13th General Programme of Work (GPW13)
WHO Impact Framework

METADATA

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Introduction: The 3 layer measurement system

The WHO Impact Framework is a three-layer measurement system: i) an over-arching and comparable measure of progress reported by the healthy life expectancy (HALE) indicator connecting the triple billion targets; ii) the triple billion targets, which focus on universal health coverage (UHC), health emergencies and healthier populations, respectively; and iii) 46 programmatic targets and related indicators.

1. Healthy life expectancy (HALE)

An over-arching and comparable measure of progress connecting the triple billion targets

Healthy life expectancy (HALE), an over-arching integrative indicator and a summary measure of average levels of population health, will be used to report the overall progress of the combined GPW13 triple billion targets. HALE quantifies expected years of life in good health at a particular age and this measure is aligned with SDG 3. HALE is a comparable measure to establish the GPW13 baseline reporting and will facilitate cross-country comparisons and comparisons within countries over time. HALE is reported annually as part of the Global Burden of Disease and the contribution of each "billion" to HALE will be quantified. WHO will develop standard guidance and provide tools and technical assistance to Member States to measure and report on HALE themselves.

HALE is estimated using Sullivan's method, which requires two sources of data input: 1) period life tables by country, and 2) age-sex-specific estimates of years of healthy life lost due to disability (YLD) by cause across a comprehensive set of disease and injuries, adjusted for severity. By summing YLD over all causes and adjusting for independent morbidity by country, age, and sex, the fractions of years of healthy life lost in total years lived by each age-sex-country group are derived. For each age interval, the corresponding fraction then used to partition the years lived in the period life table into years lived in healthy and unhealthy states. Finally, to estimate the HALE at age x, the total person-years lived in healthy state in all age intervals above age x are summed and divided by the survivor at age x in the period life table.

Table 1 Metadata on HALE

Name abbreviated	**Healthy life expectancy (HALE)**
Indicator name and target	Increase healthy life expectancy at birth by 3% (baseline: 63.1 years (2016); target: 65 years (2023))
Definition	Average number of years that a person can expect to live in "full health" 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), 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 which 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.
WHO GPW13 Framework	Outcome
Disaggregation	By sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g., education, wealth quintile).
Expected frequency of data collection	Every 5 years
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: http://www.who.int/healthinfo/statistics/LT_method.pdf; GBD 2016 DALYs and HALE Collaborators. Lancet. 2017; 390:1260-1344; Sullivan DF. HSMHA Health Rep, 1971.

2. Triple Billion Targets
which focus on universal health coverage (UHC), health emergencies and healthier populations

The triple billion targets are: 1 billion more people with universal health coverage, 1 billion better protected from health emergencies, and 1 billion enjoying better health and well-being primarily through multisectoral policy, advocacy, and regulation. Each of the triple billion targets in the GPW 13 will be measured with composite indices. The UHC billion will be measured with a UHC index; health emergencies billion, with a health emergency protection index; and healthier population billion, using a healthier population index.

2A. Universal Health Coverage (UHC)

A combined measure of UHC service coverage and UHC financial hardship will be used to monitor the GPW 13 targets. The combined measure is defined as the population with UHC service coverage minus the population experiencing financial hardship in a country in a given year. As described in SDG 3.8.1, the principles of tracer indicators are used to develop the UHC service coverage. Financial risk protection (described in SDG 3.8.2) will be measured by means of the fraction of households receiving care and not facing large health spending in a year. Equity in UHC coverage will be achieved by examining the age (life-cycle) and sex distribution of the baseline UHC and increases in UHC.

The UHC service coverage index is designed to summarize existing indicators of health service coverage to ensure consistency with the SDGs and other global initiatives and reduce duplication and reporting burden. Table 2 shows which SDG indicators the various tracers are drawn from.

Table 2 Definitions and data availabilities for UHC tracer indicators

	UHC Tracer Indicator (Effective Coverage or EC)	Type of Input Indicators	Input indicators	Data sources	Countries or territories with data in 2010 or later	Data (50% of countries)	Data (50% of population)	Related SDG indicator
Promotion								
1	EC modern contraception – proxied using the fraction of women whose need for contraception is met with modern contraceptives. Met needs should not be age standardized.	Numerator	number of women who are using modern methods of contraception	Population-based surveys	110	Yes	Yes	3.7.1
		Denominator	number of women who want to use modern methods of contraception but are not + number of women who are on modern method of contraception	Population-based surveys				
2	EC breastfeeding promotion – proxied using the fraction of newborns initiating breastfeeding within one hour of birth.	Numerator	number of newborns initiating breastfeeding within one hour of birth	Population-based surveys	108	Yes	Yes	
		Denominator	number of live births	CRVS, Population-based surveys				
Prevention								
3	EC immunization – proxied using estimated proportion of children protected against diptheria, pertussis, tetanus, measles, Streptococcus pneumoniae. Protection includes protection through herd immunity. In the absence of wider use of blood testing for relevant antibodies, this is approximated using vaccination coverage.	Numerator	number of children receiving each immunization	Population-based surveys, Facility records	DTP3: 194 MCV2: 164 PCV3: 134	Yes	Yes	3.b.1
		Denominator	for the third dose of diphtheria-tetanus-pertussis-containing vaccine (DTP3) and the third dose of pneumococcal conjugate vaccine (PcV3), the number of surviving infants and for the second dose of measles-containing vaccine (MCV2), the number of children in the cohort, according to the vaccination schedule	Population-based surveys, Facility records				

	UHC Tracer Indicator (Effective Coverage or EC)	Type of Input Indicators	Input indicators	Data sources	Countries or territories with data in 2010 or later	Data (50% of countries)	Data (50% of population)	Related SDG indicator
Prevention								
4	EC neglected tropical diseases preventive services – proxied using the geometric mean of treatment coverage of five neglected tropical diseases.	Numerator	number of people receiving preventive therapy for lymphatic filariasis, onchocerciasis, schistosomiasis, soil-transmitted helminthiases and trachoma****	Registries, Population-based surveys	SCH - 52 STH - 101 LF - 51 Trach - 40 Oncho - 31	Yes	Yes	3.3.5
		Denominator	number of people requiring preventive therapy for lymphatic filariasis, onchocerciasis, schistosomiasis, soil-transmitted helminthiases and trachoma****	Registries, Population-based surveys				
5	EC vector control for malaria – proxied using the fraction of a population sleeping under an insecticide-treated net or with effective indoor residual spraying.	Numerator	number of people who slept under an insecticide-treated net or number of households that received effective indoor residual spraying	Facility records, Population-based surveys	32**	Yes	Yes	3.3.3
		Denominator	population at risk of malaria targeted for the intervention	Facility records, Population-based surveys				
6	EC human papillomavirus immunization – proxied using coverage of human papillomavirus vaccination.	Numerator	number of girls receiving the final dose of human papillomavirus vaccine during the calendar year	Population-based surveys	45***	Yes	Yes	3.b.1
		Denominator	the number of girls in the cohort, according to the vaccination schedule	Population-based surveys				

UHC Tracer Indicator (Effective Coverage or EC)		Type of Input Indicators	Input indicators	Data sources	Countries or territories with data in 2010 or later	Data (50% of countries)	Data (50% of population)	Related SDG indicator
Prevention								
7	EC elevated blood pressure management – proxied using the fraction of individuals with hypertension reaching treatment targets of <140/90.	Numerator	number of people receiving treatment with blood pressure less than 140/90	Population-based surveys	87	No	Yes	3.4.1
		Denominator	number of people with hypertension (blood pressure ≥140/90) and no treatment + number of people with a diagnosis of hypertension receiving treatment	Population-based surveys				
8	EC diabetes: elevated blood glucose management – proxied using the fraction of individuals with elevated blood sugar reaching the treatment target of fasting plasma glucose levels less than 126 mg/dL.	Numerator	number of people with a diagnosis of diabetes and FPG less than 126 mg/dL	Population-based surveys	71	No	Yes	3.4.1
		Denominator	number of people with fasting plasma glucose levels ≥126 mg/dL + number of people with a diagnosis of diabetes and FPG less than 126 mg/dL on treatment	Population-based surveys				
Treatment: communicable, maternal, neonatal, nutritional								
9	EC management of labour and delivery – proxied using the proportion of live births delivered with a skilled birth attendant present.	Numerator	number of women aged 15–49 years with a live birth attended by a skilled health personnel (doctors, nurses or midwives) during delivery	Facility records, Population-based surveys	155	Yes	Yes	3.1.2
		Denominator	number of live births among women aged 15–49 years in the same period	CRVS, Population-based surveys				
10	EC antenatal, peripartum and postnatal care for the newborn – proxied using the early neonatal death rate*.	Numerator	number of deaths in children less than seven days of life	CRVS, Population-based surveys	194	Yes	Yes	3.2.2
		Denominator	number of live births	CRVS, Population-based surveys				

	UHC Tracer Indicator (Effective Coverage or EC)	Type of Input Indicators	Input indicators	Data sources	Countries or territories with data in 2010 or later	Data (50% of countries)	Data (50% of population)	Related SDG indicator
Treatment: communicable, maternal, neonatal, nutritional								
11	EC antenatal, peripartum and postnatal care for the mother – proxied using the age-standardized maternal mortality ratio*.	Numerator	number of maternal deaths	CRVS, Population-based surveys	110	Yes	Yes	3.1.1
		Denominator	number of live births	CRVS, Population-based surveys				
12	EC treatment for pneumonia – proxied using the rescaled death to incidence ratio for pneumonia*.	Numerator	number of deaths due to pneumonia in persons aged 5–19 years	CRVS, Population-based surveys	105	Yes	Yes	3.4.1
		Denominator	number of incident cases of pneumonia in persons aged 5–19 years	National surveillance, Population-based surveys				
13	EC treatment of severe acute malnutrition – proxied using the rescaled death to incidence ratio for severe acute malnutrition*.	Numerator	number of deaths due to severe acute malnutrition	CRVS, Population-based surveys	105	Yes	Yes	
		Denominator	number of incident cases of severe acute malnutrition	National surveillance, Population-based surveys				
14	EC treatment for diarrhoea – proxied using the death to incidence ratio for diarrhoea *.	Numerator	number of deaths due to diarrhoea	National surveillance, Population-based surveys	105	Yes	Yes	3.9.2
		Denominator	number of incident cases of diarrhoea	National surveillance, Population-based surveys				
15	EC antiretroviral therapy – proxied using the fraction of individuals with HIV/AIDS receiving antiretroviral therapy.	Numerator	number of individuals on antiretroviral therapy (Future developments will allow correction of the numerator to be number of individuals receiving antiretroviral therapy and achieving viral suppression)	Facility records, Population-based surveys	136	Yes	Yes	3.3.1
		Denominator	number of individuals with HIV/AIDS	Facility records, Population-based surveys				

	UHC Tracer Indicator (Effective Coverage or EC)	Type of Input Indicators	Input indicators	Data sources	Countries or territories with data in 2010 or later	Data (50% of countries)	Data (50% of population)	Related SDG indicator
Treatment: communicable, maternal, neonatal, nutritional								
16	EC tuberculosis treatment – measured as the ratio of notified and treated tuberculosis cases (all forms) to estimated incidence for the same year	Final output	measured as the ratio of notified and treated tuberculosis cases (all forms) to estimated incidence for the same year	Population-based surveys; case notifications (TB surveillance); cause of death data	189	Yes	Yes	3.3.2
17	EC hepatitis C virus treatment – proxied using the fraction of persons diagnosed with chronic hepatitis C virus infection receiving treatment for the infection within a given year.	Numerator	number of persons who were started on direct-acting antiviral treatment (during the particular year)	Population-based surveys, National Surveillance, Registries	29	No	Yes	
		Denominator	number of people with chronic HCV infection	Population-based surveys, National Surveillance, Registries				
18	EC perinatal care – proxied using stillbirths.	Numerator	number of fetuses and infants born with no sign of life and weighing ≥1000 g, or if data on weight are missing, ≥28 completed weeks of gestation, or if data on duration of gestation are missing, body length ≥35 cm	CRVS, Population-based surveys	142	Yes	Yes	
		Denominator	total number of births (live and stillbirths) (Expressed per 1000 total births)	CRVS, Population-based surveys				

	UHC Tracer Indicator (Effective Coverage or EC)	Type of Input Indicators	Input indicators	Data sources	Countries or territories with data in 2010 or later	Data (50% of countries)	Data (50% of population)	Related SDG indicator
Treatment: non-communicable diseases and injuries								
19	EC congenital heart disease treatment – proxied using the death to prevalence ratio for congenital heart disease*.	Numerator	number of deaths due to congenital heart disease	CRVS, Populated-based surveys	105	Yes	Yes	3.4.1
		Denominator	prevalence of congenital heart disease	CRVS, Populated-based surveys				
20	EC surgical care for abdominal emergencies – proxied using the death to incidence ratio for appendicitis, paralytic ileus and intestinal obstruction*.	Numerator	number of deaths due to appendicitis, paralytic ileus and intestinal obstruction	CRVS, Populated-based surveys	105	Yes	Yes	
		Denominator	number of incident cases of appendicitis, paralytic ileus and intestinal obstruction	CRVS, Populated-based surveys				
21	EC refractive error correction – proxied using the prevalence of moderate distance vision loss + severe distance vision loss + blindness due to uncorrected refractive error. Rescaled using the observed range rescale.	Numerator	number of prevalent cases of moderate distance vision loss + severe distance vision loss + blindness due to uncorrected refractive error	National Surveillance, Population-based surveys	51	No	Yes	
		Denominator	number in the whole population	Population statistics				
22	EC childhood leukaemias – proxied using the death to incidence ratio*.	Numerator	number of deaths due to leukaemia in individuals aged 5–19 years	CRVS, Populated-based surveys	105	Yes	Yes	3.4.1
		Denominator	number of incident cases of leukaemia in individuals aged 5–19 years	National Surveillance, Population-based surveys				

	UHC Tracer Indicator (Effective Coverage or EC)	Type of Input Indicators	Input indicators	Data sources	Countries or territories with data in 2010 or later	Data (50% of countries)	Data (50% of population)	Related SDG indicator
Treatment: non-communicable diseases and injuries								
23	EC treatment of asthma – proxied using the death to prevalence ratio for asthma*.	Numerator	number of deaths due to asthma in individuals aged 5–19 years	CRVS, populated-based surveys	105	Yes	Yes	3.4.1
		Denominator	number of prevalent cases of asthma in individuals aged 5–19 years	National Surveillance, Population-based surveys				
24	EC dental care – proxied using the prevalence of caries in permanent teeth*.	Numerator	number of individuals with caries in permanent teeth	Facility records, Population-based surveys	36	No	Yes	
		Denominator	number in the whole population	Population statistics				
25	EC treatment of breast, cervical, colorectal and uterine cancers – proxied using the death to incidence ratio of each cancer*.	Numerator	number of deaths due to each cancer (The effective coverage is calculated for each of the four cancers separately)	CRVS, Cancer registries, Population-based surveys	105	Yes	Yes	3.4.1
		Denominator	number of incident cases of each cancer	Cancer registries, Population-based surveys				
26	EC treatment for ischaemic heart disease – proxied using the death to incidence ratio for ischaemic heart disease*.	Numerator	number of deaths due to ischaemic heart disease	CRVS, Populated-based surveys	105	Yes	Yes	3.4.1
		Denominator	number of incident cases of ischaemic heart disease	National Surveillance, Population-based surveys				
27	EC treatment for stroke – proxied using the death to incidence ratio for stroke *.	Numerator	number of deaths due to stroke	CRVS, Populated-based surveys	105	Yes	Yes	3.4.1.
		Denominator	number of incident cases of stroke	National Surveillance, Population-based surveys				

UHC Tracer Indicator (Effective Coverage or EC)		Type of Input Indicators	Input indicators	Data sources	Countries or territories with data in 2010 or later	Data (50% of countries)	Data (50% of population)	Related SDG indicator
Treatment: non-communicable diseases and injuries								
28	EC treatment of chronic obstructive pulmonary disease – proxied using the death to prevalence ratio for chronic obstructive pulmonary disease*.	Numerator	number of deaths due to chronic obstructive pulmonary disease	CRVS, Populated-based surveys	105	Yes	Yes	3.4.1
		Denominator	number of prevalent cases of chronic obstructive pulmonary disease	National Surveillance, Population-based surveys				
29	EC treatment of end-stage renal disease – proxied using the ratio of deaths due to chronic kidney disease to the prevalence of end-stage renal disease*.	Numerator	number of deaths due to chronic kidney disease	CRVS, Populated-based surveys	105	Yes	Yes	3.4.1
		Denominator	number of prevalent cases of end-stage renal disease	National Surveillance, Population-based surveys				
30	EC cataract surgery – proxied using the proportion of individuals with cataracts who have received cataract surgery.	Numerator	number of individuals with cataracts who have received cataract surgery	National Surveillance, Population-based surveys	40	No	Yes	
		Denominator	number of individuals with severe visual impairment or blindness from cataracts + the number of individuals who have received cataract surgery	National Surveillance, Population-based surveys				
Palliation								
31	EC palliation – proxied using morphine-equivalent strong opioid analgesics (excluding methadone) per death from cancer.	Numerator	population-level consumption of morphine-equivalent strong opioid analgesics	National surveillance, population-based surveys, facility records	133	Yes	Yes	3.4.1
		Denominator	total number of cancer deaths over same period	CRVS, Population-based surveys				
*Rescaled using the observed range rescale; **only for Sub-Saharan Africa; ***only countries where HPV vaccine is introduced, ****only for NTD endemic countries								

Aspirational indicators for future UHC Index

	Tracer Indicator (Effective Coverage or EC)	Type of Input Indicators	Input indicators	Data sources	Countries or territories with data in 2010 or later	Data (50% of countries)	Data (50% of population)	Related SDG indicator
Prevention								
A	EC antenatal care – proxied using antenatal care measured with quality	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 and had blood pressure measured and blood drawn during at least one antenatal care visit	Facility records, Population-based surveys				
		Denominator	total number of women aged 15–49 years with a live birth in the same period	Facility records, Population-based surveys				
Treatment: non-communicable diseases and injuries								
B	EC edentulism (any individual with zero remaining permanent teeth) – proxied using the prevalence of edentulism.	Numerator	number of individuals aged ≥65 years with edentulism	National Surveillance, Population-based surveys	22	No	No	
		Denominator	the number of individuals in the population aged ≥65 years	Population statistics				
C	EC severe mental health conditions – proxied using the coverage of treatment for severe mental health conditions.	Numerator	number of people on treatment for severe mental health conditions	Facility survey, National Surveillance, Population-based surveys				3.4.2
		Denominator	number of people with severe mental health conditions	Facility survey, National Surveillance, Population-based surveys				
D	EC treatment for substance abuse – proxied using the fraction of individuals with substance abuse disorders who are receiving some treatment	Numerator	number of people who have received different treatment interventions in the past year	National Surveillance, Population-based surveys				3.5.1
		Denominator	number of people with substance abuse disorder	National Surveillance, Population-based surveys				

Tracer Indicator (Effective Coverage or EC)		Type of Input Indicators	Input indicators	Data sources	Countries or territories with data in 2010 or later	Data (50% of countries)	Data (50% of population)	Related SDG indicator
Treatment: non-communicable diseases and injuries								
E	EC prehospital emergency care services – proxied using the proportion of adults and children dying of acute injury in hospital among all acute injury deaths.	Numerator	number of hospital-based deaths due to acute injury (excludes "brought dead" or "dead on arrival")	CRVS, hospital records				
		Denominator	number of all acute injury deaths	CRVS, hospital records				
Rehabilitation								
F	EC rehabilitation after complex injury – proxied using the proportion of individuals with complex injuries who receive multiple modes of rehabilitation	Numerator	number of people with complex needs after injury who accessed multidisciplinary rehabilitation	Facility survey, National Surveillance, Population-based surveys				
		Denominator	total number of people with complex needs because of injury	Facility survey, National Surveillance, Population-based surveys				
G	EC treatment for hip osteoarthritis – proxied using the ratio of those with hip replacements to the number in need of a hip replacement.	Numerator	number of people who have received a hip replacement	National Surveillance, Population-based surveys				
		Denominator	number of people with severe hip osteoarthritis + number of people with a hip replacement	National Surveillance, Population-based surveys				
H	EC hearing loss rehabilitation of deaf or hard-of-hearing infants.	Numerator	number of infants (aged 0–1 year) receiving hearing loss rehabilitation	National Surveillance, Population-based surveys, registries				
		Denominator	number of infants (aged 0–1 year) identified as deaf or hard of hearing	Population-based surveys, Registries				
Shaded cells represent indicators identified by the health sector for which investments are needed to monitor them and for countries to report on them. Based on the data availability they can become part of the UHC index in the future.								

2B. Health Emergencies

The "1 billion more people better protected from health emergencies" goal is consistent with SDG 3.d and 3.d.1, and the 2016 Review Committee report on the Role of the International Health Regulations (IHR), 2005 in the Ebola Outbreak and Response. It will be measured using a health emergencies protection index that consists of three tracer indicators that capture activities to prepare for, prevent, and detect and respond to health emergencies.

For the "prepare" indicator, countries will be assessed on their attainment of IHR capacities. The prepare indicator is the average of country implementation of all 13 IHR self-reported core capacities, using external benchmarks to adjust for self-report bias.

For the "prevent" indicator, countries will be assessed on their capacity to prevent epidemics and pandemics by using a safe public health measure, vaccination. Immunization is a key element to tackle preventable epidemic diseases and leads to the control and elimination of high-threat infectious hazards. The indicator will measure the mean vaccine coverage of at risk groups for epidemic prone diseases.

For the "detect and respond" indicator, countries will be assessed on the timeliness of detection and response to public health events, including outbreaks and emergencies. Timeliness is measured by the delay to detect, report, confirm, and respond to a public health event. The indicator measures the proportion of public health events detected and responded to in a timely fashion.

The health emergency protection index is the mean value of the indicators for prepare, prevent, detect and respond. Countries can be categorized into 5 levels of health protection, which describe countries' overall level of protection from health emergencies. "1 billion better protected" will be measured by the total population in countries that have stepped up from one level to the next, which encourages incremental progress in all countries.

Table 3 Health Emergency Protection Index

Target	**1 billion more people better protected from health emergencies**
Indicator	Meta-index of country-level protection from health emergencies ("health protection index" [HPI]): • adjusted International Health regulations (IHR) capacity and health emergency preparedness • routine immunization coverage (MCV1, DPT3); emergency immunization coverage (cholera, yellow fever, meningitis); disease incidence (cholera, yellow fever, meningitis) • timeliness to detection, confirmation, risk assessment, verification, and response to outbreaks
Definition	Protection from health emergencies is the capacity for countries to prepare for, prevent, detect & respond to public health threats. • Prepare: country preparedness as measured by International Health Regulations (IHR 2005) capacities • Prevent: implementation of proven prevention strategies for epidemic-prone diseases • Detect and respond: rapid response to potential public health emergencies
Method of estimation/calculati	HPI is the geometric mean of 3 indices: $$Country\ Health\ Protection\ Index = (Prepare \times Prevent \times Detect\ and\ Respond)^{1/3}$$
Numerator	Applicable only for "prevent" index: immunization coverage among targeted population (varies by antigen and context)
Denominator	Applicable only for "prevent": targeted population (varies by antigen and context)
Preferred data sources	WHO and UNICEF Estimates of National Immunization Coverage (WUENIC) WHO Global Health Observatory WHO Strategic Partnership for IHR and Health Security (SPH) World Bank Gross National Income (GNI) IHME Socio-demographic index (SDI) EMS/DON Country-reported data/EWARS
Other possible data sources	Global vaccine stockpile utilization data
WHO GPW13 Framework	
Disaggregation	Country
Expected frequency of data collection	Annual
Limitations	Prepare: Model will require re-calibration with revised Joint External Evaluation (JEE) data; these data should be collected every 4–5 years, although country participation is voluntary. Prevent: Immunization coverage data among targeted populations in emergencies (outbreaks of yellow fever, meningitis, and cholera) are not readily available; target population estimation might be subject to bias. Detect and Respond: Timeliness data for detection and response to emergencies are not currently systematically or routinely collected by WHO. Data have been abstracted by academic groups for the period 1996–2014, and such methods can be applied for rapidly establishing baseline figures and targets; however, systematic data collection will require implementation of new systems at WHO and Member States.
Data type	Self-reported and externally-evaluated IHR capacities, immunization coverage estimates, timeliness indicators.
Related links	

2C. Healthier Population

The healthier population billion focuses on the impact of selected multisectoral interventions influenced by policy, advocacy and regulatory approaches driven by the health sector. 19 priority indicators comprising the healthier population billion are based on the decreased burden of disease achieved by addressing various social, environmental and behavioural risks through health sector policy, advocacy and regulation.

The healthier population index will use two approaches: a) Lives touched approach, namely totalling the number of individuals affected by improvements in each of the component indicators, and b) the lives improved approach, in which each indicator will be adjusted into a health gain via the disability adjusted life years (DALYs) averted. The DALYS averted can be converted into a lives improved measure by stipulating the threshold change in HALE contributed by these population measures that equates to a life improved. For example, if a change in HALE of 0.1 equates to a life improved then we can convert DALYs averted into lives improved by dividing by 0.1.

Table 4 Mapping third billion index indicators to programmatic targets

	Indicators	Programmatic target of GPW13
1	Prevalence of stunting among children under 5 years of age	14
2	Prevalence of wasting among children under 5 years of age	15
3	Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being	16
4	Number of children subjected to violence, including physical and psychological violence by caregivers	17
5	Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care	19
6	Proportion of ever-partnered women and girls aged 15-49 years subjected to physical or sexual violence by a current or former intimate partner	20
7	Proportion of the population with PM2.5 higher than WHO recommendations	43
8	Proportion of the population experiencing substantial increase in temperature	44
9	Population using safely managed drinking-water services	45
10	Population using safely managed sanitation services	46
11	Prevalence of tobacco use among persons aged 15+ years	22
12	Harmful use of alcohol, defined according to the national context as alcohol per capita consumption	23
13	Mean population intake of salt/sodium	24
14	Prevalence of raised blood pressure among adults	31
15	Prevalence of overweight and obesity in children and adolescents	25
16	Elimination of industrially produced trans fats	26
17	Prevalence Insufficient physical activity in adults	27
18	Attempted suicide rate	28
19	Number of injuries from road traffic accidents	29

3. Programmatic targets and indicators

46 programmatic targets serve as a flexible toolkit to measure GPW13 performance and to track and accelerate progress toward the SDGs (Annex E). Countries will use these indicators to track progress on their selected priorities; therefore, not every country will track every indicator for purposes of GPW13 performance monitoring. However, we hope that in implementing GPW13 every country will track progress on its own priorities.

The 46 targets were developed by the WHO technical programmes and have undergone consultation with Member States and extensive review by partners. 44 of the 46 targets are aligned with SDGs and or WHA resolutions, action plans and/or framework. Using the most recent trends, future projections were made to 2023 and 2030 to ensure alignment with SDG targets and WHA resolutions. 29 targets align with SDGs; 10 targets align with WHA resolutions, action plans and/or frameworks; 5 targets align with both SDGs and WHA resolutions, action plans and/or frameworks; and 2 targets are new and address emerging public health priorities i.e. antimicrobial resistance (AMR) and reducing mortality from climate-sensitive diseases.

Table 5 List of programmatic targets

#	Programmatic Target
1	Increase access to essential health services (including promotion, prevention, curative, rehabilitative and palliative care) with a focus on primary health care, measured with a UHC index
2	Stop the rise in percent of people suffering financial hardship (defined as out-of-pocket spending exceeding ability to pay) in accessing health services
3	Increase percent of publicly financed health expenditures by 10%
4	**a.** Increase availability of essential medicines for primary health care, including the ones free of charge to 80%
	b. ACCESS group antibiotics at ≥60% of overall antibiotic consumption
5	Increase coverage of essential health services among vulnerable groups, and women and girls in the poorest wealth quintile to 70%
6	Reduce the number of older adults 65+ years who are care dependent by 15 million
7	Increase the availability of oral morphine in facilities caring for patients in need of this treatment for palliative care at all levels from 25% to 50%
8	Increase health workforce density with improved distribution
9	Increase in countries International Health Regulations capacities
10	**a.** Increase the number of vulnerable people in fragile settings provided with essential health services to at least 80%
	b. Increase immunization coverage for cholera, yellow fever, meningitis and pandemic influenza
11	Reduce number of deaths attributed to disasters per 100,000 population by 5%
12	Reduce the global maternal mortality ratio by 30%
13	Reduce the preventable deaths of newborns and children under 5 years of age by 30%
14	Reduce the number of stunted children under 5 years of age by 30%
15	Reduce the prevalence of wasting among children under 5 years of age to less than 5%
16	Increase the proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being to 80%
17	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%
18	Increase the proportion of women of reproductive age (aged 15–49 yrs) who have their need for family planning satisfied with modern methods to 66%
19	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%
20	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%
21	20% relative reduction in the premature mortality (age 30-70 years) from NCDs (cardiovascular, cancer, diabetes, or chronic respiratory diseases) through prevention and treatment
22	25% relative reduction in prevalence of current tobacco use in persons aged 15+ years
23	7% relative reduction in the harmful use of alcohol as appropriate, within the national context
24	25% relative reduction in mean population intake of salt/sodium
25	Halt and begin to reverse the rise in childhood overweight (0-4 years) and obesity (5-19 years)

#	Programmatic Target
26	Eliminate industrially produced trans fats (increase the percentage of people protected by effective regulation)
27	7% relative reduction in the prevalence of insufficient physical activity in persons aged 18+ years
28	Reduce suicide mortality rate by 15%
29	Reduce the number of global deaths and injuries from road traffic accidents by 20%
30	Increase service coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for severe mental health conditions to 50%
31	20% relative reduction in the prevalence of raised blood pressure
32	Increase coverage of human papilloma virus vaccine among adolescent girls (9-14 years) to 50%
33	Increase proportion of women between 30-49 years who have been screened for cervical cancer to 25%
34	Eradicate poliomyelitis: zero cases of poliomyelitis caused by wild poliovirus or circulating vaccine-derived poliovirus
35	Eliminate at least one neglected tropical disease in 30 additional endemic countries (cumulative total number of countries)
36	Reduce tuberculosis deaths (including TB deaths among people with HIV) by 50%
37	Reduce malaria deaths by 50%
38	Reduce the number of HBV or HCV related deaths by 40%
39	Reduce number of new HIV infections per 1000 uninfected population, by sex, age, and key populations by 73%
40	Increase coverage of 2nd dose of measles containing vaccine (MCV) to 85%
41	Increase treatment coverage of RR-TB to 80%
42	Reduce the percentage of bloodstream infections due to selected AMR organisms by 10%
43	Reduce the mortality rate attributed to household and ambient air pollution by 5%
44	Reduce mortality from climate-sensitive diseases by 10%
45	Provide access to safely managed drinking water services for 1 billion more people
46	Provide access to safely managed sanitation services for 800 million more people

Target #1	**Increase access to essential health services (including promotion, prevention, curative, rehabilitative and palliative care) with a focus on primary health care, measured with a UHC index**
Indicator	Access to essential health services (including promotion, prevention, curative, rehabilitative and palliative care) with a focus on primary health care, measured with a UHC index
SDG/ Core 100	
Definition	TBD
Method of estimation/calculation	
Numerator	
Denominator	
Preferred data sources	
Other possible data sources	
WHO GPW13 Framework	
Disaggregation	
Expected frequency of data collection	
Limitations	
Data type	
Related links	

Target #2	**Stop the rise in percent of people suffering financial hardship (defined as out-of-pocket spending exceeding ability to pay) in accessing health services**
Indicator	Percent of population who spent at least 10% of their household budget (total household expenditure or income) paying for health services
SDG/Core 100	SDG 3.8.2
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 then 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
WHO GPW13 Framework	Yes
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	National population-based survey

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

Target #3	**Increase percent of publicly financed health expenditures by 10%**
Indicator-a	Domestic General Government Health Expenditure (GGHE-D) as % of General Government Expenditure (GGE)
SDG/Core 100	
Definition	Share of general government expenditures funding current health expenditures
Method of estimation/calculation	The share of domestic general government health expenditures of general government expenditure indicates the priority of the government to spend on health from own domestic public resources. It expresses this priority by comparing the size of current public health expenditures relative to the total size of government
Numerator	Funds allocated from government domestic revenues for health purposes + Social health insurance contributions + Compulsory private insurance premiums and payments to compulsory Medical Saving Accounts
Denominator	GGE
Preferred data sources	Global Health Expenditure Database (GHED)
Other possible data sources	Global Health Observatory (GHO)
WHO GPW13 Framework	
Disaggregation	
Expected frequency of data collection	Annual
Limitations	As per metadata for each country in GHED
Data type	Percent
Related links	http://www.who.int/health-accounts/

GPW13 WHO Impact Framework: **Target #3** Indicator Metadata

Target #3	**Increase percent of publicly financed health expenditures by 10%**
Indicator-b	Domestic General Government Health Expenditure (GGHE-D) as % of Gross Domestic product(GDP).
SDG/ Core 100	
Definition	Share of general government expenditures on health from domestic sources of GDP
Method of estimation/calculation	The share of current Domestic General Government resources used to fund health expenditures as a share of the economy as measured by GDP. Public sources include domestic revenue as internal transfers and grants, transfers, subsidies to voluntary health insurance beneficiaries, NPISH or enterprise financing schemes as well
Numerator	Funds allocated from government domestic revenues for health purposes + Social health insurance contributions + Compulsory private insurance premiums and payments to compulsory Medical Saving Accounts
Denominator	GDP
Preferred data sources	Global Health Expenditure Database (GHED)
Other possible data sources	Global Health Observatory (GHO)
WHO GPW13 Framework Disaggregation	
Expected frequency of data collection	Annual
Limitations	As per metadata for each country in GHED
Data type	Percent
Related links	http://www.who.int/health-accounts/

GPW13 WHO Impact Framework: **Target #3** Indicator Metadata

Target #3	**Increase percent of publicly financed health expenditures by 10%**
Indicator-c	Domestic General Government Health Expenditure (GGHE-D) per Capita in US$
SDG/ Core 100	
Definition	Per capita current general government expenditures on health from domestic sources expressed in respective currency - international US dollar.
Method of estimation/calculation	This indicator calculates the average domestic general government health expenditures per person in USD. It contributes to understand the general government health expenditure relative to the population size facilitating international comparison.
Numerator	Funds allocated from government domestic revenues for health purposes + Social health insurance contributions + Compulsory private insurance premiums and payments to compulsory Medical Saving Accounts
Denominator	Population
Preferred data sources	Global Health Expenditure Database (GHED)
Other possible data sources	Global Health Observatory (GHO)
WHO GPW13 Framework	
Disaggregation	
Expected frequency of data collection	Annual
Limitations	As per metadata for each country in GHED
Data type	Nominal in US$
Related links	http://www.who.int/health-accounts/

GPW13 WHO Impact Framework: **Target #3** Indicator Metadata

Target #3	**Increase percent of publicly financed health expenditures by 10%**
Indicator-d	Domestic General Government Health Expenditure ((GGHE-D) per Capita in PPP Int$
SDG/ Core 100	
Definition	Per capita current general government expenditures on health expressed in respective currency - PPP USD
Method of estimation/calculation	This indicator calculates the average domestic general government health expenditures per person in comparable currency including the purchasing power of national currencies against USD. It contributes to understand the general government health expenditure relative to the population size and purchasing power of each country facilitating international comparison.
Numerator	Funds allocated from government domestic revenues for health purposes + Social health insurance contributions + Compulsory private insurance premiums and payments to compulsory Medical Saving Accounts
Denominator	Population
Preferred data sources	Global Health Expenditure Database (GHED)
Other possible data sources	Global Health Observatory (GHO)
WHO GPW13 Framework	
Disaggregation	
Expected frequency of data collection	Annual
Limitations	As per metadata for each country in GHED
Data type	Nominal in mil national currency units
Related links	http://www.who.int/health-accounts/

GPW13 WHO Impact Framework: **Target #4** Indicator Metadata

Target #4a	**Increase availability of essential medicines for primary health care, including the ones free of charge to 80%**
Indicator-1	Availability of essential medicines for primary health care, including the ones free of charge
SDG/ Core 100	Yes
Definition	Proportion of health facilities that have available a core set of relevant essential medicines A medicine is **available** in a facility when it is found in this facility by the interviewer on the day of data collection. Availability is measured as a binary variable with 1 = medicine is available and 0 = otherwise
Method of estimation/calculation	Ratio of the health facilities with available medicines for primary health care over the total number of the surveyed health facilities $$GPW13\_4a = \frac{Facilities\ with\ available\ basket\ of\ medicines\ (n)}{Surveyed\ Facilities\ (n)}$$
Numerator	# of facilities with available medicines (as per core set of relevant essential medicines for primary health care)
Denominator	# of surveyed facilities
Preferred data sources	The indicator relies on three data sources that have been used by countries to collect information on medicine prices and availability: 1) Health Action International Project supported by the WHO **[HAI/WHO]** 2) The Service Availability and Readiness Assessment survey **[SARA]** 3) The WHO Medicines Price and Availability Monitoring mobile application **[EMP MedMon]** Health Action International Project supported by WHO **[HAI/WHO]** provides data from national and sub-national surveys that have used the WHO/HAI methodology, Measuring Medicine Prices, Availability and Affordability and Price Components. The database is available at the following link: http://haiweb.org/what-we-do/price-availability-affordability/price-availability-data/ The Service Availability and Readiness Assessment **[SARA]** is a health facility assessment tool designed to assess and monitor availability and readiness of the services provided in the health sector and to generate evidence to support the planning and managing of a health system. The WHO Medicines Price and Availability Monitoring mobile application **[EMP MedMon]** can be considered as an updated version of the HAI/WHO tool for collecting data on medicine prices and availability. This data collection tool was created based on the two previously mentioned existing and well-established methodologies. This application is used at facility level to collect information on availability and price of the agreed-upon core basket of medicines. The EMP MedMon is easier to use, faster to conduct and consumes much fewer resources for collecting data. It also allows for a modular approach to defining the basket, which is highly useful and convenient for the purposes of this indicator. In order to compute historical data points prior to 2018, data from HAI/WHO is used. To compute current and future data points, SARA and EMP MedMon are recommended.
Other possible data sources	NA

Disaggregation	The proposed indicator will allow for the following disaggregation: 1) public/private/mission sectors facilities (managing authority) 2) geography – rural/urban areas 3) therapeutic group 4) facility type (pharmacy/hospital) **5)** medicine.
Expected frequency of data collection	Annual

Limitations	**1) On basket of tracer essential medicines:** 1.1) Although it is possible to regularly monitor all 400+ medicines on the current WHO Model List of Essential Medicines, indicator 3.b.3 requires a specific subset of this list. Over the years, several baskets of medicines have been defined for different purposes and used to conduct data collection and monitor price and availability. This core set of medicines does not replace the other existing baskets, and WHO teams and partners are encouraged and committed to continue ad hoc monitoring through other existing channels. Throughout the process of identifying the core set of medicines, one area of focus has been to balance the selection of the tracer medicines for primary health care with the size of the basket itself. The proposed basket represents a balanced approach to allow that relevant tracer medicines for primary health care are monitored yet ensuring a practical and feasible data collection and analysis. The 32 medicines listed in the basket are meant to be indicative of the access to medicines for primary health care but do not serve as a complete or exhaustive list. 1.2) As mentioned above, each medicine in the basket is weighted according to the regional Disability Adjusted Life Years (DALYs) for relevant disease from the WHO Global health estimates. Regional estimates are less sensitive to country-by-country variability of data quality, they sufficiently illustrate the disease distribution across countries in the region and work well due simplicity and comparability. Hence, regional weights for medicines are used to establish the associated country weights. However, this diminishes the specificity of the basket to the national context. **2) On the measurement of medicines' availability:** The proposed approach for measuring the availability of medicines is based on the presence of the medicine on the day that the interviewer visits the facility and does not account for temporary and/or planned stock outs. The 32 medicines identified for the analysis should always be available in the facilities considering that in some (mainly rural) areas, the facility may be very difficult to reach and individuals may not have resources to travel on a daily basis. Moreover, in this proposed methodology the price of the medicine does not take into consideration the so-called indirect costs, which normally include transportation and other costs to reach the facility. Thus, the proposed measure for availability presents some limitations. Furthermore, given the data collection occurs at the facility level and does not monitor quantities of any given medicine, an overall analysis of the available medicines compared to the national needs is not possible. **3) Other dimensions on access to medicines (quality)** The quality of the product is another equally important dimension of access to medicines. Currently, there is no systematic and publicly available data collection on quality of a single medicine or in a single country. WHO has, however, contributed to enhanced access to quality health products through different programmes such as regulatory systems strengthening and prequalification. A national regulatory authority (NRA) plays a key role in assuring the quality, safety, and efficacy of medical products until they reach the patient/consumer, as well as ensuring the relevance and accuracy of product information. Hence, stable, well-functioning and integrated regulatory systems are an essential component of a health system and contribute to better public health outcomes. NRA maturity and WHO prequalification of medicines can be considered as a proxy for ensuring that medicines in a country are of assured quality. The NRA maturity level is assessed using the WHO National Regulatory Authority Global Benchmarking Tool (WHO NRA GBT). After the evaluations, countries are assigned one of five levels of maturity, with a score of maturity level three representing the minimum acceptable regulatory capacity and maturity level five representing the highest level of functioning. The importance of transparency and the disclosure of the results of assessments amongst regulators (from ML 3 up) are taken into consideration. However, the information on country-specific NRA maturity level is not currently publicly available and WHO is working to address this limitation through recent discussions on WHO Listed Authorities (WLA).
Data type	Binary variable (0-1 values)

Related links	1. World Health Organization and Health Action International, *Measuring medicine prices, availability, affordability and price components, 2nd Edition* (Switzerland, 2008), available from http://www.who.int/medicines/areas/access/OMS_Medicine_prices.pdf 2. World Health Organization, *The Global Burden of Disease: 2004 Update* (Switzerland, 2008), available from http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/ 3. "WHO Global Benchmarking Tool (GBT) for evaluation of national regulatory systems" (WHO Essential medicines and health products, 2018), available from http://www.who.int/medicines/regulation/benchmarking_tool/en/. 4. "Disease burden and mortality estimates" (WHO Health statistics and information systems, 2018), available from http://www.who.int/healthinfo/global_burden_disease/estimates/en/index1.html. 5. "Essential Medicines" (WHO Global Health Observatory data repository, 2016), available from http://apps.who.int/gho/data/node.main.487. 6. Health at a Glance 2017: OECD Indicators, OECD (2017). OECD Publishing, Paris https://doi.org/10.1787/health_glance-2017-en.

GPW13 WHO Impact Framework: **Target #4** Indicator Metadata

Target #4a	**Increase availability of essential medicines for primary health care, including the ones free of charge to 80%**
Indicator-2	Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis
SDG/ Core 100	SDG 3.b.3
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	
WHO GPW13 Framework 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/

Target #4b	**ACCESS group antibiotics at ≥60% of overall antibiotic consumption**
Indicator SDG/ Core 100	Patterns of antibiotic consumption at national level
Definition	**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;
WHO GPW13 Framework	Tackling AMR is a GPW13 platform that reduces the risks and contributes to the success of a number of programme targets across the UHC, Health Emergencies, and Healthier population goals. This target can be linked to GPW 13 Output 1.3.5, but also impacts Output 2.2.3, and Output 3.2.1
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
Data type	Consumption/sales data
Related links	http://www.who.int/antimicrobial-resistance/global-action-plan/optimise-use/surveillance/en/

GPW13 WHO Impact Framework: **Target #5** Indicator Metadata

Target #5	**Increase coverage of essential health services among vulnerable groups, and women and girls in the poorest wealth quintile to 70%**
Indicator	Coverage of essential health services (defined as the average coverage) for women and girls disaggregated by wealth quintile
SDG/ Core 100	SDG 3.8.1
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).
Method of estimation/calculation	Under review and likely to be updated from 2017 method (as in SDG 3.8.1 reference below). Proposed methodology will incorporate life-cycle/age-group (reproductive and newborn, <5, 5-19, 20-64 and 65+ years) together with type of care (promotion; prevention; treatment of communicable, maternal, perinatal, nutritional disease; treatment of non-communicable disease and injuries; rehabilitation; palliative care). A range of tracer indicators will be used for age and type-of-care combinations.
Numerator	Number of women in each wealth quintile provided with essential health services
Denominator	Number of women in each wealth quintile
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	
WHO GPW13 Framework	
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	TBD
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

GPW13 WHO Impact Framework: **Target #6** Indicator Metadata

Target #6	**Reduce the number of older adults 65+ years who are care dependent by 15 million**
Indicator	Number of older adults 65+ years who are care dependent
SDG/ Core 100	
Definition	Proportion of people having severe or extreme difficulty at least on one item of the ADL scale (Activities of Daily Living)
Method of estimation/calculation	By definition
Numerator	65+ years old respondents having severe/extreme limitations
Denominator	All 65+ years old respondents
Preferred data sources	Longitudinal studies on ageing such as SAGE, HRS, ELSA and SHARE.
Other possible data sources	Administrative data sources on older adults in long-term care facilities; censuses.
WHO GPW13 Framework	
Disaggregation	
Expected frequency of data collection	
Limitations	Measurement error in surveys, Quality of surveys and administrative data sources
Data type	Proportion.
Related links	

Target #7	**Increase the availability of oral morphine in facilities caring for patients in need of this treatment for palliative care at all levels from 25% to 50%**
Indicator	Availability of oral morphine in facilities at all levels
SDG/ Core 100	
Definition	Proportion of health facilities that have oral morphine available . Oral morphine is **available** in a facility when it is found in this facility by the interviewer on the day of data collection. Availability is measured as a binary variable with 1 = medicine is available and 0 = otherwise
Method of estimation/calculation	Ratio of the health facilities with available morphine over the total number of the surveyed health facilities $$GPW13\_7 = \frac{Facilities\ with\ available\ oral\ morphine\ (n)}{Surveyed\ Facilities\ (n)}$$
Numerator	# of facilities with available oral morphine
Denominator	# of surveyed facilities
Preferred data sources	The indicator relies on three data sources that have been used by countries to collect information on medicine prices and availability: 1) Health Action International Project supported by the WHO **[HAI/WHO]** 2) The Service Availability and Readiness Assessment survey **[SARA]** 3) The WHO Medicines Price and Availability Monitoring mobile application **[EMP MedMon]** Health Action International Project supported by WHO **[HAI/WHO]** provides data from national and sub-national surveys that have used the WHO/HAI methodology, Measuring Medicine Prices, Availability and Affordability and Price Components. The database is available at the following link: http://haiweb.org/what-we-do/price-availability-affordability/price-availability-data/ The Service Availability and Readiness Assessment **[SARA]** is a health facility assessment tool designed to assess and monitor availability and readiness of the services provided in the health sector and to generate evidence to support the planning and managing of a health system. The WHO Medicines Price and Availability Monitoring mobile application **[EMP MedMon]** can be considered as an updated version of the HAI/WHO tool for collecting data on medicine prices and availability. This data collection tool was created based on the two previously mentioned existing and well-established methodologies. This application is used at facility level to collect information on availability and price of the agreed-upon core basket of medicines. The EMP MedMon is easier to use, faster to conduct and consumes much fewer resources for collecting data. It also allows for a modular approach to defining a basket of medicines, which is highly useful and convenient for the purposes of this indicator. In order to compute historical data points prior to 2018, data from HAI/WHO is used. To compute current and future data points, SARA and EMP MedMon are recommended.
Other possible data sources	NA
WHO GPW13 Framework	

Disaggregation	1) public/private/mission sectors facilities (managing authority) 2) geography – rural/urban areas 3) therapeutic group 4) facility type (pharmacy/hospital)
Expected frequency of data collection	Annual
Limitations	**1) On the measurement of medicines' availability:** The proposed approach for measuring the availability of oral morphine is based on the presence of the medicine on the day that the interviewer visits the facility and does not account for temporary and/or planned stock outs. The morphine should always be available in the facilities considering that in some (mainly rural) areas, the facility may be very difficult to reach and individuals may not have resources to travel on a daily basis. Furthermore, given the data collection occurs at the facility level and does not monitor quantities of morphine, an overall analysis of the available morphine compared to the national needs is not possible. **2) Other dimensions on access to medicines (quality)** The quality of the product is another equally important dimension of access to medicines. Currently, there is no systematic and publicly available data collection on quality of a single medicine or in a single country. WHO has, however, contributed to enhanced access to quality health products through different programmes such as regulatory systems strengthening and prequalification. A national regulatory authority (NRA) plays a key role in assuring the quality, safety, and efficacy of medical products until they reach the patient/consumer, as well as ensuring the relevance and accuracy of product information. Hence, stable, well-functioning and integrated regulatory systems are an essential component of a health system and contribute to better public health outcomes. NRA maturity and WHO prequalification of medicines can be considered as a proxy for ensuring that medicines in a country are of assured quality. The NRA maturity level is assessed using the WHO National Regulatory Authority Global Benchmarking Tool (WHO NRA GBT). After the evaluations, countries are assigned one of five levels of maturity, with a score of maturity level three representing the minimum acceptable regulatory capacity and maturity level five representing the highest level of functioning. The importance of transparency and the disclosure of the results of assessments amongst regulators (from ML 3 up) are taken into consideration. However, the information on country-specific NRA maturity level is not currently publicly available and WHO is working to address this limitation through recent discussions on WHO Listed Authorities (WLA).
Data type	Binary variable (0-1 values)
Related links	1. World Health Organization and Health Action International, *Measuring medicine prices, availability, affordability and price components, 2nd Edition* (Switzerland, 2008), available from http://www.who.int/medicines/areas/access/OMS_Medicine_prices.pdf 2. "WHO Global Benchmarking Tool (GBT) for evaluation of national regulatory systems" (WHO Essential medicines and health products, 2018), available from http://www.who.int/medicines/regulation/benchmarking_tool/en/. 3. "Essential Medicines" (WHO Global Health Observatory data repository, 2016), available from http://apps.who.int/gho/data/node.main.487. Health at a Glance 2017: OECD Indicators, OECD (2017). OECD Publishing, Paris https://doi.org/10.1787/health_glance-2017-en.

Target #8	**Increase health workforce density with improved distribution**
Indicator	The density of human resources for health defined as the number of health workers per 1000 population in the given national and/or subnational area
SDG/ Core 100	SDG 3.c.1
Definition	**Density of physicians:** The density of physicians is defined as the number of physicians, including generalists and specialist medical practitioners per 1000 population in the given national and/or subnational area. **Density of nursing and midwifery personnel**: The density of nursing and midwifery personnel is defined as the number of nursing and midwifery personnel per 1000 population in the given national and/or subnational area. **Density of dentistry personnel**: The density of dentistry personnel is defined as the number of dentists, dental technician/assistants and related occupation personnel per1000 population in the given national and/or subnational area. **Density of pharmaceutical personnel:** The density of pharmaceutical personnel is defined as the number of pharmacists, pharmaceutical, technicians/assistants and related occupation personnel per 1000 population in the given national and/or subnational area.
Method of estimation/calculation	
Numerator	Though, traditionally, this indicator has been estimated using 2 measurements: density of physicians, and density of nursing and midwifery personnel. In the context of the SDG agenda, the dataset is expanded to physicians, nursing personnel, midwifery personnel, dentistry personnel and pharmaceutical personnel. The dataset is planned to progressively move to cover all health cadres.
Denominator	In general, the denominator data for workforce density (i.e. national population estimates) are obtained from the United Nations Population Division's World Population Prospects database. In cases where the official health workforce report provides density indicators instead of counts, estimates of the stock were then calculated using the population estimated from the United Nations Population Division's World population prospects database (2015).
Preferred data sources	The data is compiled from routine administrative information systems (including reports on staffing and payroll as well as professional training, registration and licensure), population censuses, labour force and employment surveys and health facility assessments. Most of the data from administrative sources are derived from published national health sector reviews and/or official country reports to WHO offices. This indicator will be reported by WHO using the National Health Workforce Accounts (NHWA).
Other possible data sources	
WHO GPW13 Framework	
Disaggregation	National level data
Expected frequency of data collection	
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.
Data type	
Related links	http://www.who.int/hrh/statistics/hwfstats/en/

GPW13 WHO Impact Framework: **Target #9** Indicator Metadata

Target #9	**Increase in countries International Health Regulations capacities**
Indicator	Composite index of better protected from health emergencies (Health Emergency Protection Index (HEPI))
SDG/ Core 100	
Definition	Index of protection from health emergencies, formed as the geometric average of 3 sub-indices:- • **Preparedness index:** country preparedness is measured by International Health Regulations (IHR 2005) core capacity scores, adjusted using Joint External Evaluation (JEE) scores, and scored into 5 categories • **Preventative inde**x: Effective protection of population at risk from priority pathogens in region, including Flu • **Response index:** TBD - representing country response to control of pathogen.
Method of estimation/calculation	Composite index is the arithmetic mean of 3 above mentioned indices $Health\ Emergency\ Protection\ Index = \frac{Prepare+Prevent+Detect\ \&\ Reposnd}{3}$
Numerator	
Denominator	
Preferred data sources	**Prepare:** WHO IHR State Party self-assessment report, Joint External Evaluation report and World Bank Gross National Income **Prevent:** WHO and UNICEF Estimates of National Immunization Coverage (WUENIC), WHO Global Health Observatory, IPC related data **Detect and Respond**: EMS/DON and country-reported data/EWARS
Other possible data sources	Global vaccine stockpile utilization data IPC related data if available
WHO GPW13 Framework	
Disaggregation	Country
Expected frequency of data collection	Annual
Limitations	**Prepare:** The index requires re-calibration and adjustment based on the two editions of the joint external evaluation tools. The JEE data are collected every 4-5 years on the voluntary basis. **Prevent:** Immunization coverage data among targeted populations in emergencies (outbreaks of yellow fever, meningitis, and cholera) and number of health care workers prevented from health care associated infection are not readily available; target population estimation may lead to some biasness. **Detect and Respond:** Timeliness data for detection and response to emergencies are not currently systematically by WHO. Although the event management system (EMS) has provision of capturing this information but this is not systematically used by all levels of WHO offices. Therefore, we need to have a mechanism of systematic data collection for these data using the EMS.
Data type	IHR State Party self-assessment report, joint external evaluation report, estimates of immunization coverage, timeliness indicators and indicator to measure the number of health care worker prevented from health care associated infection
Related links	IHR and JEE scores are available in WHO-GHO: http://www.who.int/gho/ihr/en/

GPW13 WHO Impact Framework: **Target #10** Indicator Metadata

Target #10a	**Increase the number of vulnerable people in fragile settings provided with essential health services to at least 80%**
Indicator	Proportion of vulnerable people in fragile settings provided with essential health services
SDG/ Core 100	SDG 3.8.1
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).
Method of estimation/calculation	Under review and likely to be updated from 2017 method (as in SDG 3.8.1 reference below). Proposed methodology will incorporate life-cycle/age-group (reproductive and newborn, <5, 5-19, 20-64 and 65+ years) together with type of care (promotion; prevention; treatment of communicable, maternal, perinatal, nutritional disease; treatment of non-communicable disease and injuries; rehabilitation; palliative care). A range of tracer indicators will be used for age and type-of-care combinations.
Numerator	Number of vulnerable people in fragile settings provided with essential health services
Denominator	Number of vulnerable people in fragile settings
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	
WHO GPW13 Framework	
Disaggregation	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	
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

Target #10b	**Increase immunization coverage for cholera, yellow fever, meningitis and pandemic influenza**
Indicator	Immunization coverage for cholera, yellow fever, meningitis and pandemic influenza
SDG/ Core 100	TBD
Definition	
Method of estimation/calculation	
Numerator	
Denominator	
Preferred data sources	
Other possible data sources	
WHO GPW13 Framework	
Disaggregation	
Expected frequency of data collection	
Limitations	
Data type	
Related links	

GPW13 WHO Impact Framework: **Target #11** Indicator Metadata

Target #11	**Reduce number of deaths attributed to disasters per 100,000 population by 5%**
Indicator	Number of deaths, missing persons and persons affected by disaster per 100,000 people
SDG/ Core 100	SDG 1.5.1
Definition	This indicator measures the number of people who died, went missing or were directly affected by disasters per 100,000 population.
Method of estimation/calculation	$$\frac{A2+A3+B1}{Global\ population} * 100\ 000$$
Numerator	A2+A3+B1 A2 Number of deaths attributed to disasters; A3 Number of missing persons attributed to disasters; and B1 Number of directly affected people attributed to disasters.
Denominator	Global population
Preferred data sources	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	
WHO GPW13 Framework	
Disaggregation	Number of deaths attributed to disasters; Number of missing persons attributed to disasters; and Number of directly affected people attributed to disasters. [Desirable Disaggregation]: Hazard Geography (Administrative Unit) Sex Age (3 categories) Disability Income
Expected frequency of data collection	
Limitations	
Data type	
Related links	**Official SDG Metadata URL:** https://unstats.un.org/sdgs/metadata/files/Metadata-01-05-01.pdf **<to be updated with new docs>**

GPW13 WHO Impact Framework: **Target #12** Indicator Metadata

Target #12	**Reduce the global maternal mortality ratio by 30%**
Indicator-1	Maternal mortality ratio
SDG/ Core 100	SDG 3.1.1
Definition	**The maternal mortality ratio (MMR)** is the ratio of the number of maternal deaths during a given time period per 100,000 live births during the same time-period.
	Maternal death is 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 but not from accidental or incidental causes. To facilitate the identification of maternal deaths in circumstances in which cause of death attribution is inadequate, a new category has been introduced: Pregnancy-related death is defined as 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	$$\text{MMR} = \frac{Total\ number\ of\ maternal\ deaths}{Total\ number\ of\ live\ births} \times 100,000$$
Numerator	Total number of maternal deaths
Denominator	Total number of live births
Preferred data sources	Vital registration, health service records, household surveys, census.
Other possible data sources	Sample registration systems; verbal autopsy.
WHO GPW13 Framework	Outcome
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
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/ UN: http://mdgs.un.org/unsd/mdg/Metadata.aspx?IndicatorId=0&SeriesId=810

GPW13 WHO Impact Framework: **Target #12** Indicator Metadata

Target #12	**Reduce the global maternal mortality ratio by 30%**
Indicator-2	Proportion of births attended by skilled health personnel
SDG/ Core 100	SDG 3.1.2
Definition	Percentage of live births for women aged 15-49 years attended by skilled health personnel (generally doctors, nurses or midwives).
Method of estimation/calculation	The number of women aged 15-49 years with a live birth attended by a skilled health personnel (doctors, nurses or midwives) during delivery is expressed as a percentage of women aged 15-49 years with a live birth in the same period.
Numerator	Number of births attended by skilled health personnel (doctors, nurses or midwives) 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.
WHO GPW13 Framework	
Disaggregation	Age, parity, place of residence, socioeconomic status, type of provider.
Expected frequency of data collection	3-5 years
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/#

GPW 13WHO Impact Framework: **Target #13** Indicator Metadata

Target #13	**Reduce the preventable deaths of newborns and children under 5 years of age by 30%**
Indicator (part)	Mortality rate for children under 5 years of age
SDG/ Core 100	SDG 3.2.1
Definition	**The under-5 years mortality rate (U5MR) is** the probability a child born in a specific year or period dying before reaching the age of five if subject to age-specific mortality rates of that period, expressed per 1000 live births. It is 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-IGME produces trends of under-five mortality with a standardized methodology by group of countries depending on the type and quality of source of data available. For countries with adequate trend of data from civil registration, the calculations of under-five and infant mortality rates are derived from a standard period abridged life table. For countries with survey data, under-five mortality rates are estimated using the Bayesian B-splines bias-adjusted model. See the UN-IGME link for details. 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.
Numerator	Total number of deaths among newborns and children aged 0-4 years
Denominator	Total number of live births
Preferred data sources	Civil registration and vital statistics, censuses
Other possible data sources	Sample registration systems; health service records, household surveys, verbal autopsy.
WHO GPW13 Framework	Outcome
Disaggregation	By sex, place of residence, and socio-economic status
Expected frequency of data collection	Annual updates from the UN-IGME revisions
Limitations	Civil registration and vital statistics systems are the preferred source of data on child mortality. However, many developing countries lack fully functioning registration systems that accurately record all births and deaths. Thus, household surveys, such as Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS), have become an important source of data on child mortality in developing countries; but there are some limits to their quality and representativeness. Estimates obtained from household surveys have attached confidence intervals that need to be considered when comparing values along time or across countries. Similarly, these estimates are often affected by non-sampling errors. Like census data, survey data on child mortality may omit births and deaths, include stillbirths along with live births, and suffer from survivor selection bias and age truncation. Direct estimates of child mortality based on survey data may also suffer from mothers misreporting their children's birth dates, current age or age at death — perhaps more so if the child has died.
Data type	Rate

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 www.cme.org UNICEF: https://www.unicef.org/infobycountry/stats_popup1.html

GPW13 WHO Impact Framework: **Target #13** Indicator Metadata

Target #13	**Reduce the preventable deaths of newborns and children under 5 years of age by 30%**
Indicator (part)	Neonatal mortality rate (NMR) (per 1000 live births)
SDG/ Core 100	SDG 3.2.2
Definition	Probability that a child born in a specific year or period will die in the first 28 days of life (0-27) 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) may be subdivided into early neonatal deaths, occurring during the first 7 days of life, and late neonatal deaths, occurring after the 7th day but before the 28th completed day of life.
Method of estimation/calculation	To ensure consistency with mortality rates in children younger than 5 years (under-five mortality rate) produced by the UN-IGME and to account for variation in survey-to-survey measurement errors, country data points for the under-five and neonatal mortality rates were rescaled for all years to match the latest time series estimates of the under-five mortality rate produced by UN-IGME. This rescaling assumes that the proportionate measurement error in neonatal and under-five mortality rates is equal for each data point.
	The following multilevel statistical model was then applied to estimate neonatal mortality rates: $\log(\text{neonatal mortality rate}/1000) = \alpha_0 + \beta_1 \cdot \log(\text{under-five mortality rate}/1000) + \beta_2 \cdot ([\log(\text{under-five mortality rate}/1000)]^2)$ with random effects parameters or both level and trend regression parameters, and random effects parameters influenced by the country itself. For countries with high-quality civil registration data for neonatal deaths itself) 100% complete for adults and only civil registration data is used for child mortality, (ii) population greater than 800 000, (iii) and with at least three civil registration data points for the periods 1990–1994, 1995sed for child mortality, (ii) population greater than 800 000, (iii) and with at least three civil registration data points for regression parameters, and random effects parameters influenced by the country itself. Predominant type of statistics: adjusted and predicted.
Numerator	Number of children who died in the first 28 days (0-27) of life
Denominator	Number of live births
Preferred data sources	Data from civil registration and vital statistics: The number of live births and the number of neonatal deaths are used to calculate age-specific rates. This system provides annual data.
Other possible data sources	Data from household surveys: Calculations are based on full birth history, whereby women are asked for the date of birth of each of their children, whether each child is still alive and if not the age at death
WHO GPW13 Framework	Outcome
Disaggregation	Age in days/weeks, birth weight, place of residence, sex, socioeconomic status
Expected frequency of data collection	Annual updates from the UN-IGME revisions
Limitations	These neonatal rates are estimates, derived from the estimated UN-IGME neonatal rate infant population for World population prospects to calculate the live births; hence they are not necessarily the same as the official national statistics. Measurement frequency Annual if based on registration system; otherwise, less frequent (3–5 years based on surveys)
Data type	Ratio
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

GPW13 WHO Impact Framework: **Target #14** Indicator Metadata

Target #14	**Reduce the number of stunted children under 5 years of age by 30%**
Indicator	Prevalence of stunting (height for age <-2 standard deviation from the median of the WHO Child Growth Standards) under 5 years of age
SDG/ Core 100	SDG 2.2.1
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 = $$\frac{\textit{Number of children aged } 0-4 \textit{ years that fall below minus two standard deviations from the median length} - \textit{or height} - \textit{for} - \textit{age of the WHO Child Growth Standards}}{\textit{Total number of children aged } 0-4 \textit{ years that were measured}} \times 100\%$$
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	
WHO GPW13 Framework 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.

Target #15	**Reduce the prevalence of wasting among children under 5 years of age to less than 5%**
Indicator	Prevalence of wasting (weight for height <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age
SDG/ Core 100	SDG 2.2.2
Definition	Percentage of wasting (weight-for-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 = $$\frac{\text{Number of children aged } 0-4 \text{ years that fall below minus two standard deviations from the median weight}-for-height \text{ of the WHO Child Growth Standards}}{\text{Total number of children aged } 0-4 \text{ years that were measured}} \times 100\%$$
Numerator	Number of children aged 0-4 years that fall below minus two standard deviations from the median weight-for-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	
WHO GPW13 Framework	
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 5 years
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.

GPW13 WHO Impact Framework: **Target #16** Indicator Metadata

Target #16	**Increase the proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being to 80%**
Indicator	Proportion of children under 5 who are developmentally on track in health, learning and psychosocial well-being
SDG/ Core 100	SDG 4.2.1
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	Household surveys such as UNICEF-supported MICS have been collecting data on this indicator (through the Early Childhood Development Index or ECDI) in low- and middle-income countries since around 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	
WHO GPW13 Framework	
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 only for 58 low- and middle-income countries since 2010
Data type	Proportion
Related links	WHO: https://data.unicef.org/topic/early-childhood-development/development-status/

GPW13 WHO Impact Framework: **Target #17** Indicator Metadata

Target #17	**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%**
Indicator-1	Proportion of children aged 1-17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month
SDG/ Core 100	SDG 16.2.1
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	
WHO GPW13 Framework 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 | Proportion |
| Related links | https://data.unicef.org/topic/child-protection/violence/violent-discipline/ |

GPW13 WHO Impact Framework: **Target #17** Indicator Metadata

Target #17	**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%**
Indicator-2	Prevalence of exposure to violence in the last 12 months to 1 or more of the following: physical violence, emotional violence, sexual violence, bullying, or witnessing violence of children aged 2-17
SDG/ Core 100	The indicator relates to the following Core 100 indicators: Mortality rate due to homicide [SDG 16.1.1]; Intimate partner violence prevalence [SDG 5.2.1]; Non-partner sexual violence prevalence [SDG 5.2.2]; Sexual violence against children [SDG 16.2.3]. It also relates more broadly to SDG Targets 16.2 and 5.2.
Definition	
Method of estimation/calculation	Extraction of data on past-year prevalence of violent victimization by country, age group and type (physical, sexual, emotional, or multiple types) to generate minimum regional prevalence, derived from population-weighted averages of the country-specific prevalence (see Hillis et al. 2016).
Numerator	Number of children aged 2-17 years exposed to physical violence, emotional violence, sexual violence, or bullying.
Denominator	Number of children aged 2-17 years.
Preferred data sources	Self-report by child and/or caregiver through nationally representative, population-based surveys, e.g. Violence against Children Surveys (VACS), Global School Health Surveys (GSHS), Health Behavior in School-Aged Children Surveys (HBSC), Multiple Indicator Surveys (MICS).
Other possible data sources	
WHO GPW13 Framework	Healthier population billion.
Disaggregation	By sex, age group (2-14 years, 15-17 years) and region.
Expected frequency of data collection	Every 5 years.
Limitations	Inconsistencies between survey tools; underreporting of violence in earliest years; wide confidence intervals; regional breakdown not identical to WHO breakdown.
Data type	Survey data
Related links	Hillis et al 2016: http://pediatrics.aappublications.org/content/137/3/e20154079 VACS: https://www.cdc.gov/violenceprevention/childabuseandneglect/vacs/ GSHS: http://www.who.int/chp/gshs/en/ HBSC: http://www.hbsc.org/ MICS: http://mics.unicef.org/

GPW13 WHO Impact Framework: **Target #18** Indicator Metadata

Target #18	**Increase the proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods to 66%**
Indicator	Proportion of women of reproductive age (15–49 years) in least developed countries who have their need for family planning satisfied with modern methods
SDG/ Core 100	SDG 3.7.1
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). Estimates are with respect to women who are married or in a union.
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	Proportion
Related links	United Nations, Department of Economic and Social Affairs, Population Division (2017). World Contraceptive Use 2017 (POP/DB/CP/Rev2017). World Contraceptive Use 2017 (POP/DB/CP/Rev2017), United Nations Publication, (http://www.un.org/en/development/desa/population/publications/dataset/contraception/wcu2017.shtml)

GPW13 WHO Impact Framework: **Target #19** Indicator Metadata

Target #19	**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%**
Indicator	Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care
SDG/ Core 100	SDG 5.6.1
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".
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	
WHO GPW13 Framework	
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	A key limitation is that current estimates of the indicator are based on currently married or in union women of reproductive age (15-49 years old) who are using any type of contraception. In the current DHS, the question on decision-making on use of contraception is only asked to women who are currently using contraception. Because the questions on decision- making on sexual relations and health care are restricted to women (15-49 years old) currently married or in union, the denominator for Indicator 5.6.1 is women 15-49 years old, who are currently married or in union and currently using contraception.
Data type	Proportion
Related links	

GPW13 WHO Impact Framework: **Target #20** Indicator Metadata

Target #20	**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%**
Indicator	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
SDG/ Core 100	SDG 5.2.1
Definition	This indicator measures the percentage of ever-partnered women and girls aged 15 years and older who have experienced physical, sexual or psychological violence by a current or former intimate partner, in the previous 12 months. Violence directed at women and girls is the most common form of gender-based violence. In societies that sanction male dominance over women, violence between intimate partners may be perceived as an ordinary component of interpersonal dynamics between the sexes, particularly in the context of marriage or other formal unions. Therefore, it represents one manifestation of gender inequality.
Method of estimation/calculation	This indicator calls for breakdown by form of violence and by age group and yields the following for each form of violence or forms of violence: 1. Physical violence: Number of ever-partnered women and girls (aged 15 years and above) 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 years and above) 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. Psychological violence: Number of ever-partnered women and girls (aged 15 years and above) who experience psychological 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) multiplied by 100 4. Any form of physical and/or sexual violence: Number of ever-partnered women and girls (aged 15 years and above) 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 years and above) multiplied by 100 5. Any form of physical, sexual and/or psychological violence: Number of ever-partnered women and girls (aged 15 years and above) who experience physical, sexual and/or psychological 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) 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 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.
Other possible data sources	
WHO GPW13 Framework	
Disaggregation	In addition to form of violence and age, income/wealth, education, ethnicity (including indigenous status), disability status, geographic location and frequency of violence are suggested as desired variables for disaggregation for this indicator.

Expected frequency of data collection	
Limitations	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, and 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. 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, no matter if they are obtained through stand-alone dedicated surveys or through modules inserted in other surveys.
Data type	
Related links	http://evaw-global-database.unwomen.org/en data.unicef.org http://unstats.un.org/unsd/gender/default.html

Target #21	**20% relative reduction in the premature mortality (age 30-70 years) from NCDs (cardiovascular, cancer, diabetes, or chronic respiratory diseases) through prevention and treatment**
Indicator	Probability of dying between the exact ages of 30 and 70 years from CVD, cancer, diabetes, or chronic respiratory diseases
SDG/ Core 100	SDG 3.4.1
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.
WHO GPW13 Framework	Outcome
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.

GPW13 WHO Impact Framework: **Target #22** Indicator Metadata

Target #22	**25% relative reduction in prevalence of current tobacco use in persons 15+ years**
Indicator	Age-standardized prevalence of current tobacco use among persons aged 15 years and older
SDG/ Core 100	SDG 3.a.1
Definition	"Smoked tobacco products" includes the consumption of cigarettes, bidis, cigars, cheroots, pipes, shisha (water pipes), fine-cut smoking articles (roll-your-own), kreteks, and any other form of smoked tobacco. "Smokeless tobacco" includes moist snuff, plug, creamy snuff, dissolvables, dry snuff, gul, loose leaf, red tooth powder, snus, chimo, gutkha, khaini, gudakhu, zarda, quiwam, dohra, tuibur, nasway, naas/naswar, shammah, betel quid, toombak, pan (betel quid), iq'mik, mishri, tapkeer, tombol and any other tobacco product that is sniffed, held in the mouth, or chewed.
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	
WHO GPW13 Framework	Risk factor exposure
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
Data type	Prevalence
Related links	WHO: http://www.who.int/tobacco/surveillance/survey/gats/en/; http://www.who.int/chp/steps/en/index.html.

Target #23	**7% relative reduction in the harmful use of alcohol as appropriate, within the national context**
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
SDG/ Core 100	SDG 3.5.2
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) from different sources. The first priority in the decision tree is given to government statistics; second are country-specific alcohol industry statistics in the public domain based on interviews or field work (International Wine and Spirit Research (IWSR), Wine Institute, historically World Drink Trends) 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 alcohol industry statistics in the public domain based on desk review. 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%). Since different data sources may use different conversion factors to estimate alcohol content, the beverage-specific recorded APC may not equal the total provided, in some cases. Per Capita Consumption of alcohol = $$\frac{\textit{Sum of recorded and unrecorded alcohol consumed in a population during a calendear year}}{\textit{Midyear resident population aged 15+years in the same calendar year}}$$
Numerator	Sum of recorded and unrecorded alcohol consumed in a population during a calendar year, 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 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. For main categories of alcohol beverages "Beer" includes malt beers, "Wine" includes wine made from grapes, "Spirits" include all distilled beverages, and "Other" includes one or several other alcoholic beverages, such as fermented beverages made from sorghum, maize, millet, rice, or cider, fruit wine, fortified wine, etc. Data sources for unrecorded alcohol consumption include survey data, FAOSTAT data, other data sources such as customs or police data, and expert opinions.
Other possible data sources	Data sets of FAO and UN Statistical office
WHO GPW13 Framework	Risk factor exposure
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
Limitations	- incomplete administrative records - bias through self-report, including under-reporting of alcohol consumption - misunderstanding/ -interpretation of questions and/ or size of a standard drink - limited validity of survey instruments

Data type	Volume or mean
Related links	WHO: http://apps.who.int/gho/data/node.wrapper.imr?x-id=462; http://apps.who.int/gho/data/view.main?showonly=GISAH.

GPW13 WHO Impact Framework: **Target #24** Indicator Metadata

Target #24	**25% relative reduction in mean population intake of salt/sodium**
Indicator	Age- standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years
SDG/ Core 100	Core 100
Definition	Mean population intake of salt/sodium in grams
Method of estimation/calculation	Mean population intake of salt/sodium = $$\frac{Sum\ of\ sodium\ excretion\ in\ urine\ samples\ from\ all\ respondents\ aged\ 18+years}{Number\ of\ survey\ respondents\ aged\ 18+years}$$
Numerator	Sum of sodium excretion in urine samples from all respondents aged 18+years. The gold standard for estimating salt intake is through 24-hour urine collection, however other methods such as spot urines and food frequency surveys may be more feasible to administer at the population level.
Denominator	All respondents of the survey aged 18+ years.
Preferred data sources	Population-based (preferably nationally representative) survey
Other possible data sources	Data sets of FAO and UN Statistical office
WHO GPW13 Framework	Risk factor exposure
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
Data type	Mean
Related links	WHO: http://www.who.int/chp/steps/en/index.html; http://whqlibdoc.who.int/publications/2011/9789241501699_eng.pdf.

Target #25	**Halt and begin to reverse the rise in childhood overweight (0-4 years) and obesity (5-19 years)**
Indicator	1. Prevalence of childhood overweight (0-4 years) 2. Prevalence of childhood obesity (5-19 years)
SDG/ Core 100	1. SDG 2.2.2 2. Core 100
Definition	1. For 0-4 years, overweight is defined as weight-for-height above two standard deviations of the WHO Child Growth Standards median. 2. For 5-19 years, obesity is defined as body mass index-for-age above two standard deviations of the WHO Growth Reference for School-aged Children and Adolescents median. BMI is calculated by dividing the subject's weight in kilograms by their own height in meters squared.
Method of estimation/calculation	Prevalence of overweight = $$\frac{Number\ of\ children\ aged\ 0-4\ years\ that\ fall\ above\ two\ standard\ deviations\ from\ the\ median}{Number\ of\ children\ aged\ 0-4\ years\ in\ the\ survey\ that\ were\ measured} \times 100\%$$ Prevalence of obesity = $$\frac{Number\ of\ children\ and\ adolesents\ aged\ 5-19\ years\ whose\ body\ mass\ index-for-age\ are\ above\ two\ standard\ deviations\ from\ the\ WHO\ Growth\ Reference\ for\ School-aged\ Children\ and\ Adolescents\ median}{Number\ of\ children\ and\ adolesents\ aged\ 5-19\ years\ in\ the\ survey\ that\ were\ measured} \times 100\%$$
Numerator	1. Number of children aged 0-4 years who are overweight. Number of children and adolescent aged 5-19 years who are obese. 2. Number of school–age children and adolescents in the sample with body mass index-for-age above two standard deviations of the WHO Growth Reference for School-aged Children and Adolescents.
Denominator	1. Total number of children aged 0-4 years in the survey that were measured. 2. Total number of children and adolescents aged 5-19 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 or 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
WHO GPW13 Framework	Risk factor exposure
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.
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/

Target #26	**Eliminate industrially produced trans fats (increase the percentage of people protected by effective regulation)**
Indicator	Percentage of people protected by effective regulation
SDG/ Core 100	
Definition	Adoption of a policy to virtually eliminate partially hydrogenated oils (PHOs) in the food supply.
Method of estimation/calculation	Country can respond "yes" to the question "Is your country implementing any national policies or regulations that virtually eliminate industrially produced trans-fats (i.e. partially hydrogenated oils) in the food supply?"
Numerator	
Denominator	
Preferred data sources	WHO NCD Country Capacity Survey
Other possible data sources	National nutrition and health survey
WHO GPW13 Framework	
Disaggregation	
Expected frequency of data collection	Every 2 or 5 years
Limitations	- bias through self-report - misunderstanding/ -interpretation of questions - limited validity of survey instruments
Data type	Qualitative; percentage
Related links	WHO: http://www.who.int/chp/ncd_capacity/en/; http://www.who.int/nmh/publications/best_buys_summary.pdf.

GPW13 WHO Impact Framework: **Target #27** Indicator Metadata

Target #27	**7% relative reduction in the prevalence of insufficient physical activity in persons aged 18+ years**
Indicator	Age-standardized prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent)
SDG/ Core 100	Core 100
Definition	Percentage of adults aged 18+ years not meeting any of the following criteria: – 150 minutes of moderate-intensity physical activity per week – 75 minutes of vigorous-intensity physical activity per week – an equivalent combination of moderate- and vigorous-intensity physical activity accumulating at least 600 MET-minutes* per week Minutes of physical activity can be accumulated over the course of a week but must be of a duration of at least 10 minutes. *MET refers to metabolic equivalent. It is the ratio of a person's working metabolic rate relative to the resting metabolic rate. One MET is defined as the energy cost of sitting quietly, and is equivalent to a caloric consumption of 1 kcal/kg/hour. Physical activities are frequently classified by their intensity, using the MET as a reference.
Method of estimation/calculation	Prevalence of physical inactivity = $$\frac{Number\ of\ respondents\ aged\ 18+\ years\ not\ meeting\ the\ recommended\ criteria\ for\ physical\ activity}{Number\ of\ respondents\ aged\ 18+\ years\ in\ the\ survey} \times 100\%$$
Numerator	Number of respondents where all 3 of the following criteria are true: (1) Weekly minutes* of vigorous activity < 75 mins. (2) Weekly minutes* of moderate activity < 150 mins. (3) Weekly MET-minutes** < 600. * Weekly minutes is calculated by multiplying the number of days on which vigorous/moderate is done by the number of minutes of vigorous/moderate activity per day. ** Weekly MET-minutes is calculated by multiplying the weekly minutes of vigorous activity by 8 and the number of weekly minutes of moderate activity by 4 and then adding these two results together.
Denominator	All respondents aged 18+ years in the survey.
Preferred data sources	Population-based (preferably nationally representative) survey
Other possible data sources	Data sets of FAO and UN Statistical office
WHO GPW13 Framework	Risk factor exposure
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	- bias through self-report, including over-reporting of activity - misunderstanding/ -interpretation of questions and/ or intensity of physical activity - limited validity of survey instruments
Data type	Prevalence

Related links	WHO: http://www.who.int/chp/steps/GPAQ/en/; http://www.who.int/chp/steps/en/index.html; http://www.who.int/dietphysicalactivity/publications/9789241599979/en/index.html.

Target #28	**Reduce suicide mortality rate by 15%**
Indicator	Suicide mortality rate
SDG/ Core 100	SDG 3.4.2
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.
WHO GPW13 Framework	Outcome
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	Rate
Related links	WHO: http://www.who.int/gho/mental_health/mental_health_indicatorbook.pdf?ua=1.

Target #29	**Reduce the number of global deaths and injuries from road traffic accidents by 20%**
SDG/ Core 100	SDG 3.6.1
Indicator	Number of deaths and injuries from road traffic accidents
Definition	Absolute figure indicating the number of people who die as a result of a road traffic crash.
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	
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	
WHO GPW13 Framework	
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	Count, absolute number
Related links	http://www.who.int/violence_injury_prevention http://www.who.int/violence_injury_prevention/road_safety_status/2015/en/

GPW13 WHO Impact Framework: **Target #30** Indicator Metadata

Target #30	**Increase service coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for severe mental health conditions to 50%**
Indicator-1	Proportion of persons with severe mental condition who are using services
SDG/ Core 100	Core 100
Definition	Severe mental disorder: psychosis; bipolar affective disorder; moderate-severe depression
Method of estimation/calculation	$$\text{Service coverage} = \frac{\text{Number of people in receipt of services}}{\text{Number of people with severe mental disorders}} \times 100\%$$
Numerator	Cases of severe mental disorders in receipt of services in a given year
Denominator	Total cases of severe mental disorder in the sampled population in a given year
Preferred data sources	Mental Health Atlas; Facility surveys; Routine information systems; Population-based household surveys; Modelling of prevalence using GBD data
Other possible data sources	Administrative data
WHO GPW13 Framework	
Disaggregation	By disorder
Expected frequency of data collection	Every 3-5 years. For example, the Mental Health Atlas collects data every 3 years on the proportion of people with mental disorders served by mental health systems.
Limitations	Current metrics only relate to specialist mental health services.
Data type	percentage
Related links	http://www.who.int/mental_health/publications/action_plan/en/ http://www.who.int/mental_health/evidence/atlas/mental_health_atlas_2017/en/

GPW13 WHO Impact Framework: **Target #30** Indicator Metadata

Target #30	**Increase service coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for severe mental health disorders to 50%**
Indicator-2 SDG/ Core 100	Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders SDG 3.5.1 (tier 3)
Definition	
Method of estimation/calculation	There are two approaches discussed 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	Cases of substance use disorders in contact with services/treatment interventions in a given year
Denominator	Total cases of substance use disorders in the population in a given year
Preferred data sources	WHO ATLAS on Substance Use (ATLAS-SU); Global Information System on Alcohol and Health (GISAH); UNODC Annual Report Questionnaire (ARQ); WHO-UNODC Facility surveys; periodic data collection through National statistical systems; routinely collected health data; indirect methods of prevalence estimation; population-based household surveys; modelling using GBD data, country-level and regional data on service availability and utilization.
Other possible data sources WHO GPW13 Framework	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;
Limitations	Effective coverage estimation may not feasible or limited to several high income countries; In case of poor or unavailable data, country estimations may be limited to the level of availability coverage.
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/

GPW13 WHO Impact Framework: **Target #31** Indicator Metadata

Target #31	**20% relative reduction in the prevalence of raised blood pressure**
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
SDG/ Core 100	Core 100
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 = $$\frac{\textit{Number of respondents aged } 18 + \textit{years with systolic blood pressure} \geq 140 \textit{ mmHg or diastolic blood pressure} \geq 90 \textit{ mmHg}}{\textit{Number of survey respondents aged } 18 + \textit{years}} \times 100\%$$
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	
WHO GPW13 Framework	Risk factor exposure
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.

Target #32	**Increase coverage of human papilloma virus vaccine among adolescent girls (9-14 years) to 50%**
Indicator	Percentage of girls 9-14 years old with access to HPV vaccination, living in countries that have included it in the national immunization schedule
SDG/ Core 100	
Definition	Availability of HPV vaccines as part of a national immunization schedule
Method of estimation/calculation	Country can indicate that they have added HPV vaccine to their national immunization programme, as reflected in their responses to the WHO-UNICEF Joint Reporting Form.
Numerator	Number of adolescent girls aged 9-14 years with recommended doses of HPV vaccine
Denominator	Total number of adolescent girls aged 9-14 years
Preferred data sources	WHO-UNICEF Joint Reporting Form (JRF)
Other possible data sources	
WHO GPW13 Framework	Impact
Disaggregation	By age
Expected frequency of data collection	Annual
Limitations	- bias through self-report - misunderstanding/ -interpretation of questions
Data type	Percentage
Related links	WHO: http://www.who.int/nuvi/hpv/decision_implementation/en/index.html; http://www.who.int/immunization_monitoring/routine/joint_reporting/en/index.html.

GPW13 WHO Impact Framework: **Target #33** Indicator Metadata

Target #33	**Increase proportion of women between 30-49 years who have been screened for cervical cancer to 25%**
Indicator	Proportion of women between the ages of 30–49 years screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programmes or policies
SDG/ Core 100	
Definition	Proportion of women aged 30 - 49 years who report they were screened for cervical cancer using any of the following methods: Visual Inspection with Acetic Acid/vinegar (VIA), pap smear and Human Papillomavirus (HPV) test.
Method of estimation/calculation	$\frac{Number\ of\ female\ respondents\ aged\ 30-49\ years\ who\ report\ ever\ having\ had\ a\ screening\ test\ for\ cervical\ cancer}{Number\ of\ female\ respondents\ aged\ 30-49\ years}$ $\times 100\%$
Numerator	Number of women aged 30-49 years who report ever having had a screening test for cervical cancer using any of these methods: Visual Inspection with Acetic Acid/vinegar (VIA), pap smear and Human Papillomavirus (HPV) test.
Denominator	All female respondents aged 30-49 years.
Preferred data sources	Population-based (preferably nationally representative) survey
Other possible data sources	Facility based data
WHO GPW13 Framework Disaggregation	Age, Sex, other relevant socio-demographic stratifiers where available
Expected frequency of data collection	At least every 5 years
Limitations	Potential limitations include: - bias through self-report, including mistakenly assuming any pelvic exam was a test for cervical cancer - limited validity of survey instruments
Data type	Prevalence
Related links	http://www.who.int/chp/steps/en/ http://www.who.int/reproductivehealth/publications/cancers/ http://www.who.int/nmh/ncd-tools/indicators/GMF_Indicator_Definitions_Version_NOV2014.pdf

GPW13 WHO Impact Framework: **Target #34** Indicator Metadata

Target #34	**Eradicate poliomyelitis: zero cases of poliomyelitis caused by wild poliovirus or circulating vaccine-derived poliovirus**
Indicator SDG/ Core 100	Number of cases of poliomyelitis caused by wild poliovirus (WPV) or circulating vaccine-derived poliovirus (cVDPV)
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	
WHO GPW13 Framework	
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/;

GPW13 WHO Impact Framework: **Target #35** Indicator Metadata

Target #35	**Eliminate at least one neglected tropical disease in 30 additional endemic countries (cumulative total number of countries)**
Indicator SDG/ Core 100	Total number of countries with an eliminated NTD
Definition	The cumulative total number of countries that have eliminated at least one NTD since the establishment of the World Health Organization in 1948.
Method of estimation/calculation	A country is added to the cumulative total once it is has been validated, verified or certified for elimination as a public health problem, elimination of transmission, or eradication, as assessed by WHO through a formal process; countries that have eliminated/eradicated more than one NTD are counted only once.
Numerator	Total number of countries with an eliminated NTD
Denominator	Not applicable
Preferred data sources	WHO Global Health Observatory
Other possible data sources	Not applicable
WHO GPW13 Framework	
Disaggregation	Not applicable
Expected frequency of data collection	Continuous
Limitations	This is a conservative measure of progress towards to end of the epidemic of NTDs (SDG 3.3): countries that have eliminated more than one NTD are counted only once; progress at the subnational level is not reflected until national elimination is achieved. It should be used alongside SDG indicator 3.3.5, the number of people requiring interventions against NTDs.
Data type	Number
Related links	http://www.who.int/neglected_diseases/mediacentre/resolutions/en/ http://www.who.int/neglected_diseases/resources/NTD_Generic_Framework_2015.pdf

Target #36	**Reduce tuberculosis deaths (including TB deaths among people with HIV) by 50%**
Indicator-1 SDG / Core 100 Definition	Number of deaths caused by TB (including TB deaths among people with HIV) Tuberculosis (TB): An infectious bacterial disease caused by Mycobacterium tuberculosis, which most commonly affects the lungs. It is transmitted from person to person via droplets from the throat and lungs of people with the active respiratory disease. Deaths from TB were based on ICD-10 code: A16 – A19.
Method of estimation/calculation Numerator	Total number of deaths from TB.
Denominator	
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.
WHO GPW13 Framework	Outcome
Disaggregation	By sex, age, HIV status, location (states/provinces of large countries).
Expected frequency of data collection	Annual
Limitations	Reliance on modelling in countries with incomplete or unusable death registration data
	Count, absolute number of deaths
Related links	WHO: http://www.who.int/mediacentre/factsheets/fs104/en/; http://www.who.int/gho/tb/en/;

Target #36	**Reduce tuberculosis deaths (including TB deaths among people with HIV) by 50%**
Indicator-2	Tuberculosis incidence per 100 000 population
SDG/ Core 100	SDG 3.3.2
Definition	The tuberculosis incidence per 100 000 population 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	
Denominator	
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
WHO GPW13 Framework	Outcome
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

GPW13 WHO Impact Framework: **Target #37** Indicator Metadata

Target #37	**Reduce malaria deaths by 50%**
Indicator-1 SDG/ Core 100	Number of malaria deaths
Definition	The sum deaths from malaria from confirmed and probable cases.
Method of estimation/calculation	WHO compiles data on reported deaths from malaria, submitted by the national malaria control programmes (NMCPs). Predominant type of statistics: unadjusted
Numerator	
Denominator	
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.
WHO GPW13 Framework	
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	Count, absolute number of deaths
Related links	WHO: http://apps.who.int/gho/data/node.wrapper.imr?x-id=2967; http://www.who.int/gho/malaria/epidemic/deaths/en/.

Target #37	**Reduce malaria deaths by 50%**
Indicator-2	Malaria incidence per 1 000 population
SDG/ Core 100	SDG 3.3.3
Definition	The number of new cases of malaria per 1,000 people at risk each year.
Method of estimation/calculation	Three main methods are used to estimate the number of malaria cases and incidence. *Category 1 method – adjusted routine data*. This method usually applies to countries outside sub-Saharan Africa and to Botswana, Ethiopia, Namibia and Rwanda, where the public health sector surveillance system is good but some clinical diagnosis of cases still occurs and a substantial proportion of patients use the private sector or do not seek treatment. For such countries, case data reported by the NMCPs are adjusted for test positivity rate (where clinical cases are also reported), public health sector reporting rates, fever treatment-seeking rates in the private sector and the rates of not seeking treatment. *Category 2 method – parasite rate-to-incidence modelling*. Used for many countries in sub-Saharan Africa where the routine data is unreliable: surveillance systems do not capture all malaria cases, and data often come from the public health sector only and may not be reported consistently or may not be parasitologically confirmed. A method developed by the Malaria Atlas Project is used, which estimates cases by employing an epidemiological model of the relationship between parasite prevalence and case incidence within a geospatial framework. *Category 3 method – unadjusted routine data*. This approach involves use of routine data reported by NMCPs without any adjustments. Countries for which this approach was used were Algeria, Argentina, Belize, Bhutan, Cabo Verde, China, Comoros, Costa Rica, Democratic People's Republic of Korea, Ecuador, El Salvador, Iran (Islamic Republic of), Iraq, Malaysia, Mexico, Paraguay, Republic of Korea, Sao Tome and Principe, Saudi Arabia, South Africa, Suriname, Swaziland and Thailand. These are countries that have high-quality surveillance systems and are near elimination, having reported few malaria cases (<10 000 cases) in most of the years since 2010. For more details see SDG metadata file as referenced below.
Numerator	
Denominator	
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
WHO GPW13 Framework	Outcome
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://unstats.un.org/sdgs/metadata/files/Metadata-03-03-03.pdf

GPW13 WHO Impact Framework: **Target #38** Indicator Metadata

Target #38	**Reduce the number of HBV or HCV related deaths by 40%**
Indicator SDG/ Core 100	Number of HBV and HCV related deaths
Definition	The sum deaths related to HBV and HCV infection from confirmed and probable cases. Deaths were based on ICD-10 code related to HBV (B16.0-B16.9, B17.0, B18.0, B18.1) or HCV (B17.1, B18.2).
Method of estimation/calculation	Total number of deaths related to HBV or HCV.
Numerator	
Denominator	
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.
WHO GPW13 Framework 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	Count, absolute number of deaths
Related links	WHO: http://www.who.int/mediacentre/factsheets/fs204/en/; http://www.who.int/mediacentre/factsheets/fs164/en/.

GPW13 WHO Impact Framework: **Target #39** Indicator Metadata

Target #39	**Reduce number of new HIV infections per 1000 uninfected population, by sex, age, and key populations by 73%**
Indicator-1	Number of new HIV infections per 1,000 uninfected population, by sex, age, and key population
SDG/ Core 100	SDG 3.3.1
Definition	The number of new HIV infections per 1,000 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 WHO GPW13 Framework	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	
Limitations	
Data type	Ratio
Related links	http://www.unaids.org/en/dataanalysis/datatools/spectrumepp UNAIDS Global AIDS response progress reporting 2015: construction of core indicators for monitoring the 2011 http://www.unaids.org/sites/default/files/media_asset/JC2702_GARPR2015guidelines_en.pdf a2015

Target #39	**Reduce number of new HIV infections per 1000 uninfected population, by sex, age, and key populations by 73%**
Indicator-2	Number of HIV-related deaths
SDG/ Core 100	
Definition	Number of HIV-related deaths
Method of estimation/calculation	TBD
Numerator	
Denominator	
Preferred data sources	Vital registration systems which record deaths with sufficient completeness to allow estimation of all-cause death rates.
Other possible data sources	By sex, location (urban/rural, major regions/provinces), and socio-economic characteristics (e.g., education, wealth quintile).
WHO GPW13 Framework	
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
Datatype	Count, number of deaths
Related links	http://www.unaids.org/en/dataanalysis/datatools/spectrumepp UNAIDS Global AIDS response progress reporting 2015: construction of core indicators for monitoring the 2011 http://www.unaids.org/sites/default/files/media_asset/JC2702_GARPR2015guidelines_en.pdf a2015

Target #40	**Increase coverage of 2nd dose of measles containing vaccine (MCV) to 85%**
Indicator	Coverage of 2nd dose of measles containing vaccine (MCV)
SDG/ Core 100	3.b.1
Definition	Percentage of children who received two doses of measles containing vaccine according to nationally recommended schedule through routine immunization services.
Method of estimation/calculation	WHO and UNICEF jointly developed a methodology to estimate national immunization coverage form 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 the reference section. 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
Denominator	Number of children in the target group
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)
WHO GPW13 Framework	
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)
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

Target #41	**Increase treatment coverage of RR-TB to 80%**
Indicator SDG/ Core 100	Coverage of MDR/RR-TB treatment as a percent of estimated incidence
Definition	Tuberculosis (TB): An infectious bacterial disease caused by Mycobacterium tuberculosis, which most commonly affects the lungs. It is transmitted from person to person via droplets from the throat and lungs of people with the active respiratory disease. All forms (of tuberculosis): Pulmonary (smear-positive and smear-negative) and extra pulmonary TB.
Method of estimation/calculation	RR-TB treatment coverage (%) = $$\frac{Number\ of\ cases\ on\ RR-TB\ treatment}{Estimated\ incidence\ of\ RR-TB} \times 100\%$$
Numerator	Number of cases on RR-TB treatment in a given year
Denominator	Estimated incidence of RR-TB during the same year
Preferred data sources	Surveillance systems; Facility registers and other program monitoring tools; Facility reporting system; Modelling of RR-TB incidence
Other possible data sources	
WHO GPW13 Framework	Outcome
Disaggregation	
Expected frequency of data collection	Annual
Limitations	
Data type	Percentage
Related links	WHO: https://www.ncbi.nlm.nih.gov/books/NBK390455/pdf/Bookshelf_NBK390455.pdf; http://apps.who.int/iris/bitstream/10665/70484/1/WHO_HTM_TB_2010.11_eng.pdf; http://www.who.int/tb/publications/pmdt_companionhandbook/en/; http://www.who.int/tb/data/en/; http://www.who.int/tb/publications/global_report/en/.

Target #42	**Reduce the percentage of bloodstream infections due to selected AMR organisms by 10%**
Indicator SDG/ Core 100	Percentage of bloodstream infections due to AMR 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.
WHO GPW13 Framework	
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 admission (hospital origin).
Expected frequency of data collection	Yearly
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	Prevalence
Related links	http://www.who.int/glass/en/ ; http://www.who.int/gho/glass/en/

Target #43	**Reduce the mortality rate attributed to household and ambient air pollution by 5%**
Indicator	Mortality rate attributed to household and ambient air pollution
SDG/ Core 100	SDG 3.9.1
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) = $\dfrac{\sum_{i=1}^{n} P_i \times RR_i - \sum_{i=1}^{n} P_i' \times RR_i}{\sum_{i=1}^{n} P_i \times RR_i}$ 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 = $$\dfrac{Total\ number\ of\ deaths\ attributed\ to\ household\ and\ ambient\ air\ pollution}{Total\ population} \times 100{,}000$$
Numerator	See above
Denominator	See above
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
WHO GPW13 Framework	
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/.

Target #44	**Reduce mortality from climate-sensitive diseases by 10%**
Indicator	Mortality from climate-sensitive diseases (based on total deaths for diarrheal diseases, malaria, African trypanosomiasis, leishmaniasis, schistosomiasis, intestinal nematode infections, and dengue fever)
SDG/ Core 100	
Definition	Evidence from epidemiological studies has shown that climate change is linked with a range of conditions. Taking into account only a subset of the possible health impacts, evidence for the following climate-sensitive health outcomes have been assessed on sufficiently strong basis for inclusion in the burden of disease estimates: diarrheal diseases, malaria, unintentional Injuries and deaths related to flooding, extreme heat, extreme cold, or malnutrition.
Method of estimation/calculation	Mortality rate attributed to climate-sensitive diseases = $$\frac{Total\ number\ of\ deaths\ attributed\ to\ climate-sensitive\ diseases}{Total\ population} \times 100{,}000$$
Numerator	Total number of deaths attributed to climate-sensitive diseases in a given period of time
Denominator	Total population in a given period of time
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
WHO GPW13 Framework 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
Data type	Absolute number, rate
Related links	WHO: http://apps.who.int/gho/data/node.wrapper.imr?x-id=2391; http://www.who.int/globalchange/summary/en/index4.html;

Target #45	**Provide access to safely managed drinking water services for 1 billion more people**
Indicator	Proportion of population using safely managed drinking water services
SDG/ Core 100	SDG 6.1.1
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	
Denominator	
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	
WHO GPW13 Framework	
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
Expected frequency of data collection	Biennial
Limitations	
Data type	
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/

Target #46	**Provide access to safely managed sanitation services for 800 million more people**
Indicator	Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water
SDG/ Core 100	SDG 6.2.1
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.
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	
Denominator	
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	
WHO GPW13 Framework	
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	Count, absolute number
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"