



to reach your health goals

Indicators and monitoring



World Health
Organization

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The SCORE technical package

The **SCORE for health data** technical package was developed by WHO and partners to assist Member States in strengthening country data systems and capacity to monitor progress towards the health-related SDGs, including UHC, and other national and sub-national health priorities and targets. The package represents the most effective strategies and interventions for strengthening country health data systems. It encourages stakeholders to invest in a select number of interventions that synergistically have greatest impact on the quality, availability, analysis, use and accessibility of data in countries.

The package presents five essential interventions for health data:

- **S**urvey populations and health risks ... *to know what makes people sick and their risks*
- **C**ount births, deaths and causes of death ... *to know who is born and what people die from*
- **O**ptimize health service data ... *to ensure equitable, quality services for all*
- **R**eview progress and performance ... *to make informed decisions*
- **E**nable data use for policy and action ... *to accelerate improvement*

Based on the maturity of a country's health information system, the SCORE package provides guidance on best practice measurement methods, standards and tools to improve the availability, quality, analysis access and use of data. Many countries have existing monitoring and evaluation plans as part of national health sector strategies and/or national health information system strategies that detail ways to address data gaps and weaknesses in the various data systems and capacities. The SCORE package is meant to be used in support and to improve these plans and strategies and is therefore closely aligned with country strategic priorities.

The package comprises three components that are intended for use by policymakers and those working in health information systems within Ministries of Health. These may be those working at the national level, subnational level or those responsible for data collection across facilities.

Component	Description
Framework to strengthen country health data	Provides an overview to health information systems and identifies key data sources, and optimal processes for review, analysis and use of data to inform policy. Highlights best practice interventions and measures needed to strengthen different aspects of health information systems.
Monitoring country capacity tool	<p>Provides guidance for obtaining the indicator data, details the attributes (items that make up an indicator), guides the reviewer through the relevant indicators, and how to interpret responses. Using the data collection instrument alongside this guidance allows an assessment of capacity for the individual indicators, therefore allowing countries to identify critical gaps in national data systems. Intended for use primarily by health information systems focal points.</p> <ul style="list-style-type: none"> • Indicators and measurement guidance • Data collection instrument
Essential tools and standards	For each intervention provides a list of up-to-date resources and links.

Purpose

SCORE's monitoring country capacity tool allows countries, regions and the global community to identify gaps in data systems, guide investments and actions and track progress. The indicators and measurement document provides guidance for obtaining the indicator data that relates to key interventions in the framework. With this data, countries can identify and track gaps in their data systems. Establishment of the baseline status – through the development of a global report – of a country's health information system, followed by regular, systematic monitoring of the implementation of the SCORE interventions, is critical for targeting interventions and tracking improvements in the health information system over time.

Scope

Using the monitoring country capacity tool allows for an assessment of the status of a country health information system (HIS) to be used as a basis for country planning. The instrument is not intended to be a comprehensive diagnosis on all aspects of a country health information system. It is intended to trigger more specialised and in-depth assessments based on gaps and identified needs. The SCORE assessment is linked to tailored regional HIS tools. Finally, the SCORE assessment will be used as a global monitoring tool on health information systems and input into the first *Global Status report on health data systems and capacity*.

Examples of in-depth assessments and regional tools are shown in table below:

Table: Regional and in-depth HIS assessment tools

Regional HIS assessment tools	Support tool to assess health information systems and develop and strengthen health information strategies ⁴	World Health Organization Regional Office for Europe
	Information Systems for Health ⁵	Pan American Health Organization/World Health Organization Regional Office for the America
In-depth assessment tools	Joint External Evaluation ⁶	World Health Organization
	Improving the quality and use of birth, death and cause-of-death information: guidance for a standards-based review of country practices (Comprehensive Civil Registration and Vital Statistics Assessment) ⁷	World Health Organization
	Health Information System Stages of Continuous Improvement Toolkit ⁸	MEASURE Evaluation
	Health Information Systems Interoperability Maturity Toolkit ⁹	MEASURE Evaluation
	Routine Health Information System Rapid Assessment Tool ¹⁰	World Health Organization and MEASURE Evaluation

Indicators and methods

For each SCORE intervention - Survey, Count, Optimize, Review, Enable – there is a set of key elements and each element contains a set of indicators. The SCORE for health data package includes a set of 24 quantitative and qualitative indicators for monitoring the SCORE interventions at country level.

The indicators and their attributes are grouped into two tiers. Tier 1 are indicators and attributes that are collected in all countries and used in determining and country's score. Tier 2 indicators and attributes are not used to determine a country's score but will be analysed and reported for the subset of countries with available data. The Tier 2 indicators and attributes are indicated with an asterisk. All indicators and attributes are shown in the table below.

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Core indicators to monitor country health data

General situation of health information systems in countries

INDICATOR	KEY ATTRIBUTES
Latest Availability of data on SDG and UHC indicators (Monitoring of SDGs and UHC)	Collected 54 health related SDGs/UHC indicators at least once in last five years

SCORE Interventions

INTERVENTIONS	KEY ELEMENTS	INDICATORS	KEY ATTRIBUTES
S Survey populations and health risks	S1 System of regular population-based health surveys	S1.2 A system of regular and comprehensive population health surveys that meets international standards	➤ At least one survey conducted in the last five years that: <ul style="list-style-type: none"> Cover major health priorities Cover major dimensions of inequity Are aligned with international standards Are funded by government
	S2 Surveillance of public health threats	S2.1 Completeness and timeliness of weekly reporting of notifiable conditions (%)*	➤ Percentage of reporting sites that submitted weekly report in last month: public sites* ➤ Percentage of reporting sites that submitted weekly in last month: non-public sites*
		S2.2 Indicator and event-based surveillance system(s) in place based on International Health Regulations standards	➤ If country has done SPAR, based on SPAR: <ul style="list-style-type: none"> National IHR Focal Point functions under IHR Early warning function: indicator-and event-based surveillance Mechanism for event management (verification, risk assessment, analysis investigation). ➤ If country has not done a SPAR but done JEE, based on JEE: <ul style="list-style-type: none"> Indicator- and event-based surveillance system Inter-operable, inter-connected, electronic real-time reporting system Integration and analysis of surveillance data Syndromic surveillance systems System for efficient reporting Reporting network and protocols in country ➤ If country has not done SPAR or JEE, based on IHR: <ul style="list-style-type: none"> Self-assessment score for surveillance Self-assessment score for IHR coordination
	S3 Regular population census	S3.1 Census conducted in last 10 years in line with international standards with population projections for subnational units	➤ Census conducted within last 10 years ➤ Post enumeration survey conducted ➤ Population projections with all disaggregations
C Count births, deaths and causes of death	C1 Full birth and death registration	C1.1 Completeness of birth registration	➤ Completeness of birth registration (%)
		C1.2 Completeness of death registration	➤ Completeness of death registration (%)

		C1.3	Core attributes of a functional CRVS in place to generate vital statistics*	<ul style="list-style-type: none"> ➤ Legal framework for CRVS* ➤ Easy access to registration offices* ➤ Adequate training for registrars* ➤ Formal CRVS Interagency collaboration* ➤ All data are exchanged electronically* ➤ Data quality assessment, adjustment, and analysis using international standards* ➤ System performance monitoring* ➤ Vital statistics report published in last five years*
C2 Certification and reporting of causes of death		C2.1	Completeness of deaths with cause of death reported to national authorities and/or international institutions (%)	<ul style="list-style-type: none"> ➤ Completeness of deaths with cause of death reported
		C2.2	Quality of cause-of-death data (% of cause of death with ill-defined or unknown causes of mortality)	<ul style="list-style-type: none"> ➤ Quality of cause-of-death data, measured as percentage of records with ill-defined or unknown causes of mortality
		C2.3	Core attributes of a functional system to generate cause-of-death statistics*	<ul style="list-style-type: none"> ➤ Legislation for Medically Certificate for Cause of Death (MCCD) is line with international standards* ➤ ICD compliant MCCD are used* ➤ Medical students trained in correct death certification practices* ➤ Statistical clerks trained in mortality coding* ➤ Verbal autopsy (if applicable) is applied* ➤ Data quality assurance and dissemination ➤ Cause of death statistics available*
Optimize health service data	O1 Routine facility and reporting system with patient monitoring	O1.1	Availability of annual statistic for selected indicators derived from facility data	<ul style="list-style-type: none"> ➤ Annual statistics available for 11 key facility-based indicators, including key disaggregations
		O1.2	Coverage levels of reporting from facilities*	<ul style="list-style-type: none"> ➤ Data quality for primary care facilities* ➤ Data quality for hospitals* ➤ Completeness of reporting by public, primary care facilities* ➤ Completeness of reporting by public hospitals* ➤ Completeness of reporting by private health facilities* ➤ National unique patient identifier system* ➤ Cancer registries for all types of cancer* ➤ Master facility list is up-to-date* ➤ Institutional system of data quality assurance* ➤ Standards of practice for health management information systems describe all parts of process, are fully implemented and revised periodically* ➤ System of electronic data entry – aggregate at district level* ➤ System of electronic capture - patient level primary care facilities* ➤ System of electronic capture - patient level in hospitals* ➤ Standards based data exchange between systems*
	O2 Regular system to monitor service availability, quality and effectiveness	O2.1	Well-established system to independently monitor health services	<ul style="list-style-type: none"> ➤ Regular independent assessments of the quality of care in hospitals and health facilities ➤ System of accreditation of health facilities based on data ➤ System of adverse event reporting following medical interventions*
	O3 Health service	O3.1	Availability of latest data on national health expenditure	<ul style="list-style-type: none"> ➤ Data available within last five years on: <ul style="list-style-type: none"> • Public health expenditure

	resources			<ul style="list-style-type: none"> • Private health expenditure • Catastrophic spending
		O3.2	Health worker density and distribution updated annually	<ul style="list-style-type: none"> ➤ Information, including availability at sub-national level and major levels of disaggregations for: <ul style="list-style-type: none"> • Medical doctors • Nurses • Midwives • Dentists • Pharmacists
		O3.3	National human resources health information system is in place and functional*	<ul style="list-style-type: none"> ➤ Human resource for health information systems tracks*: <ul style="list-style-type: none"> • Number of entrants to the labour market • Number of active stock on the labour market • Number of exits from the labour market • Demographic distribution of health workers • Subnational level data of active health workers • Number of graduates from education and training institutions • Information on foreign-born and/ or foreign-trained health workers
R Review progress and performance	R1 Regular analytical progress and performance reviews, with equity	R1.1	High quality analytical report of health sector progress and performance of health sector strategy/plan are produced annually	<ul style="list-style-type: none"> ➤ Analytic report published within last five years: <ul style="list-style-type: none"> • Uses all available data sources • Assesses progress against targets • Pays attention to measures of inequity • Links performance to health inputs • Provides comparative analysis • Includes Subnational rankings • Evaluates performance of hospitals and large facilities • Summarizes main findings for use for policy and planning
	R2 Institutional capacity for analysis and learning	R2.1	Institutional capacity in data analysis at national and subnational level	<ul style="list-style-type: none"> ➤ Involvement of public health institutes/schools of public health ➤ Sub-national capacity in Ministry of Health or institutions to conduct health analysis* ➤ Capacity at national Ministry of Health to conduct health analysis ➤ Capacity at NBS to: draw sample, implement surveys and conduct analysis
E Enable data use for policy and action	E1 Data and evidence drive policy and planning	E1.1	National health plan and policies are based on data and evidence	<ul style="list-style-type: none"> ➤ National health plan/policies include review of past performance (trends) ➤ National health plan/policies include burden of disease analysis ➤ National health plan/policies include health system strength analysis (response strength) ➤ Presence of a central unit or function in Ministry of Health for data and evidence to policy translation ➤ Level of output of a central unit or function in Ministry of Health for data and evidence to policy translation ➤ Coordination function between Ministry of Health and partners
	E2 Data access and sharing	E2.1	Health statistics are publicly available	<ul style="list-style-type: none"> ➤ Frequency of updating national database ➤ Contents of national database

				<ul style="list-style-type: none"> ➤ Navigation ease of national database ➤ Statistical report publication frequency ➤ Statistical report includes disaggregations ➤ Bona fide users have Access to HMIS data ➤ Bona fide users have access to health survey data ➤ Open data policy
		E3.1	National monitoring and evaluation (M&E) is based on standards	<ul style="list-style-type: none"> ➤ National M&E plan that: <ul style="list-style-type: none"> • Includes core indicator list with baselines and targets • Includes specification on data collection methods and digital architecture • Includes data quality assurance mechanisms • Includes analysis and review process specifications • Specifies use of data for policy and planning • Specifies dissemination of data • Specifies resource requirements to implement the strategic plan/policy
		E3.2	National digital health/e-health strategy is based on standards	<ul style="list-style-type: none"> ➤ National digital health/e-health strategy that: <ul style="list-style-type: none"> • Includes discussion of health data architecture • Includes description of health data standards and exchange • Includes handling of data security issues • Includes specifications for data confidentiality and data storage • Specifies access to data • Specifies alignment/is integrated with national HIS strategy
		E3.3	Foundational elements to promote data use and access are present*	<ul style="list-style-type: none"> ➤ Legal framework or policies exist for health information systems* ➤ Legal framework or policies are enforced*

Scoring

Scoring is based on a maturity model where at the end of a complete assessment, a country has a score of 1–5 for each of the five interventions, where 1 reflects nascent capacity of the health information system and 5 represents sustainable capacity.

Calculating the overall score for each intervention (for example, E “Enable data use for policy and action”) begins by scoring each attribute within each indicator of the elements within this intervention. Each indicator score is based on an assessment of its attributes that reflect various levels of capacity or implementation. Thus attribute scores feed into indicator scores, which feed into element scores, which in turn make up the final score for the intervention..

Below is an example walk through to calculate the score for the intervention E, “Enable data use for policy and action”.

Scoring the indicators

For each indicator, a country will receive a single score based on their current capacity. Reviewers will determine the appropriate score based on the descriptions of attributes included in the this document and in the data collection tool for each indicator based on their verification of documents and sources. Reviewers should provide documentation of the data sources for each indicator scored. For some indicators, there is a single item to score; for others, the indicator is a combination of multiple items. In the case of multiple items, the indicator is scored by taking a simple mean of these items.

The example begins by scoring items E3.1 and E3.2 which are used to assess a country’s capacity for country-led governance of data.

To score E3.1 (existence of a monitoring and evaluation plan based on standards), the first step is to determine if the country has a current M&E plan and then score the plan on each of the seven standards in the SCORE instrument. The information is then summarized in the table below (with hypothetical values for a country shown):

E3.1 National monitoring and evaluation (M&E) plan is based on standards		
Based on the following indicator items	Hypothetical country’s score	Response category
Includes a core indicator list with baselines and targets	2	1 = Not there 2 = Partially there 3 = Mostly/all there
Includes specification on data collection methods, digital architecture required for reporting of key indicators	3	
Has data quality assurance mechanisms in place	2	
Includes analysis process and review process specifications that includes roles and responsibilities	1	
Specifies use of data for policy and planning	2	
Includes a plan for dissemination of data	1	
Specifies resource requirements to implement the strategic plan/policy	1	
Total	12	21

These values are compared against the maturity model below to assign a score of 1 to 5 for E3.1.

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
E3.1	National monitoring and evaluation (M&E) is based on standards					

	No M&E or HIS plan exists that is linked to the current national health sector strategy	Total score of key indicator items is 9 or less	Total score of key indicator items is 10-14	Total score of key indicator items is 15-17	Total score of key indicator items is 18 or higher	1-5
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In this example, the country scores 3.

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Scoring for E3.2 which looks at a country's digital health/e-health strategy is scored in a similar way.

E3.2 National digital health/e-health strategy is based on standards		
Based on the following indicator items	Hypothetical country's score	Response category
Digital plan /e-health strategy includes discussion of health data architecture	3	1 = Not there 2 = Partially there 3 = Mostly/all there
Digital plan /e-health strategy includes description of health data standards and exchange?	3	
Digital plan /e-health strategy includes handling of data security issues	2	
Digital plan /e-health strategy includes specifications for data confidentiality and data storage	2	
Digital plan /e-health strategy specify access to data	3	
Digital plan /e-health strategy specifies alignment/is integrated with national HIS strategy?	3	
Total:	16	18

These values are compared against the maturity model below to assign a score of 1 to 5 for E3.2.

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
E3.2 National digital health/e-health strategy is based on standards						
	An eHealth strategy is non-existent or is no longer current	Total score of key indicator items is 8 or less	Total score of key indicator items is 9-12	Total score of key indicator items is between 13-15	Total score of key indicator items is 16 or higher	1-5

The hypothetical country scores a 5.

Scoring the elements

The element scores are the simple mean of the indicators within the element. In this example, the two indicators calculated above are used to determine the element score:

E3 (Strong country-led governance of data) = (National monitoring and evaluation (M&E) is based on standards) + (National digital health/e-health strategy is based on standards)/2

$$SE = \frac{3 + 5}{2} = 4$$

Scoring the intervention

The intervention scores are the weighted mean of the elements within that intervention. The elements have been weighted based on review by a set of experts to reflect their relative importance to a country's ability to achieve high capacity in the intervention. Thus, elements that are considered critical are given a higher weighting.

In this example, there are three elements in Strong country-led governance of data. Of these, data access and sharing is considered the most important and given a weighting of 0.40. The remaining two elements (data and evidence and governance of data) are both given weights of 0.30.

Therefore, the calculation of the intervention score is:

Strong country-led governance of data = [(0.3*data evidence) + (0.4* data access and sharing) + (0.3*governance of data)]

Using the results for E3 from above and having calculated E1 and E2 in a similar manner, the score is:

$$S = (0.3*3) + (0.4*2) + (0.3*4) = 3$$

Therefore, in this example, the country's score for E (Enable data use for policy and action) is 3

Overall scoring for each intervention

The table below shows the interventions and elements that feed into them along with the weight that should be applied to each element when creating the intervention score. The thresholds for scoring the maturity model can be found in Annex 1, while more detailed information on how each indicator is scored can be found in the data collection tool.

INTERVENTION	ELEMENT WEIGHT	ELEMENT	SUMMARY OF SCORING
Survey populations and health risks $= (0.65 \times S1) + (0.25 \times S2) + (0.1 \times S3)$	0.6	S1 System of regular population-based health surveys $= S1.2$	S1- coverage of health topics is scored overall – did the country collect that indicator (where relevant) through any survey since 2013. Survey score average of 3 components weighted by disaggregations (0.4), standards (0.4) and funding (0.2) S3 is 0.33 of 3 components, census within last 10 years (downweighted if old), existence of a post enumeration survey and population projections
	0.25	S2 Surveillance of public health threats $= S2.2$	
	0.15	S3 Regular population census $= S3.1$	
Count births, deaths and causes of death $= (0.5 \times C1) + (0.5 \times C2)$	0.5	C1 Full birth and death registration $= (C1.1 + C1.2) / 2$	
	0.5	C2 Certification and reporting of causes of death $= (C2.1 + C2.2) / 2$	
Optimize health service data $= (0.55 \times O1) + (0.15 \times O2) + (0.15 \times O31) + (0.15 \times O32)$	0.6	O1 Routine facility and reporting system with patient monitoring $= O1.1$	Weighted score based on availability of data by national, subnational, age and sex (diff weightings for diff indicators) and based on age of data $= (O2.1 \text{ and } O2.2) / 2$ Both O3.1 and O3.2 go in separate items Cadres scored based on availability at sub-national level and disaggregations of age and sex. Score for each indicator is weighted - with more credit for having national data.
	0.2	O2 Regular system to monitor service availability, quality and effectiveness $= O2.1$	
	0.2	O3 Health service resources $= (O3.1 + O3.2) / 2$	
Review progress and performance $= (0.5 \times R1) + (0.5 \times R2)$	0.5	R1 Regular analytical progress and performance reviews, with equity $= R1.1$	
	0.5	R2 Institutional capacity for analysis and learning $= R2.1$	
Enable data use for policy and action $= (0.3 \times E1) + (0.4 \times E2) + (0.3 \times E3)$	0.2	E1 Data and evidence drive policy and planning $= E1.1$	$= (E3.1 + E3.2) / 2$
	0.4	E2 Data access and sharing $= E2.1$	
	0.4	E3 Strong country-led governance of data $= (E3.1 + E3.2) / 2$	

General situation of health information systems in countries

Target

There is a nationally representative population-based programme of regular survey(s) to generate high quality and regular statistics on key aspects including population health status and determinants, service coverage, health-related behaviour and risk factors, health care utilisation and out-of-pocket spending on health, including equity dimensions and the use of biomarkers in support of national SDG-related statistical strategies.

Availability of latest data to monitor the health-related SDGs/UHC

S1.1 Availability of latest data to monitor the health-related SDGs/UHC		Response category
Based on the following indicator items: SDG and UHC indicators collected since 2013		
<ul style="list-style-type: none"> – Maternal mortality ratio (per 100 000 live births) – Proportion of births attended by skilled health personnel (%) – Neonatal mortality rate (per 1000 live births) – Under-five mortality rate (per 1000 live births) – New HIV infections (per 1000 uninfected pop.) – Tuberculosis incidence (per 100 000 pop.) – Malaria incidence (per 1000 pop. at risk) – Hepatitis B surface antigen (HBsAg) prevalence among children under 5 years (%)¹ – Reported number of people requiring interventions against NTDs – Probability of dying from any of CVD, cancer, diabetes, CRD between age 30 and exact age 70 (%) – Suicide mortality rate (per 100 000 pop.) – Total alcohol per capita (≥ 15 years of age) consumption (litres of pure alcohol) – Road traffic mortality rate (per 100 000 pop.) – Proportion of married or in-union women of reproductive age who have their need for family planning satisfied with modern methods (%) – Adolescent birth rate (per 1000 women aged 15-19 years) – Antenatal care, four or more visits (ANC4) (%) – 17Antiretroviral therapy (ART) coverage (%) – Care-seeking behaviour for child pneumonia (%) – Cervical cancer screening among women aged 30-49 years (%) – Density of psychiatrists (per 100,000 pop.) – Density of surgeons (per 100,000 pop.) – Hospital beds per 10000 population – Households with at least access to basic sanitation (%) – Mean fasting plasma glucose (mmol/L) – Population at risk sleeping under insecticide-treated nets for malaria prevention (%) – Prevalence of normal blood pressure, regardless of treatment status (%) – Tuberculosis effective treatment coverage (%) – Population with household expenditures on health > 10% of total household expenditure or income (%) – Population with household expenditures on health > 25% of total household expenditure or income (%) 	<ul style="list-style-type: none"> – Age-standardized mortality rate attributed to household and ambient air pollution (per 100 000 pop.) – Mortality rate attributed to exposure to unsafe WASH services (per 100 000 pop.) – Mortality rate from unintentional poisoning (per 100 000 pop.) – Age-standardized prevalence of tobacco smoking among persons 15 years and older (%) – Diphtheria-tetanus-pertussis (DTP3) immunization coverage among 1-year-olds (%) – Measles-containing-vaccine second-dose (MCV2) immunization coverage by the nationally recommended age (%) – 26. Pneumococcal conjugate 3rd dose (PCV3) immunization coverage among 1-year olds (%) – Total net official development assistance to medical research and basic health sectors per capita (US\$) – Density of dentistry personnel (per 1000 pop.) – Density of nursing and midwifery personnel (per 1000 pop.) – Density of pharmaceutical personnel (per 1000 pop.) – Density of physicians (per 1000 pop.) – Average of 13 International Health Regulations core capacity scores – Domestic general government health expenditure (GGHE-D) as percentage of general government expenditure (GGE) (%) – Prevalence of stunting in children under 5 (%) – Prevalence of overweight in children under 5 (%) – Prevalence of wasting in children under 5 (%) – Proportion of population using safely managed drinking-water services (%) – Proportion of population using safely managed sanitation services (%) – Proportion of population with primary reliance on clean fuels (%) – Annual mean concentrations of fine particulate matter (PM2.5) in urban areas (µg/m3) – Average death rate due to natural disasters (per 100 000 pop.) – Mortality rate due to homicide (per 100 000 pop.) – Estimated direct deaths from major conflicts (per 100 000 pop.) – Completeness of cause-of-death data (%) 	0=No 1=Yes
Maximum Total possible score:		54

Scoring methodology

The number of indicators for which data are available is divided by the total number of indicators that are relevant in the country's context. This percentage is then compared against the data below to determine the country's score.

Indicator Number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
S1.1	Availability of latest data to monitor the health-related SDGs/UHC					S1.1
S1.1	Over last five years, data available for <25% of indicators	Over last five years, data available for 25 – 39% of indicators	Over last five years, data available for 40– 59% of indicators	Over last five years, data available for <60– 79% of indicators	Over last five years, data available for at least 80% of indicators	1-5

¹ Note, this is a tracer indicator, not the SDG indicator for hepatitis B

Data sources: Global and country databases/repositories and observatories.



Survey populations and health risks

to know what makes people sick and their risks

Interventions	Key elements	Indicators
Survey populations and health risks	System of regular population-based health surveys	A system of regular and comprehensive population health surveys that meets international standards
	Surveillance of public health threats	Completeness and timeliness of weekly reporting of notifiable conditions (%) [*]
	Regular population census	Indicator and event-based surveillance in place based on International Health Regulations standards
		Census conducted in last 10 years with population projections for sub-national units

Indicator S1.1: A system of regular and comprehensive population health surveys that meets international standards

S1.2 A system of regular and comprehensive population health surveys that meets international standards		
Based on following indicator items for surveys conducted since 2013		Response category
Cover major health priorities (selected set of priorities): <ul style="list-style-type: none"> – Child immunization – Child weight / height – Delivery / Skilled birth attendance – Family planning – Tobacco use – Prevalence of raised blood pressure – Cervical cancer screening 	<ul style="list-style-type: none"> – Child mortality – Health expenditure as a percent of total household expenditure – HIV prevalence – TB prevalence – Prevalence of raised fasting blood glucose – Malaria parasite prevalence among children 	0=No 1=Yes
Cover major dimensions of inequality (gender, age, place of residence, administrative unit, socioeconomic status, education)		0=No 1=Yes
Are aligned with internationally accepted standards: <ul style="list-style-type: none"> • Nationally representative • Sample design described • Sample size given • Sampling errors provided • Implementation process described • Analysis of data described • Data available in public domain to bona fide users • Report is publicly available 		0=No 1=Yes
Are funded by government		0=No 1=Yes

Scoring methodology

Coverage of major health topics is based on all surveys combined, scored as number of health topics covered at least once in a survey since 2013/number of health topics relevant in the country context.

Dimensions of inequity, alignment with international standards, and government funding are scored separately for each survey.

Inequity = number of measures of inequity captured/number of relevant measures of inequity

Standards = number of standards met/total number of standards

Funding = Funded yes/no

Survey attribute score (per survey): $0.4 \times \text{inequity} + 0.4 \times \text{standards} + 0.2 \times \text{funding}$

The overall score for S1.2 is based on the coverage of health topics, the attribute scores of the top five surveys (or all surveys if there are five or fewer), and the number of surveys ($5+ = 1$, $4=0.9$, $3=0.8$, $2=0.7$, $1=0.6$).

$S1.2 = 0.35 \times \text{health topics} + 0.55 \times \text{attributes} + \text{number of surveys bonus}$

Indicator Number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
S1.2	A system of regular and comprehensive population health surveys that meets international standards					S1.2
S1.2	Overall scores is <0.25	Overall score is 0.25-0.49	Overall score is 0.50 – 0.70	Overall score is 0.71-0.89	Overall score is ≥ 0.90	1-5

Data sources

Country specific or multi-country surveys.

**S2. Surveillance of public health threats****Target**

As per the International Health Regulations Monitoring and Evaluation framework Joint External Evaluation tool 2nd edition, the target includes: (1) Strengthened foundational indicator and event based surveillance systems that are able to detect events of significance for public health, animal health and health security; (2) improved communication and collaboration across sectors and between sub-national (local and intermediate), national and international levels of authority regarding surveillance of events of public health significance; (3) improved country and intermediate level/regional capacity to analyse and link data from and between strengthened real-time surveillance systems, including interoperable, interconnected electronic reporting systems. This can include epidemiologic, clinical, laboratory, environmental testing, product safety and quality, bioinformatics data; and advancement in fulfilling the core capacity requirements for surveillance in accordance with the IHR and the World Organisation for Animal Health (OIE) standards.

Indicator S2.1: Completeness and timeliness of weekly reporting of notifiable conditions (%) (in most recent year)*

S2.1 Completeness and timeliness of weekly reporting of notifiable conditions (%) (in most recent year)	
Based on the following indicator items	Response category
Percentage of reporting sites who submitted weekly report to responsible unit at central level in last month: public sites*	1 = <80% 2 = 80-90% 3 = 90-94%
Percentage of reporting sites who submitted weekly report to responsible unit at central level in last month: non-public sites*	4 = 95-99% 5 = 100%
Total possible score:	100%

Scoring methodology

This indicator is not used in overall scoring but will be included in additional analysis where available.

Data sources

Weekly epidemiological reports/bulletins/databases.



Indicator S2.2: Indicator and event-based surveillance in place based on International Health Regulations standards

The main data source for this indicator is the IHR State Party Self-Assessment Annual Reporting tool (<https://extranet.who.int/sph/news/ihr-self-assessment-annual-reporting-tool-spar-2018>), known as SPAR, which is available for 188 countries. For countries without a SPAR, the Joint External Examination (JEE)

S2.2 Indicator and event-based surveillance in place based on International Health Regulations standards	
Based on the following indicator items, if country has done SPAR	Response category
National IHR Focal Point functions under IHR	1 = ≤20%
Early warning function: indicator-and event-based surveillance	2 = 21-40%
Mechanism for event management (verification, risk assessment, analysis investigation)	3 = 41-60%
	4 = 61-80%
	5 = >80%
Total possible score:	100%
S2.2 Indicator and event-based surveillance in place based on International Health Regulations standards	
Based on the following indicator items, if country has not done SPAR, but done JEE	Response category
Indicator- and event-based surveillance system	1 = None 2 = Planned within a year 3 = Indicator OR event-based system in place 4 = In place 5 = In place and country uses expertise to support other countries
Inter-operable, inter-connected, electronic real-time reporting system	1 = None 2 = Being developed for either public health or veterinary surveillance systems 3 = In place for either public health or veterinary surveillance systems but not yet able to share data in real-time 4 = In place for public health and/or veterinary surveillance systems but not yet fully sustained by host government 5 = Fully functional for both public health and veterinary surveillance systems
Integration and analysis of surveillance data	1 = None 2 = Sporadic with delay 3 = Regular reporting with some delay; ad-hoc teams analyse data 4 = Annual or monthly reporting; attributed functions to experts for analysing, assessing and reporting data 5 = Systematic reporting; dedicated team in place for data analysis, risk assessment and reporting
Syndromic surveillance systems	1 = None 2 = Planned within a year; policy/legislation in place 3 = In place to detected 1-2 core syndromes 4 = In place to detected three or more core syndromes 5 = In place and country uses expertise to support other countries
System for efficient reporting to FAO, OIE and WHO	1 = No national focal points 2 = Focal points appointed and linked to learning packages/best practices 3 = Demonstrated ability to identify potential PHEIC ² and file report to WHO or OIE 4 = Demonstrated ability to identify potential PHEIC and file report to WHO or OIE within 24 hours 5 = Demonstrated ability to identify potential PHEIC and file report to WHO or OIE within 24 hours and has a multisectoral process for assessing potential events
Reporting network and protocols in country	1 = None 2 = Planned within a year 3 = Established protocols, processes, regulations, and/or legislation governing reporting/processes for multisectoral coordination in response to potential PHEIC to WHO or OIE 4 = Demonstrated timely reporting of potential PHEIC to WHO or OIE in alignment with standards in selected districts 5 = Demonstrated timely reporting of potential PHEIC to WHO or OIE from district to national to international level; has sustainable process for maintaining/improving reporting/communications
Total possible score:	100%
S2.2 Indicator and event-based surveillance in place based on International Health Regulations standards	
Based on the following indicator items, if country has not done SPAR or JEE (use IHR)	Response category
Average coordination score	1 = ≤20%
Average surveillance score	2 = 21-40%
	3 = 41-60%
	4 = 61-80%
	5 = >80%

² Public Health Emergency of International Concern

**SURVEY populations and health risks**

Total possible score:	100%
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Scoring methodology

Compare the scores calculated above (either with SPAR, JEE or IHR self-assessment) with the table below to calculate the score for S2.2.

Indicator Number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
S2.2	Indicator and event-based surveillance in place based on International Health Regulations standards					
	Average % implementation of surveillance indicators <=20%	Average % implementation of surveillance indicators 21%-40%	Average % implementation of surveillance indicators 41%-60%	Average % implementation of IHR surveillance indicators 61%-80%	Average % implementation of surveillance indicators 81%-100%	1-5

Data sources

SPAR. JEE and IHR reports.



S3. Regular population census

Target

All countries should have regular censuses (once a decade) or equivalent population registers that provides information on population and socio-economic characteristics by small geographical area, conducted in line with United Nations Department of Economic and Social Affairs standards.

Indicator S3.1: Census conducted in last 10 years with population projections for sub-national units

S3.1 Census conducted in last 10 years with population projections for sub-national units	
Based on the following indicator items	Response category
Census conducted within last 10 years	0=No 3=Yes
Post enumeration survey carried out for most recent census	0=No 1=Yes
Population projections with all disaggregations for current year	0 = No data 1 = Not available 2 = Current year projections available with no disaggregations 3 = Current year projections available with disaggregations
Total possible score:	7

Scoring methodology

The three indicator items above are scored and divided by the total possible score, to obtain the percentage of criteria that are met. This is then compared against the table below to determine the overall score.

Indicator Number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
S3.1	Census conducted in last 10 years with current population projections					
	25% of criteria are met or less	26-49% of criteria are met	50-70% of criteria are met	71-90% of criteria are met	Greater than 90% of criteria are met	1-5

Data sources

- Country census reports.
- Post enumeration survey reports.



Count births, deaths and causes of death to know who is born and what people die from

Interventions	Key elements	Indicators
Count births, deaths and causes of death	Full birth and death registration	Completeness of birth registration (%)
		Completeness of death registration (%)
		Core attributes of a functional CRVS in place to generate vital statistics*
	Certification and reporting of causes of death	Completeness of deaths with cause of death reported to national authorities and/or international institutions (%)
		Quality of cause-of-death data (% of cause of death with ill-defined or unknown causes of mortality)
		Core attributes of a functional system to generate cause-of-death statistics*

**COUNT** births, deaths and causes of death**C1. Full birth and death registration****Target**

All countries should have a well-functioning civil registration and vital statistics (CRVS) system that registers all births and deaths, issues birth and death certificates, and compiles and disseminates vital statistics, including cause-of-death information. It may also record other events such as marriage, divorce, adoption and legitimation. CRVS systems are foundational to identity management systems. They furnish individuals with a legal identity; identity management systems issue cards or use other means to function as legal proof of identity. CRVS systems also generate administrative data, which serve as the basis for databases, or population registers, across multiple sectors and can be compiled to produce vital statistics.

Indicator C1.1: Completeness of birth registration (%)

C1.1 Completeness of birth registration (%)	
Based on the following indicator items	Response category
Completeness of birth registration (%)	1 = No data 2 = <50% 3 = 50–74% 4 = 75–89% 5 = 90–100%
Total possible score:	100%

Scoring methodology

Completeness of birth registration is compared against the tables below to determine the country's score.

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
C1.1	Completeness of birth registration (%)					
C1.1	There is no data on birth registration completeness	<50%	50-74%	75-89%	>=90%	1-5

Data sources

Vital statistics reports (for birth registration – registrars and surveys also).

**Indicator C1.2: Completeness of death registration (%)**

C1.2 Completeness of death registration (%)	
Based on the following indicator items	Response category
Completeness of death registration (%)	1 = No data 2 = <50 3 = 50–74 4 = 75–89 5 = 90–100
Total possible score:	100%

Scoring methodology

Completeness of death registration is compared against the tables below to determine the country's score.

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
C1.2	Completeness of death registration (%)					
C1.2	There is no data on death registration completeness	<50%	50-74%	75-89%	>=90%	1-5

Data sources

Vital statistics reports.



COUNT births, deaths and causes of death

Indicator C1.3: Core attributes of a functional CRVS system in place to generate vital statistics*

C1.3 Core attributes of a functional CRVS system in place to generate vital statistics	
Based on the following indicator items	Response category
Legal framework for CRVS: adequate and enforced legislation which states that registration of births and deaths is compulsory*	0 = No data 1 = No or outdated legal frameworks & business process; standard operating procedures (SOPs) not defined 2 = Best practice legal frameworks, business processes and SOPs under development or pathway to their development defined 3 = Best practice legal frameworks, business processes and SOPs finalized and in place
The country has sufficient locations where citizens can register births and deaths: proportion of population with easy access*	0 = No data 1 = No registration offices outside of capital city 2 = Partial/ full coverage in urban centers 3 = Full coverage, including rural and hard-to-reach areas
Registrars have adequate training*	0 = No data 1 = No formal training for registrars 2 = Mostly skills and knowledge are acquired on job 3 = All registrars receive training and/or have opportunities for skills improvement
There is a formal CRVS interagency collaboration (has oversight role, includes key stakeholders, meets regularly)*	0 = No data 1 = No or very limited system 2 = Partial or unofficial system 3 = Complete system
All data are exchanged electronically from local to regional offices and then to central offices*	0 = No data 1 = System is paper-based where paper copies are used to transfer records at all levels 2 = Paper copies used at local offices with electronic processing in regional/central offices 3 = Sharing of information is electronic at all levels
Data quality and analysis: there are reports that provide evidence of data quality assessment, adjustment and analysis of vital statistics using international standards*	0 = No data 1 = No system/limited system of quality checks 2 = Quality checks are performed on aggregated data 3 = Checks are performed on individual records and aggregate data routinely
Monitoring of system performance*	0 = No data 1 = No or limited monitoring of system performance 2 = Regular monitoring of registration completeness and generating other key system performance indicators at central level 3 = Regular monitoring of registration completeness and generating other key system performance indicators at national and sub-national levels
High quality vital statistics reports have been published in the last five years*	0 = No data 1 = No vital statistics report published in last 5 years 2 = High quality vital statistics (VS) reports produced as scheduled for at least two annual publication cycles 3 = High quality VS reports produced as scheduled for at three or more annual publication cycles
Total possible score:	24

Scoring methodology

This indicator is not used in overall scoring but will be included in additional analysis where available.

Data sources

Country rapid and/or comprehensive CRVS assessments.

**C2. Certification and reporting of causes of death****Target**

Countries should have the capacity to report leading causes of death that account for large proportions and numbers of deaths in the total population, and within specified population groups, for recent time periods. Statistics on causes of death are best generated from the medical certification of cause of death according to the standards set out in the International Statistical Classification of Diseases (ICD). Where this is not possible, verbal autopsy can be used to estimate cause of death distributions in the population.

Indicator C2.1: Deaths with medical certificate with cause of death (MCCD) and ICD coding as a percentage of total deaths (%)

C2.1 Completeness of deaths with cause of death reported to national authorities and/or international institutions (%)	
Based on the following indicator items	Response category
Completeness of death reporting to civil registrar with cause of death reported	1 = No standardized system for medical certification of cause of death 2 = Less than 30% 3 = 30-69% 4 = 70-89% 5 = 90 to 100%
Total possible score:	100%

Scoring methodology

Completeness of deaths with cause of death is compared against the tables below to determine the country's score

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
C2.1	Completeness of deaths with cause of death reported to national authorities and/or international institutions (%)					
C2.1	There is no standardised system for medical certification of cause of death	Score <30%	Score 30-69%	Score 70-89%	Score ≥90%	1-5

Data sources

Country CRVS reports/documents

**Indicator C2.2: Quality of cause-of-death data (% of cause of death with ill-defined or unknown causes of mortality)**

C2.2 Quality of cause-of-death data (% of ill-defined or unspecified ICD codes)	
Based on the following indicator items	Response category
Quality of cause-of-death data, measured as percentage of records with ill-defined or unknown causes of mortality	1 = Not applicable (cause-of-death not captured in standardized system) 2 = At least 30% ill-defined or unspecified causes 3 = 20-29% ill-defined or unspecified causes 4 = 10-19% ill-defined or unspecified causes 5 = Less than 10% ill-defined or unspecified causes
Total possible score:	5

Scoring methodology

Quality of cause-of-death is compared against the tables below to determine the country's score

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
C2.2	Quality of cause-of-death data (% of cause of death with ill-defined or unspecified causes of mortality)					
C2.2	Not applicable in the absence of data	Total score is 2 or less	Total score is 3	Total score is 4	Total score is 5	1-5

Data sources

Country CRVS reports/documents.



Indicator C2.3: Core attributes of a functional system to generate cause-of-death statistics*

C2.3 Core attributes of a functional system to generate cause-of-death statistics	
Based on the following indicator items	Response category
Legislation for medical certificate of cause of death (MCCD)*	0 = No data 1 = No legislation or regulations exist and MCCD not used 2 = Informal policy to use MCCD, but no official policy, regulation, or law in place 3 = Legislation or regulation mandating the use of MCCD in place
Use of ICD compliant MCCD*	0 = No data 1 = No or very limited 2 = Partial 3 = Complete
Medical students trained in correct death certification practices*	0 = No data 1 = No or very limited number of medical schools training on death certification 2 = At least 50% of medical schools training on death certification 3 = All medical schools training on death certification
Statistical clerks are trained*	0 = No data 1 = No or very limited training 2 = Partial or unofficial training 3 = Complete training and re-training
Verbal autopsy (if applicable) is applied*	0 = No data 1 = No or very limited application of verbal autopsy (VA) in Health and demographic surveillance system (HDSS) sites 2 = Implementation of VA in part of nationally representative sample 3 = Complete implementation of VA in nationally representative sample
Data quality checks*	0 = No data 1 = No or very infrequent data quality checks 2 = Regular implementation of limited number of data quality checks 3 = Regular implementation of all data quality checks
CoD statistics*	0 = No data 1 = No or very limited health sector production of cause of death statistics or statistics not to ICD standard 2 = Infrequent production of facility cause of death statistics to ICD standard. No reliable cause of death data for out-of-facility deaths 3 = Regular production of facility and out-of-facility cause of death statistics to ICD standard
Total possible score:	24

Scoring methodology

This indicator is not used in overall scoring but will be included in additional analysis where available.

Data sources

Country rapid and/or comprehensive CRVS assessments.



Optimize health service data to ensure equitable, quality services for all

Interventions	Key elements	Indicators
Optimize health service data	Routine facility reporting system with patient monitoring	Availability of annual statistic for selected indicators derived from facility data
		Functional facility/patient reporting system in place based on key criteria*
	Regular system to monitor service availability, quality and effectiveness	Well-established system to independently monitor health services
		Availability of latest data on national health expenditure
	Health service resources	Health worker density and distribution updated annually
		National human resource for health information system (HRHIS) is in place and functional*



O1. Routine facility reporting system with patient monitoring

Target

Countries should have the capacity to produce timely and reliable individual-level and aggregate statistics from the health facility, including hospitals and community outreach programmes.

These data are used for client management, facility management, disease surveillance, sector planning, monitoring, and management at all levels.

Indicator O1.1: Availability of annual statistic for selected indicators derived from facility data

O1.1	Availability of annual statistic for selected indicators derived from facility data	
Based on the following indicator items		Response category
OPD visits	<i>Each indicator item is scored on the following 4 attributes (with yes/no response for each attribute):</i> <ul style="list-style-type: none"> – Availability at national level – Availability at sub-national level – Disaggregation by age – Disaggregation by gender 	0=No
Hospital admission /discharge rates – by diagnosis		1=Yes
Hospital deaths by major diagnostic category (ICD)		See details below
DTP/Penta3 in one year-olds		
Institutional maternal mortality		
TB treatment success rates		
Low birth weight prevalence among institutional births		
ART coverage		
Surgery by type		
Severe mental health disorders		
New cancer diagnosis by type		
Total possible score:		24

Scoring methodology

For the 11 indicators, each is measured based on availability at national level. Most are also scored based on availability at sub-national level and disaggregation by age and sex, checks in the table below indicate relevant disaggregations. The score for each indicator is a weighted score based on the availability of relevant disaggregations with more credit given for having national level data, details are in the table below.

Indicator	Relevant?				Weighting for score
	National	Sub-National	Age	Sex	
OPD visits (new / revisits)	✓	✓	✓	✓	0.5 – national 0.25 – sub-national 0.125 – age 0.125 – sex
Hospital admission/discharge rates, by diagnosis	✓	✓	✓	✓	
Hospital deaths by major diagnostic category (ICD)	✓	✓	✓	✓	
Severe mental health disorders	✓	✓	✓	✓	
Surgical interventions by type	✓	✓	✓	✓	
TB treatment success rates	✓	✓	✓	✓	
New cancer diagnoses by type	✓	✓	✓	✓	
DTP/Penta3 (<1)	✓	✓			0.7 – national 0.3 – sub-national
Institutional maternal mortality ratio	✓	✓			
Low birthweight prevalence among institutional births	✓	✓		✓	0.625 – national 0.25 – sub-national 0.125 – sex
ART coverage	✓		✓	✓	0.6 – national 0.2 – age 0.2 – sex



OPTIMIZE health service data

Indicator	Weight indicator score (sum=1 for each indicator)			
	National	Sub-National	Age	Sex
OPD visits (new / revisits)	0.25	0.25	0.125	0.125
Hospital admission/discharge rates, by diagnosis	0.5	0.25	0.125	0.125
Hospital deaths by major diagnostic category (ICD)	0.5	0.25	0.125	0.125
Severe mental health disorders	0.5	0.25	0.125	0.125
Surgical interventions by type	0.5	0.25	0.125	0.125
TB treatment success rates	0.5	0.25	0.125	0.125
New cancer diagnoses by type	0.5	0.25	0.125	0.125
DTP/Penta3 (<1)	0.7	0.3	NA	NA
Institutional maternal mortality ratio	0.7	0.3	NA	NA
Low birthweight prevalence among institutional births	0.625	0.25	NA	0.125
ART coverage	0.6	NA	0.2	0.2

The score for each indicator is also weighted based on the age of the data (only one year is collected per indicator):

2017-2019 = 1

2016 = 0.8

2015 (or missing) = 0.6

The weighted score for these 11 availability indicators is divided by the total possible score (11) to determine the percent of the criteria that are met. This is compared against the table below to determine the score for O1.1.

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
O1.1	Availability of annual statistic for selected indicators derived from facility data					
	Meets <25 % of criteria for availability	Meets 25-49% of criteria for availability	Meets 50-70% of criteria for availability	Meets 71-89% of criteria for availability	Meets ≥ 90% of criteria for availability	1-5

Data sources

Health management information system (HMIS) reports (primary health care and hospital reports), master facility list documentation/report, cancer registry annual report.



Indicator O1.2: Functional facility/patient reporting system in place based on key criteria *

O1.2	Coverage levels of reporting from facilities	
Based on the following indicator items		Response category
Documented data quality checks for PHC data		0=No/Not available 1=Partial 2=Comprehensive
Documented data quality checks for hospital data		
Completeness of reporting by public, primary care facilities		
Completeness of reporting by public hospitals		0 = No data 1 = <25 2 = 25-75 3 = >75
Completeness of reporting by private health facilities		
National unique patient identifier system		
Cancer registries		0 = No data 1 = Not there 2 = Partially there 3 = Mostly/all there
Master facility list		
Data quality assurance		
Data management SOPs		
Standardized system of electronic data entry (aggregate reporting) at the district or comparable level		
System of electronic capture of patient level health data in primary care health facilities which is standardized and fully interoperable with aggregated routine HIS		
System of electronic capture of patient level health data in hospitals which is standardized and fully interoperable with aggregated routine HIS		
Interoperability - standards based data exchange between systems		
Total possible score:		
		40

Scoring methodology

This indicator is not used in overall scoring but will be included in additional analysis where available.

Data sources

HMIS reports (primary health care and hospital reports), master facility list documentation/report, cancer registry annual report.

HMIS/HIS assessment reports, PRISM (Performance of Routine Information System management) assessment reports.



O2. Regular system to monitor service availability, quality and effectiveness

Target

All countries should have in place a regular comprehensive system of monitoring service availability, readiness, quality and effectiveness.

Monitoring and measurement of care quality is a critical component of measuring effective coverage of high-impact interventions within the context of UHC. Data from both facilities and populations are needed to provide a full assessment of the functioning of a health system and its impact on health. A system of external review through facility surveys provides assurances that healthcare facilities have quality systems in place and the data to demonstrate the required level of service provision. Depending on the comprehensiveness of the standards against which health service performance is being measured, facility surveys can contribute to quality improvement, risk mitigation, patient safety, improved efficiency and accountability, and can contribute to the sustainability of the health-care system. They can provide information on how well health services are being delivered, identify gaps, and assist the decision-making of funders, regulators, healthcare professionals and the public.

Indicator O2.1: Well-established system to independently monitor health services

O2.1 Well-established system to independently monitor health services	
Based on the following indicator items	Response category
Regular independent assessments of the quality of care in hospitals and health facilities	0 = No data 1 = No system 2 = Ad hoc assessments of availability and readiness only 3 = Regular monitoring of service availability and readiness only 4 = Ad hoc monitoring of service quality 5 = Regular and established monitoring of quality of care
System of accreditation of health facilities based on data	0 = No data 1 = No system 2 = Partially there 3 = Mostly/all there
System of adverse event reporting following medical interventions*	
Total possible score:	8

Scoring methodology

The score for independent assessment is weighted based on the age of the data:

2017-2019 = 1
2016 = 0.8
2015 (or missing) = 0.6

The 2 indicator items above are added together and the total is compared against the table below to determine the score for O2.

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
O2.1	Well-established system to independently monitor health services					
	There is no system to independently monitor health services (score of 1 or 0 for both attributes)	Total score of key indicator items is 3 or less (but at least one attribute has a score of 2)	Total score of key indicator items is greater than 3 to less than 5	Total score of key indicator items is 5 to less than 7	Total score of key indicator items 7 or higher	1-5

Data sources

Facility survey reports, annual statistics reports, adverse event reports, accreditation reports.



O3. Health service resources: health finance data

Target

All countries are encouraged to institutionalize a system of health accounts, based on international standards. An electronic system of tracking public expenses at all levels of government is desirable to track subnational expenditures.

Countries need to ensure that there is a strong governance structure to support the process and that there is adequate human capacity and IT infrastructure at national and subnational levels to produce the national health accounts (NHA) data and core indicators on a regular basis. Government expenditure data codes can be mapped to the NHA coding system and the data are automatically converted to the NHA format. The result is a central NHA database that is used for the production of standard NHA tables and indicators.

Indicator O3.1: Availability of latest data on national health expenditure

O3.1 Availability of latest data on national health expenditure	
Based on the following indicator items, weighted by use of System of Health Accounts (SHA 2011) methodology or other international standards, recency of most recent report, and frequency of publishing:	Response category
Public health expenditure data	0=No 0.8=Yes, but not based on international standards 1=Yes, based on international standards
Private health expenditure data	
Proportion of the population with large household expenditure on health as a share of total household consumption or income	
Total possible score (each item score is multiplied by 3 to show results on a three point scale):	3

Scoring methodology

The 3 indicator items above are scored and the total is compared against the table below to determine the score for O3.1.

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
O3.1	Availability of latest data on national health expenditure					
	Key health expenditure indicators are not produced	Total weighted score of key indicator items is less than 1	Total weighted score of key indicator items is between 1 and 2	Total weighted score of key indicator items is between 2 and 3	Total score of key indicator items is 3	1-5

Data sources

National health accounts reports/data bases



O3. Health service resources: health workforce data

Target

All countries are encouraged to institutionalize a system of national health workforce accounts (NHWA), a system by which countries progressively improve the availability, quality, and use of data on health workforce.

The purpose of the NHWA is to facilitate the standardization of a health workforce information system to improve interoperability and data sharing among national stakeholders, as well as to support tracking of human resources for health (HRH) policy performance towards universal health coverage. As health systems and HRH issues vary across and within countries, countries have different key policy questions with respect to HRH. Addressing national priorities, it is for countries to decide the most relevant NHWA indicators for the monitoring and management of their national health workforce. As the NHWA implementation is progressive in nature, some of the benefits for countries will be immediate while others will become available over the longer term.

Indicator O3.2: Health worker density and distribution updated annually

O3.2 Health worker density and distribution updated annually		
Based on the following indicator items		Response category
Medical doctors	Each indicator item is scored on the following 5 attributes (with yes/no response for each attribute): <ul style="list-style-type: none">– Availability at national level– Availability at sub-national level– Disaggregation by age– Disaggregation by gender– Disaggregation by public/private	0=No 1=Yes
Dentists		
Pharmacists		
Nurses		
Midwives		
Nurses/midwives (where not reported separately)		
Total possible score:		4 or 5

Scoring methodology

For each cadre, score based on availability at national level and sub-national level and disaggregation by age, sex, and private/public facilities. The score for each indicator is a weighted score based on this availability with more credit given for having national level data. See below for details.

The weighting is:

National – 0.55
 Sub-national – 0.2
 Public/private – 0.1
 Sex – 0.075
 Age – 0.075

The score for O3.2 (workforce) is the sum of the scores for the cadres divided by 5 (for countries reporting nurses and midwives separately) or 4 (for countries reporting nurses and midwives together).

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
O3.2	Health worker density and distribution updated annually					
	Meets <20 % of criteria for availability	Meets 20-39% of criteria for availability	Meets 40-59% of criteria for availability	Meets 60-79% of criteria for availability	Meets ≥ 80% of criteria for availability	1-5

Data sources

National Health Workforce Accounts.



Indicator O3.3: National human resource for health information system (HRHIS) is in place and functional*

O3.3	National human resources for health information system (HRHIS) is in place and functional	
HRHIS tracking on the following indicator items*		Response category
Number of entrants to the labour market		0 = No tracking 1 = Yes, partial tracking 2 = Yes, full tracking
Number of exits from the labour market		
Number of active stock on the health labour market		
Demographic distribution of active health workers		
Subnational level data of active health workers		
Number of graduates from education and training institutions		
Information on foreign-born and/ or foreign-trained health workers		
Total possible score:		14

*By health occupations

Scoring methodology

This indicator is not used in overall scoring but will be included in additional analysis where available.

Data sources

National Health Workforce Accounts.



Review progress and performance to make informed decisions

Interventions

Key elements

Indicators

Review progress and performance

Regular analytical reviews of progress and performance with equity

High quality analytical report of health sector progress and performance of health sector strategy/plan are produced annually

Institutional capacity for analysis and learning

Institutional capacity in data analysis at national and subnational levels

R1. Regular analytical reviews of progress and performance with equity

Target

Countries should undertake regular analytical/statistical reviews to document progress and performance of the national and local health sector plan during a specific period.

Assessment of national health sector plan (NHSP) progress measures performance of the indicators in relation to its baseline values, while assessment of NHSP performance measures performance of the indicators in relation to its targets. This should include an in-depth analysis and synthesis of all relevant data, including health and other household surveys, health facility and disease surveillance data, facility assessments, administrative data (such as human resources and financing), health systems and policy data and research studies. The analytical report should include assessment of progress against targets for key indicators and benchmarks, as well as additional programme-specific indicators, equity analysis by key stratifiers, comparative analyses with peer countries, performance and efficiency analysis comparing inputs and outputs at the subnational level, and computation of lives saved through interventions. Data quality assessment with supervision and possible adjustment should be carried out to maximize the report's quality and usefulness.

Indicator R1.1: High quality analytical report of health sector progress and performance produced annually

R1.1	High quality analytical report of health sector progress and performance produced annually	
Based on the following indicator items		Response category
Uses all data relevant sources		0 = Data not available 1 = Not there/limited coverage 2 = Partially there* 2 = Mostly/all there*
Assesses progress against target		
Pays attention to inequalities: subnational		
Pays attention to inequalities: socioeconomic		
Pays attention to inequalities: gender		
Assesses performance, linking to expenditure reviews, workforce and other health inputs		
Includes comparative analysis (country to country)		
Includes subnational rankings for key indicators (or index)		
Includes performance metrics for large health facilities / hospitals		
Links finding to policy		
Total possible score:		20

Scoring methodology

The 10 indicator items above are scored based on the response and weighted based on the recency of the source document:

2017-2019 = 1
 2016 = 0.8
 2015 (or missing) = 0.6

*Given the difficulty in distinguishing between “partially there” and “mostly/all there”, the scoring system credits these two categories with the same score. The weighted total is compared against the table below to determine the score for R1.

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
R1.1	High quality analytical report of health sector progress and performance produced annually					
	No report produced in past 5 years	Total weighted score of key indicator items is less than 8.	Total weighted score of key indicator items is 8 to less than 13	Total weighted score of key indicator items is 13 to less than 17	Total score of key indicator items is 17 or higher	1-5

Data sources

Ministry of Health (MOH)'s health sector performance reports (annual, midterm, final evaluations); annual health sector analysis reports/other scorecards and reports; health sector / programme reviews.

R2. Institutional capacity for analysis and learning

Target

All countries should have adequate institutional capacity for health data collection, compilation and sharing, data quality assurance, analysis and synthesis, data interpretation, and effective communication and use of results

Institutional capacity at all levels of the health system for data analysis and for making data meaningful to multiple audiences, including civil society, health managers and decision makers. Adequate capacity to improve the quality of data and make the health data meaningful to multiple audiences, including civil society, health managers, and decision-makers, is key to triggering policy dialogue, making informed decisions, taking corrective measures when needed, and providing adequate feedback to support local planning and management.

Indicator R2.1: Institutional capacity in data analysis at national and subnational levels

R2.1 Institutional capacity in data analysis at national and subnational levels	
Based on the following indicator items	Response category
Involvement of public health institutes	0 = No data available 1 = No/little involvement 2 = Some involvement 3 = Strong involvement
Sub-national capacity in MOH or independent institutions*	
Capacity at national MOH	0 = No data available 1 = No/little involvement 2 = Some involvement 3 = Strong involvement
Capacity at NBS - average of capacity to:	
– draw sample	0 = No data available
– implement surveys	1 = No/little capacity
– analyse	2 = Some capacity 3 = Strong capacity
Total possible score:	9

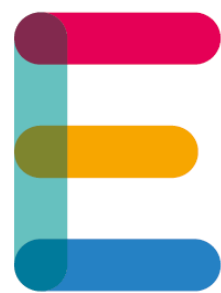
Scoring methodology

The three indicator items above are scored based on the response and the total is compared against the table below to determine the score for R2.

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
R2.1	Institutional capacity in data analysis at national and subnational levels					
	Key indicator items meet 25% or less of standards	Key indicator items meet more than 25% but less than 50% standards	Key indicator items meet 50% to less than 67% of standards	Key indicator items meet 67% to less than 83% of standards	Key indicator items meet at least 85% of standards	1-5

Data sources

HIS assessments; M&E plans/HIS strategies.



Enable

data use for
policy and action

to accelerate improvement

Enable data use for policy and action	Data and evidence drive policy and planning	National health plan and policies are based on data and evidence
	Data access and sharing	Health statistics (reports and data) are publicly available
		National monitoring and evaluation (M&E) is based on standards
	Strong country-led governance of data	National digital health/e-health strategy is based on standards
		Foundational elements to promote data use and access are present

E1. Data and evidence drive policy and planning

Target

Countries use data and evidence to drive policy making and annual operational plans to prioritize activities and allocate resources. The use of regular independent analyses and reviews will strengthen accountability and should galvanize remedial action. This requires transparent, inclusive mechanisms that foster discussion of findings on a regular basis, and help identify follow-up remedial action. Routine representation of civil society members in accountability mechanisms at all levels, including national health sector reviews, is important. The media, parliamentarians, professional associations and academics are also important stakeholders.

Indicator E1.1: National health plan and policies are based on data and evidence

E1.1	National health plan and policies are based on data and evidence	
Based on the following indicator items		Response category
National health plan/policies include review of past performance (trends)		1 = Not there 2 = Partially there 3 = Mostly/all there
National health plan/policies include burden of disease analysis		1 = Not there 2 = Partially there 3 = Mostly/all there
National health plan/policies include health system strength analysis (response strength)		1 = Not there 2 = Partially there 3 = Mostly/all there
Presence of output of a central unit or function in MOH for data and evidence to policy translation		0=No 1=Yes
Level of output of a central unit or function in MOH for data and evidence to policy translation		1 = Rarely/no outputs 2 = Annual 3 = At least quarterly
Coordination function between MOH and partners		0=No 1=Yes
Total possible score:		14

Scoring methodology

The six indicator items above are scored based on the response and the total is compared against the table below to determine the score for E1.

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
E1.1	National health plan and policies are based on data and evidence					
	Total score of key indicator items is 3 or less	Total score of key indicator items is 4-6	Total score of key indicator items is 7-8	Total score of key indicator items is 9-11	Total score of key indicator items is 12 or higher	1-5

Data sources

Health sector strategic plans; health policies.

E2. Data access and sharing

Target

Accountability for health requires openly available, credible statistics at a number of levels. Health data is accessible to decision-makers at all levels, including sub-national decision makers and local communities with appropriate dis-aggregations for inequalities to all constituencies, including the general public.

Indicator E2.1: Health statistics are publicly available

E2.1	Health statistics are publicly available	
Based on the following indicator items		Response category
Frequency of updating NHO		1 = Rarely/ad hoc/less than annual 2 = Annually 3 = More than once per year
NHO contents		1 = Limited contents 2 = Some coverage of health statistics 3 = Extensive coverage of health statistics
NHO navigation ease		1 = Difficult 2 = Moderately difficult 3 = Easy
Statistical report publication frequency		1 = Less than once every 5 years 2 = Every 2-5 years 3 = Annually
Statistical report includes disaggregations		1 = Limited/no disaggregation 2 = Appropriate disaggregation mostly at national level 3 = Appropriate disaggregation at national and subnational level
Access to HMIS		1 = Not at all 2 = Restricted access 3 = Broad access
Access to health surveys		1 = Not at all 2 = Restricted access 3 = Broad access
Open data policy*		1 = No policy 2 = Policy exists with limited enforcement 2 = Fully enforced policy
Total possible score:		23

Scoring methodology

*Given the difficulty in determining the level of enforcement consistently, the scoring system credits these two categories with the same score.

The eight indicator items above are scored based on the response and the total is compared against the table below to determine the score for E2.

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
E2.1	Health statistics are publicly available					
	Total score of key indicator items is 8 or less	Total score of key indicator items is 9-12	Total score of key indicator items is 13-16	Total score of key indicator items is 17-20	Total score of key indicator items is 21 or higher	1-5

Data sources

On-line databases/briefs and reports.

E3. Strong country-led governance of data

Target

Well- functioning country health information system ultimately requires a sound policy and institutional environment. This includes sound governance policies and legal frameworks for data as well as multi-stakeholder coordination mechanisms, with defined roles and responsibilities for the different stakeholders.

Indicator E3.1: National monitoring and evaluation (M&E) is based on standards

E3.1	National monitoring and evaluation (M&E) is based on standards	
Based on the following indicator items		Response category
Includes a core indicator list with baselines and targets		1 = Not there 2 = Partially there 3 = Mostly/all there
Includes specification on data collection methods, digital architecture required for reporting of key indicators		
Has data quality assurance mechanisms in place		
Includes analysis process and review process specifications that includes roles and responsibilities		
Specifies use of data for policy and planning		
Includes a plan for dissemination of data		
Specifies resource requirements to implement the strategic plan/policy		
Total possible score:		21

Scoring methodology

The seven indicator items above are scored based on the response and the total is compared against the table below to determine the score for E3.1.

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
E3.1	National monitoring and evaluation (M&E) is based on standards					
	No M&E or HIS plan exists that is linked to the current national health sector strategy	Total score of key indicator items is 9 or less	Total score of key indicator items is 10-14	Total score of key indicator items is 15-17	Total score of key indicator items is 18 or higher	1-5

Data sources

National health strategic plan; national M&E plans; national health annual operational plans; national health budget; HIS assessment reports; HMIS assessments; national digital health plans; national e-Health or m-Health plans; national policy legal and regulatory frameworks for HIS; M&E coordination mechanism terms or reference.

Indicator E3.2: National digital health/e-health strategy is based on standards

E3.2	National digital health/e-health strategy is based on standards	
Based on the following indicator items		Response category
Digital plan /e-health strategy includes discussion of health data architecture		1 = Not there 2 = Partially there 3 = Mostly/all there
Digital plan /e-health strategy includes description of health data standards and exchange?		
Digital plan /e-health strategy includes handling of data security issues		
Digital plan /e-health strategy includes specifications for data confidentiality and data storage		
Digital plan /e-health strategy specify access to data		
Digital plan /e-health strategy specifies alignment/is integrated with national HIS strategy?		
Total possible score:		18

Scoring methodology

The six indicator items above are scored based on the response and weighted based on the presence of the source document (where appropriate). The weighted total is compared against the table below to determine the score for E3.2.

Indicator number	Nascent capacity 1	Limited capacity 2	Moderately developed capacity 3	Well-developed capacity 4	Sustainable capacity 5	Scoring (1-5)
E3.2	National digital health/e-health strategy is based on standards					
	An eHealth strategy is non-existent or is no longer current	Total score of key indicator items is 8 or less	Total score of key indicator items is 9-12	Total score of key indicator items is between 13-15	Total score of key indicator items is 16 or higher	1-5

Data sources

National health strategic plan; national M&E plans; national health annual operational plans; national health budget; HIS assessment reports; HMIS assessments; national digital health plans; national e-Health or m-Health plans; national policy legal and regulatory frameworks for HIS; M&E coordination mechanism terms or reference.

Indicator E3.3: Foundational elements to promote data use and access are present*

E3.3	Foundational elements to promote data use and access are present	
<i>Based on the following indicator items</i>		Response category
Legal framework or policies exist for health information systems		0=No 1=Yes
Legal framework or policies are enforced		1 = Legislation exists but is not enforced 2 = Legislation exists but is not enforced consistently 3 = Legislation exists and is enforced 4 = Legislation exists, is enforced and actively reviewed to reflect changes in health domain
Total possible score:		Qualitative scoring

Scoring methodology

This indicator is not used in overall scoring but will be included in additional analysis where available.

Data sources

National health strategic plan; national M&E plans; national health annual operational plans; national health budget; HIS assessment reports; HMIS assessments; national digital health plans; national e-Health or m-Health plans; national policy legal and regulatory frameworks for HIS; M&E coordination mechanism terms or reference.

Annex 1

Maturity model: thresholds used for scoring

S1 System of regular population-based health surveys	1: <0.25, 2: 0.25 – 0.49, 3: 0.5 – 0.69, 4: 0.7 – 0.79, 5: >0.8
S2 Surveillance of public health threats	1: ≤ 0.2, 2: ≤ 0.4, 3: ≤ 0.6, 4 ≤ 0.8, 5 >0.8
S3 Regular population census	1 ≤0.25, 2: <0.5, 3 <0.71, 4 <0.91, 5 >0.91
C1 Full birth and death registration	1 no data, 2 <0.5, 3 <0.85, 4 <0.9, 5 ≥0.9
	1 no data, 2 <0.5, 3 <0.85, 4 <0.9, 5 ≥0.9
	1 no system, 2 <0.3, 3 <0.7, 4 <0.9, 5 ≥0.9
C2 Certification and reporting of causes of death	1 no data, 2 at least 30% ill-defined, 3 20-29% ill-defined 4 10-19% ill-defined, 5 less than 10% ill-defined
O1 Routine facility and reporting system with patient monitoring	1 ≤0.25, 2 <0.50, 3 <0.71, 4 <0.90, 5 >0.90
O2 Regular system to monitor service availability, quality and effectiveness	1 no data, 2 ≤ 0.27, 3 <0.45, 4 <0.73, 5 ≥0.73
O3 Health service resources	1 – 0, 2 <1.2, 3 <2.3, 4 <3, 5 – 3
Finance	
Workforce	1 <0.2, 2 <0.4, 3 <0.6, 4 <0.8, 5 ≥0.8
R1 Regular analytical progress and performance reviews, with equity	1 <0.25, 2 <0.5, 3 <0.67, 4 <0.83, 5 ≥0.83
R2 Institutional capacity for analysis and learning	1 ≤0.25, 2 <0.5, 3 <0.67, 4 <0.83, 5 ≥0.83
E1 Data and evidence drive policy and planning	1 <4, 2 <7, 3 <9, 4 <12, 5 ≥12
E2 Data access and sharing	1 <9, 2 <13, 3 <17, 4 <21, 5 ≥21
E3 Strong country-led governance of data	1 -No M&E plan, 2 <10, 3 <15, 4 <18, 5 ≥18
	1 -No eHealth strategy, 2 <9, 3 <13, 4 <16, 5 ≥16

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