). The estimate for cholera is the average of campaign coverage (when available), weighted by the relative sizes of the target population for the

	specific campaign(s). There is no cholera vaccination currently recommended as part of the routine vaccination schedule. Where target population data are not available for a specific campaign, the number of doses shipped by the ICG or GTFCC will be used as a proxy for target population size.
Numerator	Vaccination coverage (routine and/or campaign)
Denominator	Target population
Preferred data sources	Coverage estimates for routine vaccination (yellow fever, measles, polio) from WHO/UNICEF estimate of immunization coverage (WUENIC) for MCV1 and YF routine immunization estimates; WHO/UNICEF Joint Reporting Form (JRF) for administrative coverage estimates of meningococcal meningitis routine immunization coverage; emergency immunization coverage for cholera, meningococcal meningitis and yellow fever using the International Coordinating Group (ICG) on Vaccine Provision; mass preventive oral cholera vaccination campaign coverage data from the Global Task Force on Cholera Control (GTFCC); polio immunization campaign data from WHO/Global Polio Eradication; additional meningitis, polio and yellow fever immunization campaign coverage estimates from the WHO/UNICEF JRF.
Other possible data sources	Global Health Observatory; pandemic influenza vaccination campaign data in targeted countries, where applicable
Disaggregation	Country; antigen
Expected frequency of data collection	Annual (routine immunizations); periodic (vaccination campaigns), updated annually
Limitations	Routine immunization data for meningococcal meningitis are not available from WUENIC and are only available (self-reported administrative coverage) from the JRF. Emergency vaccination campaign coverage estimates might require the use of administrative estimates, which could bias (overestimate) campaign coverage as measured using a population-based survey. Because cholera is not part of routine immunization programs, relatively small cholera campaigns can have a disproportionate influence on the mean coverage estimate. The indicator is an absolute estimate, meaning that countries can demonstrate progress by incremental improvement independently of other countries' performance. Ultimately, all countries should have coverage estimates of >90%. The weighting scheme places a high weight on routine vaccination, emphasizing the value of routine coverage for many diseases. A potential limitation of this approach is that small targeted campaigns will have only a small impact on the indicator. Other weighting schemes were also considered (e.g. equal weighting for all antigens – in which small campaigns (e.g. for cholera) had an oversized effect on the mean).
Data type	Percentage
Related links	

Health Emergencies Proportion of vulnerable people in fragile settings provided with essential health services (%)

Indicator	**Proportion of vulnerable people in fragile settings provided with essential health services**
Definition	The indicator will provide the overall number of functioning health facilities at primary and secondary and tertiary care levels that provide the minimum services packages against the population size. The minimum services package is defined by the country/event context. Fragile, conflict, and vulnerable (FCV) countries are identified by WHO based on criteria including the existing protracted grade, existing acute grade but likely to convert to protracted grade, having a humanitarian response plan (HRP) or other relevant response plans, an INFORM index of at least 4.4, or countries with "risk of very high concern" or "high concern" in the IASC EWEAR. This list is updated periodically by WHO, in consultation with the Regional Emergency Directors. As of January 2019, there were 29 FCV countries.
Method of estimation/ calculation	The Health Resources and Services Availability Monitoring System (HeRAMS) aims to guide the standardized, systematic and continuous collection, collation, analysis and dissemination of data on the availability of essential health resources and services in highly constrained, low-resourced and fast changing environments. HeRAMS is a data collection system with standard and country-defined indicators, which is updated on a near-real time basis by service providers. Data on the functioning of health facilities and the availability of context-specific minimum service packages are collected and shared using an online platform. The indicator can be measured using the numerator and denominator described below.
Numerator	Number of fragile, conflict, or vulnerable settings with an average attainment of the Sphere indicators for availability of delivery of a minimum services package at primary and secondary/tertiary levels (i.e., per 50,000 for primary care health facilities; per 250,000 for secondary and tertiary care health facilities).
Denominator	Total number of fragile, conflict, or vulnerable settings.
Preferred data sources	HeRAMS
Other possible data	Population-based survey data, where available, can be used to assess access to services among affected populations.
Disaggregation	By health facility type; by country/setting
Expected frequency of data collection	Data are collected on a near-real time basis. Estimates will be updated annually, the average monthly mid-point.
Limitations	HeRAMS has not yet been rolled-out in all FCV settings. Data quality is difficult to verify given the challenging nature of these environments. Availability of essential health resources and services is a proxy for access to essential health resources and services, which is measurable only by population-based surveys.
Data type	Percentage
Related links	http://www.who.int/hac/herams/en/

WHA 68.3 Number of cases of poliomyelitis caused by wild poliovirus (WPV)

Indicator	**Number of cases of poliomyelitis caused by wild poliovirus (WPV)**
Definition	Reported cases of laboratory-confirmed polio cases. A polio case is confirmed if wild poliovirus is isolated from stool specimens collected from an Acute flaccid paralysis (AFP) case.
Method of estimation/calculation	Sum of reported cases.
Numerator	
Denominator	
Preferred data sources	Surveillance systems
Other possible data sources	
Disaggregation	
Expected frequency of data collection	Weekly
Limitations	
Data type	Count, absolute number of cases
Related links	WHO: http://www.who.int/immunization/monitoring_surveillance/en/;

WHA 68.7 Patterns of antibiotic consumption at national level

Indicator	**Patterns of antibiotic consumption at national level**
Definition	Proportion of Access group antibiotics as percentage of overall antibiotic sales. From data on total consumption of antibiotics, the proportion of the total, by DDD that are within the ACCESS group (EML 2017). The term consumption refers to estimates of aggregated data, mainly derived from import, sales or reimbursement databases. In the recent revision of the WHO Model List of Essential Medicines, antibiotics in the list have been grouped into three AWaRe categories: Access, Watch and Reserve. The Access category includes first and second choice antibiotics for the empirical treatment of common infectious syndromes and they should be widely available in health care settings. Antibiotics in the Watch category have a higher potential for resistance to develop and their use as first and second choice treatment should be limited. Finally, the Reserve category includes "*last resort*" antibiotics whose use should be reserved for specialized settings and specific cases where alternative treatments have failed. **Rationale:** Narrow-spectrum beta-lactams of the Access group such as amoxicillin are the preferred treatment option for most RTI and are thought to have a lower ecologic impact regarding the selection and spread of antibiotic resistance than broader-spectrum agents such as cephalosporins, macrolides or fluoroquinolones. Access group antibiotics should therefore constitute the majority of antibiotic use in the outpatient setting and overall (as outpatient use represents the vast majority of AB sales). Broader-spectrum agents classified in the Watch group should be mostly limited to their specific recommended EML uses.
Method of estimation/calculation	Data on overall consumption by AWaRe categories: ACCESS, WATCH, RESERVE, OTHER, are collected and validated at the national level and reported to WHO where epidemiological statistics and metrics are generated. Antibiotic consumption is presented using the following key indicators: • Quantity of antibiotics as DDD per 1000 inhabitants per day for total consumption and by pharmacological subgroup (ATC3) • Quantity of antibiotics as weight in tonnes for total consumption • Relative consumption of antibiotics as a percentage of total consumption by route of administration (oral, parenteral, rectal and inhaled) and AWaRe categories (Access, Watch, and Reserve). To measure the consumption of antimicrobials, the methodology uses the number of defined daily doses (DDDs). The DDD is the assumed average maintenance dose per day of an antimicrobial substance(s) used for its main indication in adults, and is assigned to active ingredients with an existing ATC code. As a rule, the DDDs for antimicrobials are based on treatment for infections of moderate severity. To adjust for population size, the consumption is usually presented as number of DDDs per 1000 inhabitants per day. This metric can be roughly interpreted as the number of individuals per 1000 inhabitants on antibiotic treatment per day. The volume of antibiotics consumed can be presented using two metrics: DDD and the weight of the antibiotic substances in metric tonnes (t). The second metric can be used for comparison with antimicrobial consumption in the animal sector.
Numerator	**Antibiotic consumption of ATC class J01 antibiotics plus oral metronidazole (P01AB01), oral vancomycin (A07AA09) and oral fidaxomicin (A07AA12) in defined daily doses belonging to the ACCCES group.** The number of DDDs consumed for each antibiotic substance can be calculated by dividing the amount consumed in grams of the substance by the DDD value assigned to that substance: Number of DDDs = grams of active substance /substance-specific DDD. The total amount in grams is obtained by multiplying the strength of each tablet or vial by the number of units per package and the number of packages consumed. The DDD value is mostly specified in grams, but can also be defined as MU (million units) for certain substances. For combinations of antibiotics, the DDD value is specified as UD (unit dose). One tablet or vial of a combination product with a specific strength is defined as one UD.

	To obtain the DDD consumed of a specific combination product, the total number of UDs is divided by the assigned DDD value. For countries that have data at the substance level and by DDD, a reverse calculation can be done using DDD values to obtain the total number of tonnes.
Denominator	**Overall antibiotic consumption/sales of ATC classes: J01 antibiotics plus oral metronidazole (P01AB01), oral vancomycin (A07AA09) and oral fidaxomicin (A07AA12) in defined daily doses** The population size for each country can be obtained from the World Bank population database for all countries, but for Member States of the ESAC-Net, specific populations indicated by the data provider (European Centre for Disease Prevention and Control) is used.
Preferred data sources	National (or sampling of) antibiotic consumption data available at national level through different sources (sales, prescribing, dispensing) Consumption data will be collated according to the *WHO methodology for a global programme on surveillance of antimicrobial consumption.* Consumption data collected through a standardized protocol comparable with the WHO methodology will also be utilized, including data collected through the European Surveillance of Antimicrobial Consumption Network (ESAC-Net), the Antimicrobial Medicines Consumption Network managed by the WHO Regional Office for Europe, and the surveillance programmes on antimicrobial consumption in Canada, Japan, New Zealand and the Republic of Korea. According to the WHO protocol, data are collected at the product level (proprietary and generic-products) and comprise information on the active substance(s) of the product, route of administration, strength per unit, number of units per package and total number of packages consumed.
Other possible data sources	Sales should be the main source of data. Other sources could include: • Import records: for example from custom records and declaration forms; • Production records from domestic manufacturers; • Wholesaler records: both procurement data by the wholesaler or sales data from wholesaler to healthcare facilities and pharmacies; • Public sector procurement: from centralized or decentralized purchasing of medicines for the public sector, e.g. records from central medical stores;
Disaggregation	Data will be aggregated at the country level – allow disaggregation at regional/district level, by antibiotic category (Access, Watch and Reserve)
Expected frequency of data collection	Yearly
Limitations	• Completeness / representativeness of sales data. Currently, data are collected from official channels and no data explicitly capturing antimicrobials circulating on the informal market have been obtained. Consequently, for countries in which the informal market is significant, only an incomplete picture of antibiotic consumption can be presented. • Data may be available only in certain metrics (e.g. Standard Units instead of DDD) and it is unclear how this will affect the index. • Measurement errors • Antibiotic "Black market" • DDDs are not adequate for children but this will have no impact in this indicator expressed as relative proportion of DDD
Data type	Percentage
Related links	http://www.who.int/antimicrobial-resistance/global-action-plan/optimise-use/surveillance/en/ https://www.who.int/medicines/areas/rational_use/WHO_AMCsurveillance_1.0.pdf

WHA 66.10 Prevalence of raised blood pressure in adults aged 18+

Indicator	**Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure of >140 mmHg and/or diastolic blood pressure >90 mmHg) and mean systolic blood pressure**
Definition	Systolic blood pressure ≥140 and/or diastolic blood pressure ≥90 among persons aged 18+ years.
Method of estimation/calculation	Prevalence of raised blood pressure = $\frac{Number\ of\ respondents\ aged\ 18+\ years\ with\ systolic\ blood\ pressure\ \geq 140\ mmHg\ or\ diastolic\ blood\ pressure\ \geq 90\ mmHg}{Number\ of\ survey\ respondents\ aged\ 18+\ years} \times 100\%$
Numerator	Number of respondents with systolic blood pressure ≥140mmHg or diastolic blood pressure ≥90mmHg. Ideally three blood pressure measurements should be taken and the average systolic and diastolic readings of the second and third measures should be used in this calculation.
Denominator	All respondents of the survey aged 18+ years.
Preferred data sources	Population-based (preferably nationally representative) survey in which blood pressure was measured, not self-reported.
Other possible data sources	
Disaggregation	By age, sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g., education, wealth quintile).
Expected frequency of data collection	Annual or every 5 years
Limitations	- measurement error - representativeness of the sample
Data type	Prevalence
Related links	WHO: http://www.who.int/chp/steps/en/; http://apps.who.int/gho/data/node.wrapper.imr?x-id=2386.

WHA 66.10 Effective policy/regulation for industrially produced trans-fatty acids (TFA) (Y/N)

Indicator	**Protection of the population of a country by effective policy/regulation on industry produced trans-fatty acids (TFA)**
Definition	Presence of a WHO best-practice TFA policy/regulation which has come into effect in a country to eliminate industrially produced *trans*-fatty acids (TFA) in the food supply. The two alternative best-practice TFA policies are: 1) mandatory national limit of 2 grams of industrially produced TFA per 100 grams of total oils and fats in all foods; and 2) mandatory national ban on the production or use of partially hydrogenated oils (PHO) as an ingredient in all foods.
Method of estimation/calculation	Country can respond "yes" to the question “Has a best-practice TFA policy/regulation come into effect in your country to eliminate industrially produced TFA in the food supply?” The indicator will store the Y/N for each year.
Numerator	Yes/No. Yes: if best-practice policy/regulation is fully implemented; Missing: if no data
Denominator	Not applicable
Preferred data sources	WHO Global database on the Implementation of Nutrition Action (GINA) (http://www.who.int/nutrition/gina/en/) Information from WHO Regional Offices, Country Offices, Ministries of Health and partners
Other possible data sources	National nutrition and health survey, Global Nutrition Policy Review
Disaggregation	Not applicable
Expected frequency of data collection	Yearly
Limitations	Requires careful confirmation to ascertain information on the policy contents, the status of policy adoption, and when policies come into effect in countries.
Data type	Yearly
Related links	WHO: https://www.who.int/nutrition/topics/replace-transfat/ http://www.who.int/nutrition/gina/en/ https://www.who.int/ncds/surveillance/ncd-capacity/en/http://www.who.int/nmh/publications/best_buys_summary.pdf .

WHA 66.10 Prevalence of obesity (%)

Indicator	**Prevalence of obesity**
Definition	For 5-19 years, obesity is defined as body mass index (BMI)-for-age above two standard deviations of the WHO Growth Reference for School-aged Children and Adolescents median. For ages 20 years and older, obesity is defined as BMI of 30 kg/m2 or higher. BMI is calculated by dividing the subject's weight in kilograms by their own height in meters squared.
Method of estimation/calculation	Prevalence of obesity = $\frac{Number\ of\ persons\ who\ are\ obese}{Total\ number\ of\ persons\ in\ the\ survey\ that\ were\ measured} \times 100\%$
Numerator	Number of persons who are obese
Denominator	Total number of persons in the survey that were measured
Preferred data sources	Nationally representative population-based household or school-based surveys with height and weight measurements of adults aged 20 years and older and school-age children and adolescents aged 5–19 years. Other sources of data include national nutrition surveillance systems.
Other possible data sources	Data sets of FAO and UN Statistical office
Disaggregation	By age, sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g., mother's education, wealth quintile).
Expected frequency of data collection	Annual or at least every 3-5 years based on survey availability in countries.
Limitations	Survey estimates come with levels of uncertainty due to both sampling and non-sampling error (e.g. measurement technical error, recording error etc.). Another limitation, especially for the school-age children and adolescent age group is the representativeness of the sample.
Data type	Prevalence
Related links	WHO: http://who.int/chp/gshs/en/; http://www.who.int/dietphysicalactivity/childhood/en/

Section 2: Universal Health Coverage (UHC) Billion

Table 2. Overview of Universal Health Coverage (UHC) Billion Indicators

Note: 14 tracer indicators are used to calculate average service coverage. These are based on the SDG 3.8.1 tracer indicators with the following adjustments. As such, metadata for UHC Billion is embedded within Section 1 (Outcome Indicators); see cross-referenced outcome indicator.

Tracer	Indicator Definition	Cross-referenced Outcome Indicator	Adjustment made from SDG 3.8.1 (if applicable)	Rescaling Notes (if applicable)
Reproductive, maternal, newborn and child health				
Family Planning	Proportion of married women or in-union (aged 15–49) having need for family planning satisfied with modern methods (%)			
Pregnancy and delivery care	Percentage of women aged 15–49 years with a live birth in a given time period who received antenatal care, four times or more from any provider	n/a		
Child immunization	Percentage of infants receiving three doses of diphtheria-tetanus-pertussis containing vaccine	**SDG 3.b.1**: Proportion of population covered by all vaccines included in national programmes (DTP3, MCV2, PCV3) (%) *See page 49*		
Child treatment	Percentage of children under 5 years of age with suspected pneumonia (cough and difficult breathing NOT due to a problem from blocked nose) in the two weeks preceding the survey taken to an appropriate health facility or provider	n/a		
Infectious diseases				

Tuberculosis treatment	Percentage of incidence tuberculosis cases that are detected and successfully treated in a given year	n/a		
HIV treatment	Percentage of people currently receiving ART among the estimated number of adults and children living with HIV	n/a		
Malaria Prevention	Percentage of population in malaria-endemic areas who slept under an insecticide-treated net the previous night (only for countries with moderate to high malaria transmission in sub-Saharan Africa)	n/a		
Water and sanitation	Percentage of households using at least basic sanitation facilities	n/a		
Non-communicable diseases				
Prevention of cardiovascular diseases	Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg)	**WHA66.10**: Prevalence of raised blood pressure in adults aged 18+ *See page 70*		
Management of diabetes	Age-standardized mean fasting plasma glucose (mmol/L) for adults aged 18 years and older	n/a		
Tobacco	Age-standardized prevalence of adults ≥ 15 years not smoking tobacco in the past 30 days	**SDG 3.a.1**: Prevalence of tobacco use in adults aged 15+ (%) *See page 48*	Rescaling adjusted as SDG 3.8.1 method [50%–100%] (0–100%) did not include all MS values	The rescaling of the prevalence of non-use of tobacco has been adjusted to include all observed values (since 2000). The minimum observed value of tobacco non-use of 32% is rescaled to

				represent zero service coverage, and 100% to represent 100% service coverage.
Service capacity and access				
Hospital access	Number of hospital beds per 10 000 population	n/a		
Health worker density	Number of health professionals (physicians, nurses, and midwives) per 10 000 population	**SDG 3.c.1:** Density of health workers (doctors; nurse and midwives; pharmacists; dentists per 10 000 population) *See page 51*	Adjusted indicator from physicians, psychiatrists and surgeons to physicians and nurses/midwives	Rescaled using a maximum density of 155 per 10 000 population, which is the 95th percentile across all national densities from 2000 to 2017. Densities above that level are reset at 100%. The indicator replaces the SDG 3.8.1 tracer for physicians, psychiatrists and surgeons for which data availability is poor, and which neglects the large and important category of nurses.
Health security	International Health Regulations (IHR) core capacity index, which is the average percentage of attributes of 13 core capacities that have been attained	**SDG 3.d.1:** International Health Regulations (IHR) capacity and health emergency preparedness *See page 53*		
Financial Hardship				

Health expenditures	Proportion of population with household health expenditures as a share of total household expenditure or income > 10%	**SDG 3.8.2:** Population with household expenditures on health > 10% of total household expenditure or income (%) *See page 39*		

UHC Billion: Family Planning

Indicator definition	**Proportion of married women or in-union (aged 15–49) having need for family planning satisfied with modern methods (%)**
Numerator	Number of women aged 15-49 who are married or in-union who use modern methods
Denominator	Total number of women aged 15-49 who are married or in-union in need of family planning
Main Data Sources	Population-based health surveys
Method of Measurement	Household surveys include a series of questions to measure modern contraceptive prevalence rate and demand for family planning. Total demand for family planning is defined as the sum of the number of women of reproductive age (15–49 years) who are married or in a union and who are currently using, or whose sexual partner is currently using, at least one contraceptive method, and the unmet need for family planning. Unmet need for family planning is the proportion of women of reproductive age (15–49 years) either married or in a consensual union, who are fecund and sexually active but who are not using any method of contraception (modern or traditional), and report not wanting any more children or wanting to delay the birth of their next child for at least two years. Included are: 1. All pregnant women (married or in a consensual union) whose pregnancies were unwanted or mistimed at the time of conception. 2. All postpartum amenorrhoeic women (married or in consensual union) who are not using family planning and whose last birth was unwanted or mistimed. 3. All fecund women (married or in consensual union) who are neither pregnant nor postpartum amenorrhoeic, and who either do not want any more children (want to limit family size), or who wish to postpone the birth of a child for at least two years or do not know when or if they want another child (want to space births), but are not using any contraceptive method. Modern methods include female and male sterilization, the intrauterine device (IUD), the implant, injectables, oral contraceptive pills, male and female condoms, vaginal barrier methods (including the diaphragm, cervical cap and spermicidal foam, jelly, cream and sponge), lactational amenorrhoea method (LAM), emergency contraception and other modern methods not reported separately.
Method of Estimation	The United Nations Population Division produces a systematic and comprehensive series of annual estimates and projections of the percentage of demand for family planning that is satisfied among married or in-union women. A Bayesian hierarchical model combined with country-specific data is used to generate the estimates, projections and uncertainty assessments from survey data. The model accounts for differences by data source, sample population and contraceptive methods. See here for details: http://www.un.org/en/development/desa/population/ theme/family-planning/cp_model.shtml
UHC Billion Related Notes	n/a

UHC Billion: Pregnancy and delivery care

Indicator definition	**Percentage of women aged 15-49 years with a live birth in a given time period who received antenatal care four or more times**
Numerator	Number of women aged 15−49 years with a live birth in a given time period who received antenatal care four or more times
Denominator	Total number of women aged 15−49 years with a live birth in the same period.
Main data sources	Household surveys and routine facility information systems.
Method of measurement	Data on four or more antenatal care visits is based on questions that ask if and how many times the health of the woman was checked during pregnancy. Household surveys that can generate this indicator include DHS, MICS, RHS and other surveys based on similar methodologies. Service/facility reporting systems can be used where the coverage is high, usually in higher income countries.
Method of estimation	WHO maintains a database on coverage of antenatal care: https://www.who.int/gho/maternal_health/reproductive_health/antenatal_care/en/
UHC Billion Related Notes	Ideally this indicator would be replaced with a more comprehensive measure of pregnancy and delivery care, for example the proportion of women who have a skilled provider attend the birth or an institutional delivery. A challenge in measuring skilled attendance at birth is determining which providers are “skilled”. WHO and UNICEF are currently leading a process to come to agreement across countries about the definition of a skilled provider, after which a more comprehensive indicator of pregnancy and delivery care could be incorporated into the index. Once comparable values are available across countries, SDG 3.1.2 will be used.

UHC Billion: Child Immunization

Indicator definition	**Percentage of infants receiving three doses of diphtheria-tetanus-pertussis containing vaccine**
Cross-referenced Outcome Indicator	Metadata identical to SDG 3.b.1
UHC Billion Related Notes	There is variability in national vaccine schedules across countries. Given this, one option for monitoring full child immunization is to monitor the fraction of children receiving vaccines included in their country's national schedule. A second option, which may be more comparable across countries and time, is to monitor DTP3 coverage as a proxy for full child immunization. Diphtheriatetanus-pertussis containing vaccine often includes other vaccines, e.g., against Hepatitis B and Haemophilus influenza type B, and is a reasonable measure of the extent to which there is a robust vaccine delivery platform within a country.

UHC Billion: Child treatment (care-seeking for symptoms of pneumonia)

Indicator definition	**Percentage of children under 5 years of age with suspected pneumonia (cough and difficult breathing NOT due to a problem from a blocked nose) in the two weeks preceding the survey taken to an appropriate health facility or provider**
Numerator	Number of children with suspected pneumonia in the two weeks preceding the survey taken to an appropriate health provider.
Denominator	Number of children with suspected pneumonia in the two weeks preceding the survey.
Main data sources	Household surveys
Method of measurement	During the UNICEF/WHO Meeting on Child Survival Survey-based Indicators, held in New York, 17–18 June 2004, it was recommended that acute respiratory infections (ARI) be described as "presumed pneumonia" to better reflect probable cause and the recommended interventions. The definition of presumed pneumonia used in the Demographic and Health Surveys (DHS) and in the Multiple Indicator Cluster Surveys (MICS) was chosen by the group and is based on mothers' perceptions of a child who has a cough, is breathing faster than usual with short, quick breaths or is having difficulty breathing, excluding children that had only a blocked nose. The definition of "appropriate" care provider varies between countries. WHO maintains a data base of country-level observations from household surveys that can be accessed here: http://www.who.int/gho/child_health/prevention/pneumonia/en/
Method of estimation	There are currently no internationally comparable estimates for this indicator.
UHC Billion Related Notes	This indicator is not typically measured in higher income countries with well-established health systems. For countries without observed data, coverage was estimated from a regression that predicts coverage of care-seeking for symptoms of pneumonia (on the logit scale), obtained from the WHO data base described above, as a function of the log of the estimated under-five pneumonia mortality rate, which can be found here: https://www.who.int/healthinfo/global_burden_disease/estimates/en/index2.html

UHC Billion: Tuberculosis Treatment

Indicator definition	**Percentage of incidence TB cases that are detected and successfully treated in a given year**
Numerator	Number of new and relapse cases detected in a given year and successfully treated
Denominator	Number of new and relapse cases in the same year
Main data sources	Facility information systems, surveillance systems, population-based health surveys with TB diagnostic testing, TB register and related quarterly reporting system (or electronic TB registers)
Method of measurement	This indicator requires three main inputs: (1) The number of new and relapse TB cases diagnosed and treated in national TB control programmes and notified to WHO in a given year. (2) The number of incident TB cases for the same year, typically estimated by WHO. (3) Percentage of TB cases successfully treated (cured plus treatment completed) among TB cases notified to the national health authorities. The final indicator = = (1 in year t)/(2 in year t) x (3 in year t-1)
Method of estimation	Estimates of TB incidence are produced through a consultative and analytical process led by WHO and are published annually. These estimates are based on annual case notifications, assessments of the quality and coverage of TB notification data, national surveys of the prevalence of TB disease and information from death (vital) registration systems. Estimates of incidence for each country are derived, using one or more of the following approaches depending on available data: 1. incidence = case notifications/estimated proportion of cases detected; 2. incidence = prevalence/duration of condition; 3. incidence = deaths/proportion of incident cases that die. These estimates of TB incidence are combined with country-reported data on the number of cases detected and treated, and the percentage of cases successfully treated, as described above.
UHC Billion Related Notes	To compute the indicator using WHO estimates, one can access necessary files here: http://www.who.int/tb/country/data/download/en/, and compute the indicator as = c_cdr in year t x c_new_tsr in year t-1

UHC Billion: HIV Treatment

Indicator definition	**Percentage of people currently receiving antiretroviral therapy (ART) among the estimated number of adults and children living with HIV**
Numerator	Number of adults and children who are currently receiving ART at the end of the reporting period
Denominator	Number of adults and children living with HIV during the same period
Main data sources	Facility reporting systems, sentinel surveillance sites, population-based surveys
Method of measurement	Numerator: The numerator can be generated by counting the number of adults and children who received antiretroviral combination therapy at the end of the reporting period. Data can be collected from facility-based ART registers or drug supply management systems. These are then tallied and transferred to cross sectional monthly or quarterly reports which can then be aggregated for national totals. Patients receiving ART in the private sector and public sector should be included in the numerator. Denominator: Data on the number of people with HIV infection may come from population-based surveys or, as is common in sub-Saharan Africa, surveillance systems based on antenatal care clinics.
Method of estimation	Estimates of antiretroviral treatment coverage among people living with HIV in 2015 are derived as part of the 2016 UNAIDS' estimation round or, in some limited instances, taken from data submitted to UNAIDS through the Global AIDS Response Progress Reporting tool. To estimate the number of people living with HIV across time in high burden countries, UNAIDS in collaboration with countries uses an epidemic model (Spectrum) that combines surveillance data on prevalence with the current number of patients receiving ART and assumptions about the natural history of HIV disease progression. Since ART is now recommended for all individuals living with HIV, monitoring ART coverage is less complicated than before, when only those with a certain level of disease severity were eligible to receive ART. Estimates of ART coverage can be found here: http://aidsinfo.unaids.org/
UHC Billion Related Notes	Comparable estimates of ART coverage in high income countries, in particular time trends, are not always available.

UHC Billion: Malaria Prevention

Indicator definition	**Percentage of population in malaria-endemic areas who slept under an ITN the previous night.**
Numerator	Number of people in malaria-endemic areas who slept under an ITN the previous night.
Denominator	Total number of people in malaria endemic areas.
Main data sources	Data on household access and use of ITNs come from nationally representative household surveys such as Demographic and Health Surveys, Multiple Indicator Cluster Surveys, and Malaria Indicator Surveys. Data on the number of ITNs delivered by manufacturers to countries are compiled by Milliner Global Associates, and data on the number of ITNs distributed within countries are reported by National Malaria Control Programs.
Method of measurement	Many recent national surveys report the number of ITNs observed in each respondent household. Ownership rates can be converted to the proportion of people sleeping under an ITN using a linear relationship between access and use that has been derived from surveys that collect information on both indicators.
Method of estimation	Mathematical models can be used to combine data from household surveys on access and use with information on ITN deliveries from manufacturers and ITN distribution by national malaria programmes to produce annual estimates of ITN coverage. WHO uses this approach in collaboration with the Malaria Atlas Project. Methodological details can be found in the Annex of the World Malaria Report 2019: https://www.who.int/publications-detail/world-malaria-report-2019
UHC Billion Related Notes	WHO produces comparable ITN coverage estimates for 40 high burden countries. For other countries, ITN coverage is not included in the UHC service coverage index due to data limitations. However, future research will focus on estimating ITN coverage among those at risk in countries outside of Africa with (potentially localized) malaria burden.

UHC Billion: Water and Sanitation

Indicator definition	**Percentage of households using at least basic sanitation facilities**
Numerator	Population living in a household with: flush or pour-flush to piped sewer system, septic tank or pit latrine; ventilated improved pit latrine; pit latrine with slab; or composting toilet.
Denominator	Total population
Main data sources	Population-based household surveys and censuses
Method of measurement	Household-level responses, weighted by household size, are used to compute population coverage.
Method of estimation	The WHO/UNICEF Joint Monitoring Programme has produced regular estimates of coverage of improved sanitation for MDG monitoring. After compiling a database of available data sources, for each country, simple linear regressions are fitted to the country's data series to obtain an in-sample estimate, as well as to produce a 2-year extrapolation beyond the last available data point, after which coverage is held constant for 4 years and then assumed missing. This is done separately for urban and rural regions, and then combined to obtain national coverage estimates. Details of the methodology and most recent estimates can be found here: http://www.wssinfo.org/
UHC Billion Related Notes	The SDG indicator for sanitation (SDG 6.2.1) is an expanded version of the MDG indicator, incorporating the quality of sanitation facilities. Once country data and estimates are available for this new indicator, it could be used for UHC monitoring in lieu of the MDG indicator definition described above. A joint indicator that identifies the proportion of households with access to both safe water and sanitation could also be considered.

UHC Billion: Prevention of cardiovascular disease

Indicator definition	**Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg)**
Cross-referenced Outcome Indicator	Metadata identical to WHA 66.10 with noted difference below
UHC Billion Related Notes	Prevalence estimates are converted to the prevalence of non-raised blood pressure for incorporation into the UHC index and Average Service Coverage, so that a value of 100% is the optimal target. This is computed as: non-raised blood pressure prevalence = 100 – raised blood pressure prevalence. The above estimates are done separately for men and women; for the UHC tracer indicator a simple average of values for men and women is computed. Prevalence of non-raised blood pressure is then rescaled using a minimum value of 50% when calculating the UHC index and Average Service coverage (rescaled value = (X-50)/(100-50)*100). Non-raised blood pressure is the sum of the percentage of individuals who do not have hypertension, and the percentage of individuals whose hypertension is controlled by medication. The absence of hypertension is a result of prevention efforts via promotion of physical activity and healthy diets, as well as other factors. Hypertension controlled with medication is a result of effective treatment. This indicator is thus a proxy for both effective health promotion and effective medical services. As more data become available, this indicator will likely be replaced by the fraction of population with hypertension receiving treatment.

UHC Billion: Management of diabetes

Indicator definition	**Age-standardized mean fasting plasma glucose for adults aged 18 years and older**
Main data sources	Population-based surveys and surveillance systems
Method of measurement	Fasting plasma glucose (FPG) levels are determined by taking a blood sample from participants who have fasted for at least 8 hours. Other related biomarkers, such as hemoglobin A1c (HbA1c), were used to help calculate estimates (see below).
Method of estimation	For producing comparable national estimates, data observations based on mean FPG, oral glucose tolerance test (OGTT), HbA1c, or combinations therein, are all converted to mean FPG. A Bayesian hierarchical model is then fitted to these data to calculate age-sex-year-country specific prevalences, which accounts for national vs. subnational data sources, urban vs. rural data sources, and allows for variation in prevalence across age and sex. Age-standardized estimates are then produced by applying the crude estimates to the WHO Standard Population. Methodological details can be found here: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)00618-8/fulltext
UHC Billion Related Notes	Mean fasting plasma glucose, which is a continuous measure (units of mmol/L), is converted to a scale of 0 to 100 using the minimum theoretical biological risk (5.1 mmol/L) and observed maximum across countries (7.1 mmol/L) when calculating the UHc index or Average Service Coverage (rescaled value = (7.1 - original value)/(7.1-5.1)*100). An individual's FPG may be low because of effective treatment with glucose-lowering medication, or because the individual is not diabetic as a result of health promotion activities or other factors such as genetics. Mean FPG is thus a proxy for both effective promotion of healthy diets and behaviors and effective treatment of diabetes. As more data become available, this indicator will be replaced by the fraction of population with diabetes under treatment. The above estimate are done separately for men and women; for the UHC tracer indicator a simple average of values for men and women is computed.

UHC Billion: Tobacco

Indicator definition	**Age-standardized prevalence of adults aged 15 years and older not smoking tobacco in last 30 days**
Cross-referenced Outcome Indicator	Metadata identical to SDG 3.a.1 with noted difference below
UHC Billion Related Notes	Prevalence of not smoking tobacco is computed as 1 minus the prevalence of tobacco smoking. Prevalence of non-use of tobacco is rescaled using a minimum value of 32% when calculating average service coverage. Rescaled value = (X-32)/(100-32)*100 .

UHC Billion: Hospital access

Indicator definition	**Total number of hospital beds per 10 000 population**
Numerator	Number of hospital beds (should exclude labor and delivery beds)
Denominator	Total population
Main data sources	Administrative systems / Health facility reporting system
Method of measurement	Country administrative systems are used to total the number of hospital beds, which are divided by the total estimated population, and multiplied by 10,000.
Method of estimation	n/a
UHC Billion Related Notes	When calculating the UHC index and Average Service coverage, the indicator is computed relative to a threshold value of 18 hospital beds per 10,000 population. This threshold is below the observed OECD high income country minimum (since year 2000 to 2015) of 20 per 10,000 and tends to correspond to an inpatient hospital admission rate of around 5 per 100 per year. This indicator is designed to capture low levels of hospital capacity; the maximum threshold is used because very high hospital bed densities are not necessary an efficient use of resources. The indicator is computed as follows, using country data on hospital bed density (*x*), which results in values ranging from 0 to 100: • Country with a hospital bed density *x* < 18 per 10,000 per year, the indicator = *x* /18*100. • Country with a hospital bed density *x* >= 18 per 10,000 per year, the indicator = 100. An alternative indicator could be hospital in-patient admission rate, relative to a maximum threshold. However, that indicator is currently not reported widely across regions, in particular the African Region. In countries where both hospital beds per capita and in-patient admission rates are available, they are highly correlated.

UHC Billion: Health Worker Density

Indicator definition	**Density of health workers (doctors, nurses and midwives per 10 000 population).**
Cross-referenced Outcome Indicator	Metadata identical to SDG 3.c.1 with noted difference below
UHC Billion Related Notes	Adjusted indicator from physicians, psychiatrists and surgeons to physicians and nurses/midwives. When calculating the UHC index and Average Service Coverage, health worker density is capped at maximum thresholds, and values above this threshold are held constant at 100 (rescaled health workers per 10,000 = minimum(100, original value / 155*100)).

UHC Billion: Health Security

Indicator definition	**International Health Regulations (IHR) core capacity index, which is the average percentage of attributes of 13 core capacities that have been attained**
Cross-referenced Outcome Indicator	Metadata identical to SDG 3.d.1
UHC Billion Related Notes	n/a

UHC Billion: Health Expenditure

Indicator definition	**Proportion of population with household health expenditures as a share of total household expenditure or income > 10%**
Cross-referenced Outcome Indicator	Metadata identical to SDG 3.8.2
UHC Billion Related Notes	n/a

Average Service Coverage

Indicator	**Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access)**
Definition	Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access). The indicator is an index reported on a unitless scale of 0 to 100, which is computed as the arithmetic mean of 14 tracer indicators of health service coverage.
Method of estimation/calculation	This index indicator is computed with arithmetic means and requires first preparing the 14 tracer indicators so that they can be combined into the index, and then computing the index from those values. The 14 tracer indicators are first all placed on the same scale, with 0 being the lowest value and 100 being the optimal value. For most indicators, this scale is the natural scale of measurement, e.g., the percentage of infants who have been immunized ranges from 0 to 100 percent. However, for a few indicators additional rescaling is required to obtain appropriate values from 0 to 100, as follows: **Rescaling based on a non-zero minimum to obtain finer resolution** (this "stretches" the distribution across countries): - prevalence of non-raised blood pressure is rescaled using a minimum value of 50%. rescaled value = (X-50)/(100-50)*100; - prevalence of non-use of tobacco is rescaled using a minimum value of 32%. rescaled value = (X-32)/(100-32)*100 **Rescaling for a continuous measure:** mean fasting plasma glucose, which is a continuous measure (units of mmol/L), is converted to a scale of 0 to 100 using the minimum theoretical biological risk (5.1 mmol/L) and observed maximum across countries (7.1 mmol/L). rescaled value = (7.1 - original value)/(7.1-5.1)*100 **Maximum thresholds for density indicators:** hospital bed density and health worker density are both capped at maximum thresholds, and values above this threshold are held constant at 100. rescaled hospital beds per 10,000 = minimum(100, original value / 18*100) rescaled health workers per 10,000 = minimum(100, original value / 155*100) Note that in countries with, the tracer indicator for use of insecticide-treated nets is dropped from the calculation. Once all tracer indicator values are on a scale of 0 to 100, arithmetic means are computed within each of the four health service areas, and then an arithmetic mean is taken of those four values.
Numerator	This indicator is based on aggregate estimates.
Denominator	This indicator is based on aggregate estimates.

Preferred data sources	Many of the tracer indicators of health service coverage are measured by household surveys. However, administrative data, facility data, facility surveys, and sentinel surveillance systems are utilized for certain indicators.
Other possible data sources	
Disaggregation	No disaggregation
Expected frequency of data collection	Data collection varies from every 1 to 5 years across tracer indicators. For example, country data on immunizations and HIV treatment are reported annually, whereas household surveys to collect information on child treatment may occur every 3-5 years, depending on the country.
Limitations	
Data type	Index
Related links	

Section 3: Health Emergencies Billion

Table 3. Health Emergencies Billion Indicators

Indicator	Definition	Cross-referenced Outcome Indicator
Emergency Prepare Indicator **(IHR Core Capacity)**	The emergency prepare indicator measures country preparedness for emergencies. It is the percentage of attributes of 13 core capacities that have been attained at a specific point in time.	**SDG 3.d.1:** International Health Regulations (IHR) capacity and health emergency preparedness *See page 53*
Emergency Prevent Indicator	The emergency prevent indicator measures efforts to prevent health emergencies via vaccination coverage. The indicator is a weighted average of routine and campaign vaccinations for diseases linked with epidemics and pandemics. Its includes priority infection diseases Cholera, Yellow Fever, Meningitis, Polio, Measles plus other needed emergency vaccines.	**Health Emergencies:** Vaccine coverage for epidemic prone diseases *See page 64*
Emergency Detect and Respond Indicator (Timeliness)	The emergency detect & respond indicator monitors the timeliness of detection, notification, and response to events with serious public health impact, including all IHR notifiable events. It is calculated from • time to detect • time to notify • time to respond	n/a

Health Emergencies Billion: Emergency Prepare Indicator (IHR Core Capacity)

Indicator definition	**The emergency prepare indicator measures country preparedness for emergencies. It is the percentage of attributes of 13 core capacities that have been attained at a specific point in time.**
Cross-referenced Outcome Indicator	Metadata identical to SDG 3.d.1
Notes	n/a

Health Emergencies Billion: Emergency Prevent Indicator

Indicator definition	**The emergency prevent indicator measures efforts to prevent health emergencies via vaccination coverage. The indicator is a weighted average of routine and campaign vaccinations for diseases linked with epidemics and pandemics. Its includes priority infection diseases Cholera, Yellow Fever, Meningitis, Polio, Measles plus other needed emergency vaccines.**
Cross-referenced Outcome Indicator	Metadata identical to Health Emergencies: Vaccine coverage for epidemic prone diseases
Notes	n/a

Health Emergencies Billion: Emergency Detect and Respond Indicator (Timeliness)

Indicator	**Emergency Detect and Respond Indicator (Timeliness)**
Indicator definition	The emergency detect & respond indicator monitors the timeliness of detection, notification, and response to events with serious public health impact, including all IHR notifiable events. The indicator focuses on three key aspects of timeliness: • time to detection (t_0) • time to notification (t_1) • time to respond (t_2). These are converted to levels and then averaged to give an overall measure of timeliness.
Main data sources	Data from the Event information site (EIS): a web-based platform that allows secure communication between WHO and the IHR national focal points (NFPs), as defined in Article 11.1 of the IHR (2005). Data from the Event management system (EMS): WHO's central internal electronic system for entering, accessing and managing information for all potential and substantiated events It is hoped to add new capability to additionally record timeliness information for events with serious public health impact within EMS.
Method of calculation	The time to detect, notify and respond are determined from Event start: The true start of the event. IF the true start date is not fully known, a proxy start date for an event will be used., e.g. the symptom onset of the earliest reasonably identified case. Event detection: The date when the event was first detected. If detected by WHO and reported to the Member State, the earliest detection date will be used. Event notification: Date when the event was reported to WHO by the Member State under IHR. If there is no reporting by Member State, this will be the date when the verification request was sent to the Member State. Event response: Date when event was first responded to, e.g. earliest date of any public health intervention. Time to detect = event detection - event start Time to notify = event notification - event detection Time to respond = event response – event detection The times are converted to levels as shown in the table below, with Level 5 being shortest delay and Level 2 the longest delay. Level 1 is used to indicate that no data were recorded for the event. Use of time to notify will only apply for IHR events. The detect & respond indicator (timeliness) is then calculated as the average of the timeliness measures, rescaled between 0 and 100. For IHR events this will be three values, for other events if will be the average of time to detect and time to respond (time to notify will not apply). $$Detect\ \&\ repond\ indicator = Average\ of\ timeliness\ level \times 20$$ The detect & respond indicator is on a scale 0-100 and may also be shown as levels.

Level	Timeliness sub-indicators range (detection, notification, and response) (days)	Detect & respond indicator range
Level 5	≤1	indicator ≥ 90
Level 4	1< t ≤7	70≤ indicator <90
Level 3	7 < t ≤14	50≤ indicator <70
Level 2	>14	30≤ indicator <50
Level 1	no date reported	Indicator <30

Limitations	Detect & respond timeliness is a new indicator. The definition and measurement of timeliness is challenging. Key event milestones may be unknown and even proxies can be difficult to define. The proposed indicator is expected to evolve. Definitions of sub indicators may need to be linked to the type of event The number and nature of events varies enormously between Member States. The very variable nature of events makes this indicator sensitive to a single event. This will be mitigated by including as many events as possible (by including national health events). There is a need to extend the sources of data used, in order to increase the number of events included in the Detect and Respond indicator and to improve the quality of event timeliness data.

Section 4: Healthier Populations Billion

Table 4. Healthier Populations Billion Indicators*

*Note: Sixteen GPW13 outcome indicators are used to measure the Healthier Populations (HPOP) Billion. Metadata for HPOP indicators are embedded within Section 1 (Outcome Indicators).

For the healthier population calculations, all indicators are represented on a scale of healthiness from 0 to 100, with 0% being the least healthy and 100% being the healthiest. For example, for SDG 3.a.1 Prevalence of tobacco use, the indicator, x, will be transformed to 100 – x. A value of 0%, the least healthy, would mean everyone uses tobacco, and a value of 100%, the healthiest, would mean no one uses tobacco. This inversion is required for tobacco use, stunting, wasting and overweight in under 5s, obesity, intimate partner violence, and violence against children.

Five of the selected indicators are not measures of prevalence but are included in the HPOP Billion because each is a key contributor to global healthiness. These include alcohol consumption, road safety, mean particulates (clean air), trans fats, suicides mortality (mental health).

GPW13 Indicators selected (Indicator short name)		Definition	Transformation to Billion (if applicable)	Corresponding page number
SDG 2.2.1	Childhood stunting < 5	Prevalence of stunting among children under 5 years of age	n/a	See page 14
SDG 2.2.2	Childhood wasting < 5	Prevalence of wasting among children under 5 years of age	n/a	See page 15
SDG 2.2.2	Childhood overweight < 5	Prevalence of overweight among children under 5 years of age	n/a	See page 16
SDG 3.4.2	Suicides mortality	Suicide mortality rate	The number of additionally healthier lives will be counted as the estimated number of people avoiding suicide or a suicide attempt.	See page 31
SDG 3.5.2	Alcohol consumption	Alcohol per capita consumption (15+ years) within a calendar year in liters of pure alcohol	Populations are deemed healthier (in terms of alcohol consumption) if either heavy episodic drinking is decreased or abstinence is increased – both implying a reduced alcohol consumption. The transformation for alcohol will therefore relate changes in mean alcohol consumption to changes in prevalence of abstainers and of heavy episodic drinkers, using this as a measure of the proportion of the population that can be considered healthier.	See page 33

SDG 3.6.1	Road deaths	Death rate due to road traffic injuries	Additional population avoiding road injury or death will be counted as healthier.	See page 35
SDG 3.a.1	Tobacco use	Prevalence of current tobacco use among persons aged 15 years and older**	n/a	See page 47
SDG 4.2.1	Developmentally on track < 5	Proportion of children under 5 developmentally on track in health, learning and psychosocial well-being	n/a	See page 55
SDG 5.2.1	Intimate partner violence	Proportion of ever-partnered women aged 15-49 years subjected to intimate partner violence	n/a	See page 56
SDG 6.1.1	Safely managed water	Proportion of population using safely managed drinking water services	n/a	See page 59
SDG 6.2.1	Safely managed sanitation	Proportion of population using safely managed sanitation services	n/a	See page 61
SDG 7.1.2	Clean household fuels	Proportion of population with primary reliance on clean fuels and technology	n/a	See page 45
SDG 11.6.2	Mean particulates (PM2.5)	Annual mean levels of fine particulate matter (PM2.5) in cities	A reduction of PM2.5 by 100 µg/m3 is equated to 100% of the population being healthier. Smaller changes contribute to the HPOP Billion in a proportional manner.	See page 46
SDG 16.2.1	Violence against children	Proportion of children aged 1-14 years who experienced physical/ psychological aggression by caregivers	n/a	See page 63
WHA 66.10	Trans fats policy	Presence of a WHO best-practice TFA policy/regulation	Countries which implement best-practice TFA policy during the GPW13 period will contribute 2.1% of their population to the billion.	See page 71
WHA66.10	Obesity	Prevalence of obesity among adolescents (5-17) and adults	n/a	See page 72

**not age standardized

Section 5: Healthy Life Expectancy (HALE)

Healthy life expectancy (HALE)

Name abbreviated	**Healthy life expectancy (HALE)**
Indicator name	Healthy life expectancy at age x (e.g, at birth, at age 60 years, etc)
Definition	Average remaining number of years that a person can expect to live in "full health" at a certain age by taking into account years lived in less than full health due to disease and/or injury.
Method of estimation/calculation	HALE is a metric based on methods by Sullivan (1971). It provides a single summary measure of population health across all causes, combined by weighting years lived with a measure of functional health loss before death, and is the most comprehensive among competing expectancy metrics. HALE at age x is the sum of YWD_i from i = x to w (the last open-ended age interval in the life table) divided by l_x (survivors at age x): $$HALE_x = \left[\sum_{i=x}^{w} YWD_i\right] / I_x$$ $YWD_x = L_x(1 - D_x)$ – Years lived without disability, equivalent years of healthy life lived between ages x and x+5. I_x – Survivors at age x. L_x – Total years lived by the life table population between ages x and x+5. D_x – Equivalent lost healthy year fraction between ages x and x+5.
Numerator	See above
Denominator	See above
Preferred data sources	Vital registration systems that record deaths with sufficient completeness to allow estimation of all-cause death rates. National health examination surveys on the prevalence of diseases, injuries, and disabilities.
Other possible data sources	Sample registration systems; verbal autopsy.
Disaggregation	By sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g., education, wealth quintile).
Expected frequency of data collection	
Limitations	Lack of reliable data on mortality and morbidity, especially from low income countries. Lack of comparability of self-reported data from health interviews and the measurement of health-state preferences for such self-reporting.
Data type	Number of years
Related links	WHO Methods and Data Sources for Life Tables (Mathers and Ho, 2018); Systemic Analysis for the Global Burden of Disease Study 2016 (Hay *et al.*, 2017); HSMHA Health Reports (Sullivan, 1971); Systemic Analysis for the Global Burden of Disease Study 2015 (Kassebaum *et al.*, 2016)

Annex 1: Outcome Indicators and GPW13 2023 Targets[1]

Target #	SDG #	Outcome Indicators	GPW13 2023 Targets
1.	SDG 1.5.1	Number of deaths, missing persons and directly affected persons attributed to disasters per 100 000 population	Reduce the number of deaths, missing persons and directly affected persons attributed to disasters per 100 000 population
2.	SDG 1.a.2	Proportion of total government spending on essential services (education, health and social protection)	Increase the share of public spending on health by 10%
3.	SDG 2.2.1	Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age	Reduce the number of stunted children under 5 years of age by 30%
4.	SDG 2.2.2	Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age (wasting)	Reduce the prevalence of wasting among children under 5 years of age to less than 5%
5.	SDG 2.2.2	Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age (overweight)	Halt and begin to reverse the rise in childhood overweight (0-4 years)
6.	SDG 3.1.1	Maternal mortality ratio	Reduce the global maternal mortality ratio by 30%
	SDG 3.1.2	Proportion of births attended by skilled health personnel	
7.	SDG 3.2.1	Under-5 mortality rate	Reduce the preventable deaths of newborns and children under 5 years of age by 17% and 30%, respectively
	SDG 3.2.2	Neonatal mortality rate	
8.	SDG 3.3.1	Number of new HIV infections per 1 000 uninfected population, by sex, age and key populations	Reduce number of new HIV infections per 1 000 uninfected population, by sex, age, and key populations by 73%

Target #	SDG #	Outcome Indicators	GPW13 2023 Targets
9.	SDG 3.3.2	Tuberculosis incidence per 100 000 population	Reduce by 27% the number of new TB cases per 100 000 population
10.	SDG 3.3.3	Malaria incidence per 1 000 population	Reduce malaria case incidence by 50%
11.	SDG 3.3.4	Hepatitis B incidence per 100 000 population	Reduce Hepatitis B incidence to 0.5% for children under 5 years
12.	SDG 3.3.5	Number of people requiring interventions against neglected tropical diseases	Reduction of people requiring interventions by 400 million
13.	SDG 3.4.1	Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory diseases	20% relative reduction in the premature mortality (age 30-70 years) from NCDs (cardiovascular, cancer, diabetes, or chronic respiratory diseases) through prevention and treatment
14.	SDG 3.4.2	Suicide mortality rate	Reduce suicide mortality rate by 15%
15.	SDG 3.5.1	Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders	Increase service coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders to xx% *
16.	SDG 3.5.2	Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol	*Reduction will be in line with SDG 2030 target*
17.	SDG 3.6.1	Death rate due to road traffic injuries	Reduce the number of global deaths and injuries from road traffic accidents by 20%
18.	SDG 3.7.1	Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods	Increase the proportion of women of reproductive age (15–49 years) who have their need for family planning satisfied with modern methods to 66%
19.	SDG 3.8.1	Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, noncommunicable diseases and service capacity and access, among	Increase coverage of essential health services

Target #	SDG #	Outcome Indicators	GPW13 2023 Targets
		the general and the most disadvantaged population)	
20.	SDG 3.8.2	Proportion of population with large household expenditures on health as a share of total household expenditures or income	Stop the rise in percent of people suffering financial hardship (defined as out-of-pocket spending exceeding ability to pay) in accessing health services
21.	SDG 3.9.1	Mortality rate attributed to household and ambient air pollution	Reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
	SDG 3.9.2	Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)	
	SDG 3.9.3	Mortality rate attributed to unintentional poisoning	
	SDG 7.1.2	Proportion of population with primary reliance on clean fuels and technology	
	SDG 11.6.2	Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)	
22.	SDG 3.a.1	Age-standardized prevalence of current tobacco use among persons aged 15 years and older	*Reduction will be in line with SDG 2030 target*
23.	SDG 3.b.1	Proportion of the target population covered by all vaccines included in their national programme	Increase coverage of 2nd dose of measles containing vaccine (MCV2) to 85%
24.	SDG 3.b.3	Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis	Increase availability of essential medicines for primary health care, including the ones free of charge to 80%
25.	SDG 3.c.1	Health worker density and distribution	Increase health workforce density with improved distribution

Target #	SDG #	Outcome Indicators	GPW13 2023 Targets
26.	SDG 3.d.1	International Health Regulations (IHR) capacity and health emergency preparedness	Increase in member states International Health Regulations capacities
27.	SDG 3.d.2	Percentage of bloodstream infections due to antimicrobial resistant organisms.	Reduce the percentage of bloodstream infections due to selected antimicrobial resistant organisms by 10%
28.	SDG 4.2.1	Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being, by sex	Increase the proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being to 80%
29.	SDG 5.2.1	Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age	Decrease the proportion of ever-partnered women and girls aged 15-49 years subjected to physical or sexual violence by a current or former intimate partner in the previous 12 months from 20% to 15%
30.	SDG 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	Increase the proportion of women aged 15–49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care to 68%
31.	SDG 6.1.1	Proportion of population using safely managed drinking water services	Provide access to safely managed drinking water services for 1 billion more people
32.	SDG 6.2.1	Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water	Provide access to safely managed sanitation services for 800 million more people
33.	SDG 16.2.1	Proportion of children aged 1–17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month	Decrease the number of children subjected to violence in the past 12 months, including physical and psychological violence by care givers in the past month, by 20%
34.	Health Emergencies	Vaccine coverage of at-risk groups for epidemic or pandemic prone diseases	Increase immunization coverage for cholera, yellow fever, meningococcal meningitis, polio and pandemic influenza
35.	Health Emergencies	Proportion of vulnerable people in fragile settings provided with essential health services	Increase the availability of health facilities providing a minimum services package to

Target #	SDG #	Outcome Indicators	GPW13 2023 Targets
			people in fragile, conflict, or vulnerable settings to at least 80%
36.	WHA68.3	Number of cases of poliomyelitis caused by wild poliovirus (WPV)	Eradicate poliomyelitis: zero cases of poliomyelitis caused by wild poliovirus and establish a clear timetable for the global withdrawal of oral polio vaccines in order to stop outbreaks caused by vaccine-derived poliovirus
37.	WHA68.7	Patterns of antibiotic consumption at national level	ACCESS group antibiotics at ≥60% of overall antibiotic consumption
38.	WHA66.10	Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure of >140 mmHg and/or diastolic blood pressure >90 mmHg) and mean systolic blood pressure	20% relative reduction in the prevalence of raised blood pressure
39.	WHA66.10	Protection of the population of a country by effective policy/regulation on industry produced trans-fatty acids (TFA)	All countries implement WHO best practice policy
40.	WHA66.10	Prevalence of obesity	Halt and begin to reverse the rise in obesity

[1] GPW13 2023 Targets to be updated