



for **Health Data**
Technical Package

Assessment Methodology, 2020



World Health
Organization



for **Health Data**
Technical Package

Assessment Methodology, 2020

Made possible by funding from
Bloomberg Philanthropies



SCORE for health data technical package: assessment methodology, 2020
ISBN 978-92-4-001872-3 (electronic version)
ISBN 978-92-4-001897-6 (print version)

© World Health Organization 2021

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercialShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition".

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization (<http://www.wipo.int/amc/en/mediation/rules/>).

Suggested citation. SCORE for health data technical package: assessment methodology, 2020. Geneva: World Health Organization; 2021. Licence: [CC BY-NC-SA 3.0 IGO](https://creativecommons.org/licenses/by-nc-sa/3.0/igo).

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

Sales, rights and licensing. To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

Photo credits. page viii: © WHO | NOOR - Sebastian Liste; page 27: © WHO | Blink Media - Saiyna Bashir; page 39: © WHO | Lindsay Mackenzie; page 45: © WHO | Sebastian Meyer; page 55: © WHO | Christopher Black; page 65: © WHO | Jawad Jalali

SCORE logo by Artifex Creative Webnet Ltd (ACW). Design and layout by Café.art.br

Contents

- Acronyms** **vi**

- Overview** **1**

- Survey populations and health risks** **8**
 - System of regular population-based surveys.....9
 - Surveillance of public health threats12
 - Regular population census16

- Count births, deaths and causes of death** **18**
 - Full birth and death registration19
 - Certification and reporting of causes of death23

- Optimize health service data** **28**
 - Routine facility reporting system with patient monitoring29
 - Regular system to monitor service availability, quality and effectiveness.....33
 - Health service resources: health financing and health workforce35

- Review progress and performance** **40**
 - Regular analytical reviews of progress and performance, with equity41
 - Institutional capacity for analysis and learning.....43

- Enable data use for policy and action** **46**
 - Data and evidence drive policy and planning.....47
 - Data access and sharing49
 - Strong country-led governance of data51

- Annexes** **56**
 - Annex 1. SCORE Interventions, elements and indicators.....57
 - Annex 2. SCORE Assessment maturity models for indicators included in scoring.....62

Acronyms

ART	Antiretroviral Therapy
COD	Cause of Death
CRVS	Civil Registration and Vital Statistics
DHS	Demographic and Health Survey
FAO	Food and Agriculture Organisation
GGE	General Government Expenditure
GGHE-D	General Government Health Expenditure -Domestic
HDSS	Health and Demographic Surveillance System
HMIS	Health Management Information System
HRHIS	Human Resource Health Information System
HRSDG	Health-Related Sustainable Development Goals
HIS	Health Information System
HIV	Human Immunodeficiency Virus
ICD	International Classification of Diseases
IHR	International Health Regulations
JEE	Joint External Examination
MoH	Ministry of Health
M&E	Monitoring and Evaluation
MCCD	Medical Certificate of Cause of Death
NHA	National Health Accounts
NHO	National Health Observatory
NHSP	National Health Sector Strategic Plan
NHWA	National Health Workforce Accounts
OIE	World Organisation for Animal Health

OPD	Outpatient Department
PES	Post Enumeration Survey
PHEIC	Public Health Emergency of International Concern
PRISM	Performance of Routine Information System Management
SCORE	Survey, Count, Optimize, Review, Enable
SOP	Standard Operating Procedure
SDG	Sustainable Development Goal
SHA	System of Health Accounts
SPAR	State Party Self-Assessment Annual Reporting tool
UHC	Universal Health Coverage
UNDESA	United Nations Department of Economic and Social Affairs
UNSD	United National Statistical Division
VA	Verbal Autopsy
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization



Overview

The SCORE for health data package uses five interventions: **S**urvey populations and health risks; **C**ount births, deaths and causes of death; **O**ptimize health service data; **R**evue progress and performance; **E**nable data use for policy and action. Each intervention has a set of key elements, which is accompanied by a set of indicators. In total, there are 24 quantitative and qualitative indicators for assessing SCORE interventions at various levels.

The SCORE *Assessment methodology, 2020* complements the SCORE *Global report on health data and capacity, 2020*, and explains how countries were assessed and scored by five interventions and the accompanying elements and indicators.

SCORE Assessment instrument and indicators

The SCORE *Assessment instrument* and the accompanying indicators were used to collect data to assess the Health Information Systems (HIS) in countries. They were developed in consultation with World Health Organization (WHO) country representatives, and technical experts from WHO regional offices and headquarters, and also drew upon the expertise and experience of external agencies and individual experts.

Data gathered for the Global report on health data systems and capacity were initially obtained through a desk review of qualitative and quantitative data from multiple sources, including global, regional, and national survey reports, regional and national health information databases, national birth and death registration portals, and health facility data. These preliminary data and assessments were shared with countries for review and input

through WHO regional and country offices, and validated, most commonly, by the ministry of health. During the review and verification process, additional data were also submitted by multiple institutions, including ministries of health, national public health institutions, bureaus of statistics, ministries of finance, and other bodies responsible for specific data areas. Overall, 133 countries validated the data or provided permission to use the data from the desk review.

Country sign-off

Collated data and assessments for each country (in the form of a summary sheet and draft country profile) were sent to respective governments for review and sign-off. Any changes requested or made by national authorities required supporting documentation verified by WHO SCORE focal persons. Some countries provided (caveated) permission to publish results which include an additional note indicating that validation is still awaiting completion due to delays related to the COVID-19 pandemic. When finalized these results will be updated online.

Scoring methodology

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

For each intervention there is a set of key elements. Each key element is measured by one or more indicators and each indicator is defined by a set of attributes or items. Scoring begins at the indicator level by assessing the attributes.

Reviewers assess each indicator attribute against a publicly available and verifiable source document (or website). Reviewers must provide documentation of the data sources for each indicator scored. In the case of multiple items, the indicator is scored by taking the sum of these item scores and comparing it to a maturity model. If there is more than one indicator within an element, the indicator scores are averaged to get the element score. An intervention score is the average of the key element scores.

Due to concerns about data availability and/or comparability, not all indicators or key elements were used in calculating a country's score. Indicators and key elements not used in scoring are indicated by an asterisk.

Scoring example

Below is an example to calculate the country score for intervention E, "Enable data use for policy and action", using a hypothetical scenario.

SCORING THE INDICATORS

For each indicator countries receive a single score based on their current capacity.

This example begins by scoring the two indicators within the key element "Strong country-led governance of data": "National monitoring and evaluation (M&E) plan is based on standards" and "National digital health/eHealth strategy is based on standards". This element actually contains three indicators, but only two are used for illustration purpose.

For the first indicator, the first step is to determine if the country has a current M&E plan and then assign a score to 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):

TABLE N.1
SCORING EXAMPLE FOR INDICATOR "NATIONAL MONITORING AND EVALUATION (M&E) PLAN IS BASED ON STANDARDS"

Indicator items	Item score (hypothetical)	Response and score
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 (maximum) score	12	21

The sum of the indicator item scores is compared against the maturity model in table N.2 to determine the indicator score, which is an integer between 1 and 5.

TABLE N.2
SCORING TABLE FOR NATIONAL MONITORING AND EVALUATION (M&E)
IS BASED ON STANDARDS

Nascent capacity	Limited capacity	Moderate capacity	Well-developed capacity	Sustainable capacity
1	2	3	4	5
No M&E or HIS plan exists that is linked to the current national health sector strategic plan	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

In our example, the total sum of the indicator scores is 12, which corresponds to “Moderate capacity”. Therefore, the country scores a 3 on indicator “National monitoring and evaluation (M&E) plan is based on standards”.


Scoring for the second indicator is conducted in a similar way using Table N.3.

TABLE N.3
SCORING EXAMPLE FOR INDICATOR “NATIONAL DIGITAL HEALTH/
eHEALTH STRATEGY IS BASED ON STANDARDS”

Indicator items	Item score (hypothetical)	Response and score
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 (maximum) score	16	18

The sum of the indicator item score is 16, which corresponds to “Sustainable capacity” in the scoring table N.4. Therefore, the country scores a 5 for indicator “National digital health/eHealth strategy is based on standards”.

TABLE N.4
SCORING TABLE FOR INDICATOR “NATIONAL DIGITAL HEALTH/
eHEALTH STRATEGY IS BASED ON STANDARDS”



Nascent capacity 1	Limited capacity 2	Moderate capacity 3	Well-developed capacity 4	Sustainable capacity 5
An eHealth strategy is non-existent or is no longer current	Total score of key indicator items is 8 or lower	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

SCORING THE ELEMENTS

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

$$\text{Score of "Strong country-led governance of data"} = (\text{Score of "National monitoring and evaluation (M\&E) is based on standards"} + \text{Score of "National digital health/e-health strategy is based on standards"})/2 = (3+5)/2 = 4$$

SCORING THE INTERVENTION

The intervention score is the weighted sum of the elements under the intervention. The elements are weighted based on review by a set of experts to reflect their relative importance to a country’s ability to achieve high capacity for that intervention. Thus, elements that are considered critical are given higher weights.

In the following example, there are three elements in intervention “Enable data use for policy and action”. The element “data access and sharing” is considered the most important and was given a weight of 0.40. The remaining two elements “data and evidence” and “governance of data” are both given a weight of 0.30.

Therefore, the calculation of the intervention score is as follows:

$$\text{Score of "Enable data use for policy and action"} = [(0.3*\text{Score of "data evidence"}) + (0.4*\text{Score of "data access and sharing"}) + (0.3*\text{Score of "governance of data"})]$$

Using the score for “Governance of data” we calculated above and taking hypothetical scores of 3 and 2 for the other two key elements, the intervention score is calculated as follows:

$$\text{Score of "Enable data use for policy and action"} = (0.3*3) + (0.4*2) + (0.3*4) = 2.9$$

For simplicity, the final intervention score is rounded up to make an integer. Therefore, in our example, the country’s score for intervention “E (Enable data use for policy and action)” is 3.

It is worth noting that the element scores and intervention scores are usually calculated by taking the average of the indicators score or element scores, respectively. The scoring methods for most elements and interventions are thus not given in this document, unless the method is unique to the element or intervention.

Availability of latest data to monitor the HRSDGs and UHC

To assess the performance of health information system in countries, the SCORE package used 52 indicators from Health-Related Sustainable Development Goals (SDG) and one tracer variable for Universal Health Coverage index (UHC). The

availability of these 53 indicators since 2013 was evaluated and used to calculate an index for the overall performance of the health information system in the country. All 53 indicators are listed in the table N.5.

TABLE N.5
INDICATORS AND RESPONSES FOR DATA AVAILABILITY MEASUREMENT TO MONITOR HEALTH-RELATED SDGS AND UHC

Indicator items	Response and score
Maternal mortality ratio (per 100 000 live births)	0 No, not available 1 Yes, available
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 population)	
Tuberculosis incidence (per 100 000 population)	
Malaria incidence (per 1000 population at risk)	
Hepatitis B surface antigen (HBsAg) prevalence among children under 5 years*	
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 population)	
Total alcohol per capita (≥15 years of age) consumption (litres of pure alcohol)	
Road traffic mortality rate (per 100 000 population)	
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)	
Antiretroviral therapy (ART) coverage	
Care seeking behaviour for child pneumonia	
Cervical cancer screening among women aged 30-49 years	
Density of psychiatrists (per 100 000 population)	
Density of surgeons (per 100 000 population)	
Hospital beds (per 10 000 population)	

TABLE N.5 (CONTINUED)
AVAILABILITY OF LATEST DATA TO MONITOR THE HRSDGS AND UHC

Indicator items	Response and score
Households with at least access to basic sanitation	0 No, not available
Mean fasting plasma glucose (mmol/L)	1 Yes, available
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 of total household expenditure or income > 10% or >25%	
Age-standardized mortality rate attributed to household and ambient air pollution (per 100 000 population)	
Mortality rate attributed to exposure to unsafe Water, Sanitation and Hygiene (WASH) services (per 100 000 population)	
Mortality rate from unintentional poisoning (per 100 000 population)	
Age-standardized prevalence of tobacco smoking	
Diphtheria-tetanus-pertussis (DTP3) immunization coverage among 1-year-olds	
Measles-containing-vaccine second-dose (MCV2) immunization coverage by the nationally recommended age	
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 (USD)	
Density of dentistry personnel (per 100 000 population)	
Density of nursing and midwifery personnel (per 100 000 population)	
Density of pharmaceutical personnel (per 100 000 population)	
Density of physicians (per 100 000 population)	
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 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 (PM _{2.5}) in urban areas (µg/m ³)	
Average death rate due to natural disasters (per 100 000 population)	

TABLE N.5 (CONTINUED)
AVAILABILITY OF LATEST DATA TO MONITOR THE HRSDGS AND UHC

Indicator items	Response and score
Mortality rate due to homicide (per 100 000 population)	0 No, not available
Estimated direct deaths from major conflicts (per 100 000 population)	1 Yes, available
Completeness of cause-of-death data	
Total maximum score	53

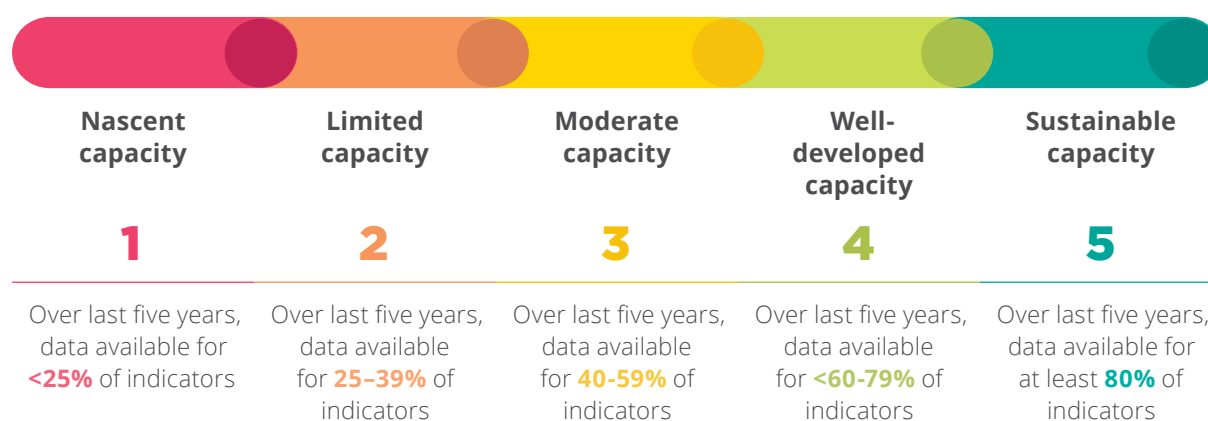
*UHC tracer variable.

SCORING METHODOLOGY

An indicator gets a score of 1 if data are available for this indicator since 2013 in the country. The number of indicators for which data are available is divided by the total maximum score of 53, the

total number of indicators that are relevant in the country's context. This percentage is then compared against the table N.6 to determine the country's score.

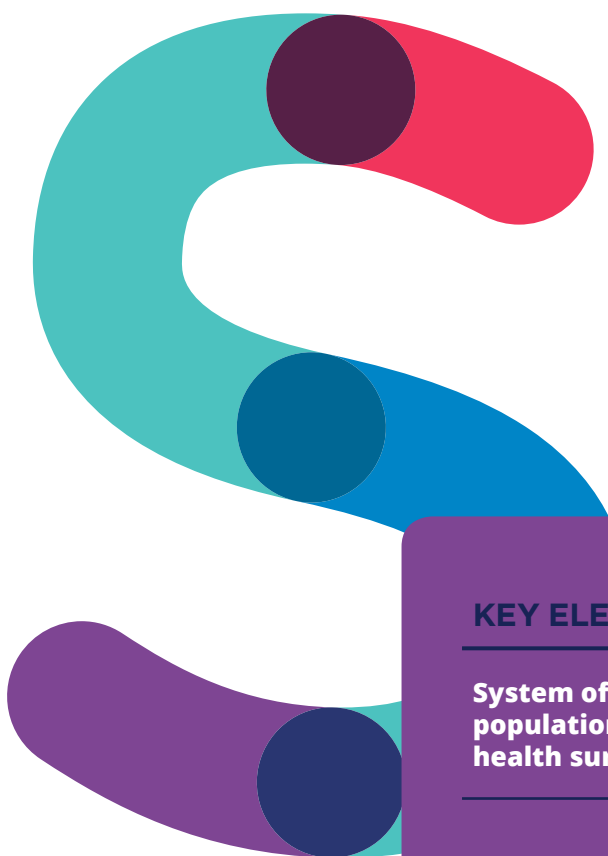
TABLE N.6
SCORING TABLE FOR DATA AVAILABILITY SINCE 2013 TO MONITOR HEALTH-RELATED SDGs AND UHC



DATA SOURCES

Global and country databases/repositories and observatories.

Survey populations and health risks



KEY ELEMENTS	INDICATORS
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* Indicator and event-based surveillance in place based on International Health Regulations standards
Regular population census	Census conducted in last 10 years in line with international standards with population projections for sub-national units

*Item not included in the calculation of overall element score.

S1. System of regular population-based health surveys

Aim

All countries generate regular, comprehensive, high-quality, nationally representative statistics with equity dimensions on important health measurement such as population health status, health-related behaviours and risk factors, access to health interventions and out-of-pocket spending on health.

This element contains one indicator: a system of regular and comprehensive population health surveys that meets international standards, and its corresponding items to measure the strength of the health survey system in a country.

TABLE S1.1
INDICATOR ITEMS AND RESPONSE FOR “A SYSTEM OF REGULAR AND COMPREHENSIVE POPULATION HEALTH SURVEYS THAT MEETS INTERNATIONAL STANDARDS”*

Indicator items	Response and score
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 • Child mortality • Health expenditure as a percent of total household expenditure • HIV prevalence • Tuberculosis prevalence • Prevalence of raised fasting blood glucose • Malaria parasite prevalence among children 	0 No 1 Yes
Cover major dimensions of inequality <ul style="list-style-type: none"> • Sex • 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

TABLE S1.1 (CONTINUED)
INDICATOR ITEMS AND RESPONSE FOR “A SYSTEM OF REGULAR AND COMPREHENSIVE POPULATION HEALTH SURVEYS THAT MEETS INTERNATIONAL STANDARDS”*

Indicator items	Response and score
Are funded by government	0 Not at all 1 Partly 2 Fully
Total maximum score	

*From surveys conducted since 2013.

SCORING METHODOLOGY

The overall score for S1 is determined by three dimensions: the coverage of health topics, the attribute of the individual surveys, and the number of surveys.

COVERAGE OF HEALTH TOPICS

Coverage of major health topics is based on all surveys combined, scored as the number of health topics covered at least once in a survey since 2013, divided by the total number of health topics relevant in the country context. Some indicators are not relevant in certain countries, e.g. malaria in non-malaria endemic countries; or the information is collected by non-survey methods, e.g. surveys are not needed to track child mortality in many countries with strong CRVS systems).

SURVEY ATTRIBUTES

Survey attributes include dimensions of inequity (such as sex, age, education, socioeconomic status, place of residence, and administrative unit), alignment with international standards (such as being nationally representative, having description of sample design, inclusion of sample

size, provision of sampling errors, description of implementation processes and analysis of data, availability of report in public domain, and data access to bona fide users), and whether a survey is supported by government funding. Survey attributes are scored separately for each survey.

Dimension of Inequality measures

The score is calculated as the number of inequality measures captured divided by number of relevant inequality measures.

Alignment of international standards

The score is calculated as the number of international standards met by the survey divided by total number of international standards.

Funding status

The score is assigned for each survey using the scoring described in table S1.1.

Final attribute score

The survey attribute score for each survey is calculated as follows: $0.4 \times \text{dimension of inequity measures} + 0.4 \times \text{alignment of standards} + 0.2 \times \text{funding status}$

The overall survey attribute score is the sum of top five surveys ranked by individual survey attribute scores; all surveys are used when there are only five or fewer surveys.

NUMBER OF SURVEYS

A value of 1 is assigned if there are five or more surveys, 0.9 for four surveys, 0.8 for three surveys, 0.7 for two surveys, and 0.6 for one survey.


FINAL ELEMENT SCORE

An overall score is calculated using three indicator scores as follows:

$$0.35 * \text{"health topics"} + 0.55 * \text{"survey attributes"} + \text{score of "number of surveys"}$$

A final element score is determined when the overall S1 score is compared against the scoring table S1.2.

TABLE S1.2
SCORING TABLE FOR ELEMENT S1: A SYSTEM OF REGULAR AND COMPREHENSIVE POPULATION HEALTH SURVEYS THAT MEETS INTERNATIONAL STANDARDS



Nascent capacity	Limited capacity	Moderate capacity	Well-developed capacity	Sustainable capacity
1	2	3	4	5
Overall scores <0.25	Overall scores 0.25-0.49	Overall scores 0.50-0.70	Overall scores 0.71-0.89	Overall scores ≥0.90

DATA SOURCES

Country specific or multi-country surveys.

S2. Surveillance of public health threats

Aim

All countries can detect public health events requiring rapid investigation and response and ensure timely action and control through:

- A strong indicator and event-based surveillance system that can detect events of significance for public health, animal health and health security (these are the two main channels of information for public health surveillance).
- Effective communication and collaboration across sectors and between subnational, national and international authorities on surveillance of events of public health significance.

- Strong country and intermediate level or regional capacity to analyse and link data from and between strengthened, real-time surveillance systems, including interoperable, interconnected electronic reporting systems, including at points of entry.

This element contains two indicators:

1. completeness and timeliness of weekly reporting of notifiable health conditions, and indicator, and
2. event-based surveillance in place based on International Health Regulations (IHR) standards.

Completeness and timeliness of weekly reporting of notifiable health conditions

TABLE S2.1
INDICATOR ITEMS AND RESPONSE FOR “COMPLETENESS AND TIMELINESS OF WEEKLY REPORTING OF NOTIFIABLE CONDITIONS”*

Indicator items	Response and score
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 maximum score	100%

*The data is from the most recent year available. **Items are not included in the calculation of overall score.

SCORING METHODOLOGY

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

DATA SOURCES

Weekly epidemiological reports/bulletins/databases.

Indicator and event-based surveillance in place based on International Health Regulations standards

This indicator is primarily measured through the State Party Self-Assessment Annual Reporting (SPAR) that countries use to self-report their IHR core capacities (table S2.2). If a Joint External Evaluation (JEE) instead of the SPAR is available

for a country, the relevant indicators (table S2.3) are used. If neither the SPAR nor the JEE are present, the scoring from an older IHR self-assessment is used (table S2.4).

TABLE S2.2
INDICATOR ITEMS AND RESPONSE FOR “INDICATOR AND EVENT-BASED SURVEILLANCE IN PLACE BASED ON IHR STANDARDS” AS MEASURED THROUGH SPAR*

Indicator items	Response and score
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 maximum score	100%

*For countries that report a SPAR.

TABLE S2.3
INDICATOR ITEMS AND RESPONSE FOR “INDICATOR AND EVENT-BASED SURVEILLANCE IN PLACE BASED ON IHR STANDARDS” AS MEASURED THROUGH JEE*

Indicator items	Response and score
Indicator and event-based surveillance system	1 None 2 Planned within a year 3 Indicator or event-based system in place 4 Indicator and event-based system 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

TABLE S2.3 (CONTINUED)
INDICATOR ITEMS AND RESPONSE FOR “INDICATOR AND EVENT-BASED SURVEILLANCE IN PLACE BASED ON IHR STANDARDS” AS MEASURED THROUGH JEE*

Indicator items	Response and score
Syndromic surveillance systems	<ol style="list-style-type: none"> 1 None 2 Planned within a year; policy/legislation in place 3 In place to detect 1-2 core syndromes 4 In place to detect three or more core syndromes 5 In place and country uses expertise to support other countries
System for efficient reporting	<ol style="list-style-type: none"> 1 No national focal points 2 Focal points appointed and linked to learning packages/best practices 3 Demonstrated ability to identify potential Public Health Emergency of International Concern (PHEIC) and file report to WHO or World Organization for Animal Health (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	<ol style="list-style-type: none"> 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 maximum score	30

*For countries that do not report a SPAR.

TABLE S2.4
INDICATOR ITEMS AND RESPONSE FOR “INDICATOR AND EVENT-BASED SURVEILLANCE IN PLACE BASED ON IHR STANDARDS” AS MEASURED BY IHR SELF-ASSESSMENT*


Indicator items	Response and Score
IHR self-reported average coordination score	<ol style="list-style-type: none"> 1 ≤20% 2 21-40% 3 41-60%
IHR self-reported average surveillance score	<ol style="list-style-type: none"> 4 61-80% 5 >80%
Total maximum score	100%

*For countries that report neither a SPAR nor a JEE.

SCORING METHODOLOGY

For countries that report SPAR or use IHR self-assessment average score, the mean of item percentages is calculated. For JEE, the percentage is calculated by dividing the total item score by the total maximum score of 30. The resulting percentage is then compared against the table below to obtain the indicator score respectively.

**TABLE S2.5
SCORING TABLE FOR ELEMENT S2. INDICATOR AND EVENT-BASED SURVEILLANCE IN PLACE BASED ON INTERNATIONAL HEALTH REGULATIONS STANDARDS**



Nascent capacity 1	Limited capacity 2	Moderate capacity 3	Well-developed capacity 4	Sustainable capacity 5
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%

DATA SOURCES

The main data source for this indicator is the IHR SPAR tool, which is available for the majority of WHO Member States. For countries without a SPAR, the JEE would be the second choice and finally the self-assessed IHR.

S3. Regular population census

Aim

All countries should have regular censuses every 10 years, or equivalent population registries that provide information on population and socioeconomic characteristics by small geographical area, conducted in line with United Nations Department of Economic and Social

Affairs (UNDESA) standards. This element has one indicator: census conducted in last 10 years in line with international standards with population projections for subnational units.


TABLE S3.1
INDICATOR ITEMS AND RESPONSES FOR “CENSUS CONDUCTED IN LAST 10 YEARS IN LINE WITH INTERNATIONAL STANDARDS WITH POPULATION PROJECTIONS FOR SUBNATIONAL UNITS”

Indicator items	Response and score
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 disaggregation for current year	0 No data 1 Not available 2 Current year projections available with no disaggregation 3 Current year projections available with relevant disaggregation
Total maximum score	7

SCORING METHODOLOGY

A percentage is calculated by dividing the sum score of the three indicator items by the total maximum score of 7 as described in table S3.1. This percentage is then compared against the scoring table S3.2 to determine the overall indicator score.

TABLE S3.2
SCORING TABLE FOR INDICATOR S3.1. CENSUS CONDUCTED IN LINE WITH STANDARDS



Nascent capacity 1	Limited capacity 2	Moderate capacity 3	Well-developed capacity 4	Sustainable capacity 5
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

DATA SOURCES

Country census reports, and post enumeration survey reports.

Count births, deaths and causes of death



KEY ELEMENTS	INDICATORS
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*

*Items not included in the calculation of overall element score.

C1. Full birth and death registration

Aim

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 data. It may also record marriages, divorces and adoptions.

This element has three indicators:

1. completeness of birth registration,
2. completeness of death registration, and
3. core attributes of a functional CRVS in place to generate vital statistics.

Completeness of birth registration


TABLE C1.1
RESPONSE AND SCORE FOR “COMPLETENESS OF BIRTH REGISTRATION”

Indicator items	Response and score
Completeness of birth registration (%)	1 No data 2 <50% 3 50–74% 4 75–89% 5 90–100%
Total maximum score	100%

SCORING METHODOLOGY

Completeness of birth registration is assessed by calculating the percentage of registered birth among all births. This percentage is compared against the tables below to determine the score for birth registration.

TABLE C1.2
SCORING TABLE FOR INDICATOR C1.1. COMPLETENESS OF BIRTH REGISTRATION



Nascent capacity	Limited capacity	Moderate capacity	Well-developed capacity	Sustainable capacity
1	2	3	4	5
There is no data on birth registration completeness	<50%	50-74%	75-89%	≥90%

DATA SOURCES

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

Completeness of death registration

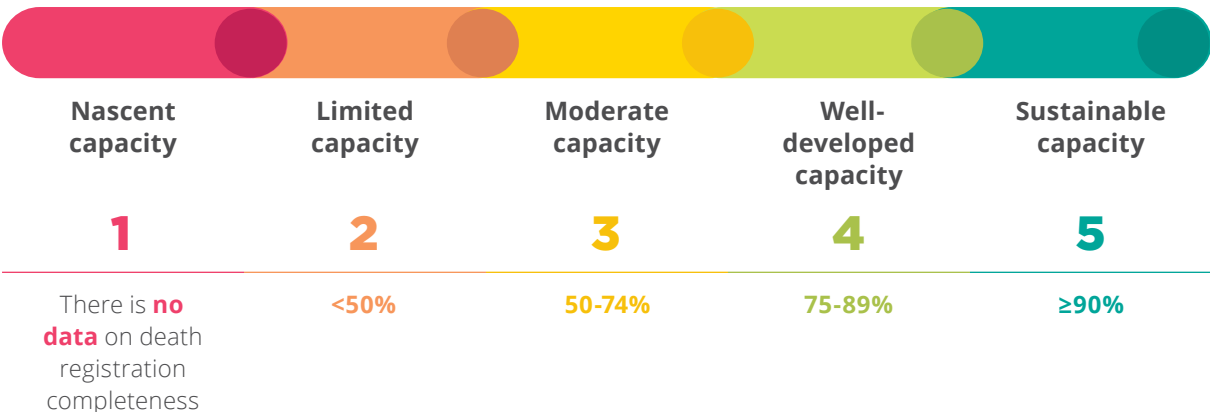
TABLE C1.3
RESPONSE AND SCORE FOR “COMPLETENESS OF DEATH REGISTRATION”

Indicator items	Response and score
Completeness of death registration	1 No data 2 <50% 3 50–74% 4 75–89% 5 90–100%
Total maximum score	100%

SCORING METHODOLOGY

Completeness of death registration is evaluated by calculating the percentage of registered deaths among all deaths. This percentage is compared against the tables below to determine the score for death registration.

TABLE C1.4
SCORING TABLE FOR INDICATOR C1.2. COMPLETENESS OF DEATH REGISTRATION



DATA SOURCES

Vital statistics reports.

Core attributes of a functional CRVS in place to generate vital statistics

TABLE C1.5
INDICATOR ITEMS AND RESPONSE FOR “CORE ATTRIBUTES OF A FUNCTIONAL CRVS SYSTEM IN PLACE TO GENERATE VITAL STATISTICS”

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

**TABLE C1.5 (CONTINUED)
INDICATOR ITEMS AND RESPONSE FOR “CORE ATTRIBUTES OF A
FUNCTIONAL CRVS SYSTEM IN PLACE TO GENERATE VITAL STATISTICS”**

Indicator items	Response and score
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 maximum score	24

*Items are not included in overall element score.

SCORING METHODOLOGY

The eight indicator items that measure a functional CRVS system are assessed based on their availability as shown in table C1.5. This indicator is not used in overall scoring but can be included in additional analysis where available.

DATA SOURCES

Country rapid and/or comprehensive CRVS assessments.

C2. Certification and reporting of causes of death

Aim

All countries should have the capacity to generate good quality, recent mortality statistics to describe levels and trends of mortality and identify and track changes in the burden of disease in different population groups.

This element has three indicators:

1. completeness of deaths with cause of death reported to national authorities and/or international institutions,
2. quality of cause-of-death data (percentage of cause of death with ill-defined or unknown causes of mortality), and
3. core attributes of a functional system to generate cause-of-death statistics.

Completeness of deaths with cause of death reported to national authorities and/or international institutions

TABLE C2.1
RESPONSE AND SCORE FOR “COMPLETENESS OF DEATH WITH CAUSE OF DEATH REPORTED”

Indicator items	Response and score
Completeness of death reporting to civil registrar with cause of death reported	<ol style="list-style-type: none"> 1 No standardized system for medical certification of cause of death 2 <30% 3 30-69% 4 70-89% 5 90-100%
Total maximum score	100%

SCORING METHODOLOGY

The indicator score is determined by comparing the response from table C2.1 against the score:

TABLE C2.2
SCORING TABLE FOR INDICATOR C2.1. COMPLETENESS OF DEATHS
WITH CAUSE OF DEATH REPORTED TO NATIONAL AUTHORITIES AND/OR
INTERNATIONAL INSTITUTIONS

Nascent capacity	Limited capacity	Moderate capacity	Well-developed capacity	Sustainable capacity
1	2	3	4	5
There is no standardised system for medical certification of cause of death	Score <30%	Score 30-69%	Score 70-89%	Score ≥90%

DATA SOURCES

Country CRVS reports/documents.

Quality of cause-of-death data


TABLE C2.3
RESPONSE AND SCORE FOR “QUALITY OF CAUSE-OF-DEATH DATA”

Indicator items	Response and score
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 ≥30% ill-defined or unspecified causes 3 20-29% ill-defined or unspecified causes 4 10-19% ill-defined or unspecified causes 5 <10% ill-defined or unspecified causes
Total maximum score	100%

SCORING METHODOLOGY

The response from table C2.3 is compared against the scoring table C2.4 to determine the indicator score.

TABLE C2.4
SCORING TABLE FOR INDICATOR C2.2. QUALITY OF CAUSE-OF-DEATH DATA



Nascent capacity	Limited capacity	Moderate capacity	Well-developed capacity	Sustainable capacity
1	2	3	4	5
Not applicable in the absence of data	At least 30% ill-defined or unspecified causes	20-29% ill-defined or unspecified causes	10-19% ill-defined or unspecified causes	Less than 10% ill-defined or unspecified

DATA SOURCES

Country CRVS reports/documents.

Core attributes of a functional system to generate cause-of-death statistics

TABLE C2.5
INDICATOR ITEMS AND RESPONSE FOR “CORE ATTRIBUTES OF A FUNCTIONAL SYSTEM TO GENERATE CAUSE-OF-DEATH (COD) STATISTICS”

Indicator items	Response and score
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 ¹ 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

TABLE C2.5 (CONTINUED)
INDICATOR ITEMS AND RESPONSE FOR “CORE ATTRIBUTES OF A FUNCTIONAL SYSTEM TO GENERATE CAUSE-OF-DEATH (COD) STATISTICS”

Indicator items	Response and score
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 maximum score	24

*Items are not included in the calculation of the overall element score. ¹International classification of diseases.

SCORING METHODOLOGY

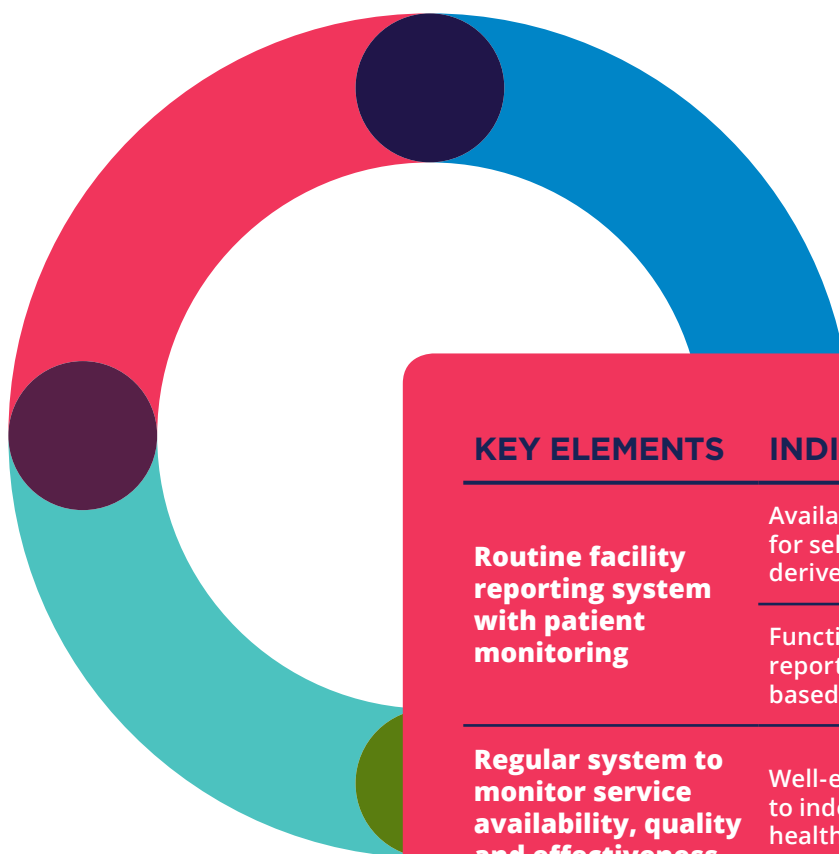
The nine indicator items that measure a functional system to generate cause-of-death statistics are assessed based on their availability as shown in table C2.5. This indicator is not used in overall scoring but can be included in additional analysis where available.

DATA SOURCES

Country rapid and/or comprehensive CRVS assessments.



Optimize health service data



KEY ELEMENTS	INDICATORS
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 financing and health workforce	Health worker density and distribution updated annually
	National human resource for health information system (HRHIS) is in place and functional*

*Items not included in the calculation of overall element score.

O1. Routine facility reporting system with patient monitoring

Aim

All countries should be able to continuously monitor health service use and coverage, disease patterns, individual client care and health care resources; and to produce and use timely and reliable, individual-level and aggregate statistics from all health facility levels, including community outreach programmes.

This element has two indicators:

1. availability of annual statistic for selected indicators derived from facility data, and
2. functional facility/patient reporting system in place based on key criteria.

Availability of annual statistic for selected indicators derived from facility data

TABLE O1.1
INDICATOR ITEMS AND RESPONSE FOR “AVAILABILITY OF ANNUAL STATISTIC FOR SELECTED INDICATORS DERIVED FROM FACILITY DATA”

Indicator items	Response and Score	
Outpatient department (OPD) visits (new/revisit)	0 No 1 Yes	
Hospital admission /discharge rates by diagnosis		
Hospital deaths by major diagnostic category (use ICD)		
Diphtheria-tetanus-pertussis (DTP)/Penta3 in one-year-olds		
Institutional maternal mortality ratio		
Tuberculosis treatment success rates		
Low birth weight prevalence among institutional births		
Antiretroviral treatment (ART) coverage		
Surgical interventions by type		
Severe mental health disorders		
New cancer diagnosis by type		
Documented data quality checks for primary health care facility data		0 No/Not available 1 Partial 2 Comprehensive
Documented data quality checks for hospital data		
Completeness of reporting by public primary care facilities	0 No data 1 <25% 2 25-75% 3 >75%	
Completeness of reporting by public hospitals		
Completeness of reporting by private health facilities		
Total maximum score	24	

SCORING METHODOLOGY

The first 11 items reported from health facilities are scored on availability at national level. Most of them are also scored on availability at sub-national level and disaggregation by age and sex. The score for each indicator item is the sum of weighted scores on the four attributes (national, subnational, age, sex) with more credit given for having national level data. Weighting details are in table O1.2. All 11 indicator items have a minimum score of 0 and a maximum

score of 1. For example, the item of OPD visits (new/revisits) gets a score of 0 if there is no data; it gets a 0.5 if data is available at national level only, but not at sub-national level with no disaggregated data by age and sex; it gets a score of 1 (0.5+0.25+0.125+0.125=1) if data is available at both national and sub-national level, and disaggregated data are also available by both age and sex.

TABLE O1.2
WEIGHTS AND THEIR APPLICABILITY FOR 11 FACILITY-BASED INDICATORS*


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

*Weights sum to 1 for each indicator.

The remaining five items in table O1.1 are added as a measure of the quality of the reported data. These items have scores ranging from 0 to 2 or from 0 to 3 based on the response category. The maximum sum score for these five items is 13.

The total score for this indicator is calculated by summing up all the 16 item scores, and then divided by the total maximum score of 24 to determine the percentage of the criteria that are met. This percentage is then compared against the scoring table O1.3 to determine the indicator score.

**TABLE O1.3
SCORING TABLE FOR ELEMENT O1. AVAILABILITY OF ANNUAL STATISTIC FOR SELECTED INDICATORS DERIVED FROM FACILITY DATA**



Nascent capacity 1	Limited capacity 2	Moderate capacity 3	Well-developed capacity 4	Sustainable capacity 5
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

DATA SOURCES

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

Functional facility/patient reporting system in place based on key criteria

TABLE O1.4
INDICATOR ITEMS AND RESPONSE FOR “FUNCTIONAL FACILITY/PATIENT REPORTING SYSTEM IN PLACE BASED ON KEY CRITERIA”

Indicator items*	Response and score
National unique patient identifier system	0 No data 1 Not there 2 Partially there 3 Mostly/all there
Cancer registries	
Master facility list	
Data quality assurance	
Data management standard operation protocols (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 health information system (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 maximum score	27

*All items are not included in the calculation of overall element score.

SCORING METHODOLOGY

The nine indicator items that measure a functional facility/patient reporting system are assessed based on their availability as shown in table O1.4. This indicator is not used in overall scoring but can 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, Performance of Routine Information System Management (PRISM) assessment reports.

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

Aim

All countries have in place an independent, objective, comprehensive system of external review, through health facility surveys or accreditation systems, to regularly monitor

health service availability, readiness, quality and effectiveness. This element only has one indicator: well-established system to independently monitor health services.

TABLE O2.1
INDICATOR ITEMS AND RESPONSE FOR “WELL-ESTABLISHED SYSTEM TO INDEPENDENTLY MONITOR HEALTH SERVICES”


Indicator items	Response and score
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*	0 No data available 1 No system 2 Partially there 3 Mostly/all there
Total maximum score	8

*Item is not included in the calculation of overall indicator score.

SCORING METHODOLOGY

Only the first two indicator items in table O2.1 are used in the overall scoring for this indicator. They are scored individually based on the responses; and the total sum score is calculated and compared against the scoring table O2.2 to determine the indicator score.

TABLE O2.2
SCORING TABLE FOR ELEMENT O2. WELL-ESTABLISHED SYSTEM
TO INDEPENDENTLY MONITOR HEALTH SERVICES



Nascent capacity	Limited capacity	Moderate capacity	Well-developed capacity	Sustainable capacity
1	2	3	4	5
Survey-based system for monitoring of the quality of services = 1 and accreditation system = 1	Survey-based system for monitoring of the quality of services = 2 or accreditation system = 2	Survey-based system for monitoring of the quality of services = 3	Survey-based system for monitoring of the quality of services = 4	Survey-based system for monitoring of the quality of services = 5 or accreditation system = 3

DATA SOURCES

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

O3. Health service resources: health financing and health workforce

Aim

All countries systematically measure the flow of funds in their health system using a system of national health accounts, based on international standards. An electronic system for tracking public expenses at all levels of government is desirable to enable tracking of subnational health expenditures.

All countries should also have a system of national health workforce accounts (NHWA) that can generate and improve the availability, quality and use of health workforce data (including health workforce distribution).

This element has three indicators:

1. availability of latest data on national health expenditure,
2. health worker density and distribution updated annually, and
3. national human resource for health information system (HRHIS) is in place and functional.

Availability of latest data on national health expenditure

TABLE O3.1
INDICATOR ITEMS AND RESPONSE FOR “AVAILABILITY OF LATEST DATA ON NATIONAL HEALTH EXPENDITURE”

Indicator items	Response and score
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 maximum score	3


SCORING METHODOLOGY

The three indicator items in table O3.1 are scored individually; and the total sum score is compared against the scoring table O3.2 to determine the indicator score.

DATA SOURCES

National health accounts reports/data bases

TABLE O3.2
SCORING TABLE FOR INDICATOR O3.1. AVAILABILITY OF LATEST DATA ON NATIONAL HEALTH EXPENDITURE



Nascent capacity	Limited capacity	Moderate capacity	Well-developed capacity	Sustainable capacity
1	2	3	4	5
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

Health worker density and distribution updated annually

TABLE O3.3
INDICATOR ITEMS AND RESPONSE FOR “HEALTH WORKER DENSITY AND DISTRIBUTION UPDATED ANNUALLY”

Indicator items	Response and score
Medical doctors	0 No
Dentists	1 Yes
Pharmacists	
Nurses (if reported separately)	
Midwives (if reported separately)	
Nurses/midwives (where not reported separately)	
Total maximum score	4 or 5*


*When nurses and midwives are measured separately in a country, the maximum score is 5; if they are assessed jointly, the maximum score is 4.

SCORING METHODOLOGY

For each item, the score is calculated on data availability at national level and subnational level, and disaggregation by age, sex and private/ public facilities. The score for each indicator is the sum of weighted scores based on the five attributes described above with more credit given for having national level data. The minimum score for each item is 0 and maximum 1 (see below for weight details). The sum of the item scores is calculated and compared against the scoring table O3.4 to determine the indicator score.

- **No data:** 0
- **National:** 0.55
- **Subnational:** 0.2
- **Public/private:** 0.1
- **Sex:** 0.075
- **Age:** 0.075

TABLE O3.4
SCORING TABLE FOR INDICATOR O3.2. HEALTH WORKER DENSITY AND DISTRIBUTION UPDATED ANNUALLY



Nascent capacity	Limited capacity	Moderate capacity	Well-developed capacity	Sustainable capacity
1	2	3	4	5
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

DATA SOURCES

National health workforce accounts.

National human resource for health information system (HRHIS) is in place and functional

TABLE 03.5
INDICATOR ITEMS AND RESPONSE FOR “NATIONAL HUMAN RESOURCE FOR HEALTH INFORMATION SYSTEM (HRHIS) IS IN PLACE AND FUNCTIONAL”

Indicator items*	Response and score
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 maximum score	

*Measured separately by health occupations.

SCORING METHODOLOGY

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

DATA SOURCES

National health workforce accounts.



Review progress and performance



KEY ELEMENTS

Regular analytical reviews of progress and performance with equity

Institutional capacity for analysis and learning

INDICATORS

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

Institutional capacity in data analysis at national and subnational levels

R1. Regular analytical reviews of progress and performance, with equity

Aim

Countries should assess and monitor the progress and performance of their national health sector strategic plan (NHSP), including the extent to which equity in access to, and availability of, health care has been achieved.

This element has only one indicator: high quality analytical report of progress and performance of NHSP are produced annually.


TABLE R1.1
INDICATOR ITEMS AND RESPONSE FOR “HIGH QUALITY ANALYTICAL REPORT OF PROGRESS AND PERFORMANCE OF HEALTH SECTOR STRATEGIC PLAN PRODUCED ANNUALLY”

Indicator items	Response and score
Uses all data relevant sources	0 Data not available 1 Not there/limited coverage 2 Partially there 3 Mostly/all there
Assesses progress against target	
Pays attention to inequalities: subnational	
Pays attention to inequalities: socioeconomic	
Pays attention to inequalities: sex	
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 maximum score	30

SCORING METHODOLOGY

The ten items in table R1.1 are scored based on the responses; and the total sum score is calculated and compared against the scoring table R1.2 to determine the indicator (element) score.

TABLE R1.2
SCORING TABLE FOR ELEMENT R1. HIGH QUALITY ANALYTICAL REPORT OF PROGRESS AND PERFORMANCE OF HEALTH SECTOR STRATEGIC PLAN PRODUCED ANNUALLY



Nascent capacity	Limited capacity	Moderate capacity	Well-developed capacity	Sustainable capacity
1	2	3	4	5
No report produced in past 5 years	Total weighted score of key indicator items is less than 12	Total weighted score of key indicator items is 12 to less than 20	Total weighted score of key indicator items is 20 to less than 25	Total score of key indicator items is 25 or higher

DATA SOURCES

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

R2. Institutional capacity for analysis and learning

Aim

All countries should have national, institutionalized capacity for health data and statistics generation, synthesis, analysis, dissemination and use.

This element only has one indicator: institutional capacity in data analysis at national and subnational levels.

TABLE R2.1
INDICATOR ITEMS AND RESPONSE FOR “INSTITUTIONAL CAPACITY IN DATA ANALYSIS AT NATIONAL AND SUBNATIONAL LEVELS”


Indicator items	Response and score
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*	0 No data available 1 No/little involvement 2 Some involvement 3 Strong involvement
Capacity at national MoH	0 No data available 1 No/little involvement 2 Some involvement 3 Strong involvement
Capacity at national bureau of statistics to:** <ul style="list-style-type: none"> • draw sample • implement surveys • analyse 	0 No data available 1 No/little involvement 2 Some involvement 3 Strong involvement
Total maximum score	9

*Item is not included in the calculation of overall indicator score. **Average score for the three areas listed is used.

SCORING METHODOLOGY

The three items in table R2.1 are scored based on the responses; the total sum score is calculated and compared against the scoring table R2.2 to determine the indicator (element) score.

TABLE R2.2
SCORING TABLE FOR ELEMENT R2. INSTITUTIONAL CAPACITY IN DATA ANALYSIS AT NATIONAL AND SUBNATIONAL LEVELS



Nascent capacity	Limited capacity	Moderate capacity	Well-developed capacity	Sustainable capacity
1	2	3	4	5
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

DATA SOURCES

HIS assessments; M&E plans/HIS strategies.



تاریخات روز
ملاحظات

تاریخ	ملاحظات
20/10	...
21/10	...
22/10	...
23/10	...
24/10	...
25/10	...
26/10	...
27/10	...
28/10	...
29/10	...
30/10	...
31/10	...

Enable data use for policy and action



KEY ELEMENTS	INDICATORS
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/ eHealth strategy is based on standards
	Foundational elements to promote data use and access are present

*Item not included in the calculation of overall element score.

E1. Data and evidence drive policy and planning

Aim

Countries should use data and evidence to allocate resources effectively, enhance performance and demonstrate accountability nationally and globally.

This element has only one indicator: national health plan and policies are based on data and evidence.


TABLE E1.1
INDICATOR ITEMS AND RESPONSE FOR “NATIONAL HEALTH PLAN AND POLICIES ARE BASED ON DATA AND EVIDENCE”

Indicator items	Response and score
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	
National health plan/policies include health system strength analysis (response strength)	
Presence of output of a central unit or function in MoH for data and evidence to policy translation	0 No 1 Yes
Coordination function between MoH and partners	
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
Total maximum score	14

SCORING METHODOLOGY

The six items in table E1.1 are scored based on the response; and the total sum score is compared against the scoring table E1.2 to determine the score.

TABLE E1.2
SCORING TABLE FOR ELEMENT E1. NATIONAL HEALTH PLAN AND
POLICIES ARE BASED ON DATA AND EVIDENCE



Nascent capacity	Limited capacity	Moderate capacity	Well-developed capacity	Sustainable capacity
1	2	3	4	5
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

DATA SOURCES

Health sector strategic plans; health policies.

E2. Data access and sharing

Aim


All countries have health data that are accessible to decision-makers at all levels, including subnational decision-makers and local communities, and to all constituencies, including the public, with appropriate disaggregation for equity dimensions.

This element has only one indicator: health statistics (reports and data) are publicly available.

TABLE E2.1
INDICATOR ITEMS AND RESPONSE FOR “HEALTH STATISTICS ARE PUBLICLY AVAILABLE”

Indicator items	Response and score
Frequency of updating national health observatory (NHO)	<ol style="list-style-type: none"> 1 Rarely/ad hoc/less than annual 2 Annually 3 More than once per year
NHO contents	<ol style="list-style-type: none"> 1 Limited contents 2 Some coverage of health statistics 3 Extensive coverage of health statistics
NHO navigation ease	<ol style="list-style-type: none"> 1 Difficult 2 Moderately difficult 3 Easy
Statistical report publication frequency	<ol style="list-style-type: none"> 1 Less than once every 5 years 2 Every 2-5 years 3 Annually
Statistical report includes disaggregation	<ol style="list-style-type: none"> 1 Limited/no disaggregation 2 Appropriate disaggregation mostly at national level 3 Appropriate disaggregation at national and subnational level
Access to health management information system (HMIS) Access to health surveys	<ol style="list-style-type: none"> 1 Not at all 2 Restricted access 3 Broad access
Open data policy	<ol style="list-style-type: none"> 1 No policy 2 Policy exists with limited enforcement 3 Fully enforced policy
Total maximum score	24

TABLE E2.2
SCORING TABLE FOR ELEMENT E2. HEALTH STATISTICS ARE PUBLICLY AVAILABLE



Nascent capacity	Limited capacity	Moderate capacity	Well-developed capacity	Sustainable capacity
1	2	3	4	5
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

SCORING METHODOLOGY

The eight indicator items in table E2.1 are scored based on the response; and the total sum score is compared against the scoring table E2.2 to determine the indicator (element) score.

DATA SOURCES

On-line databases/briefs and reports.

E3. Strong country-led governance of data

Aim

Countries' health information systems should operate according to sound governance policies and legal frameworks for data, as well as multi stakeholder coordination mechanisms, with defined roles and responsibilities for different stakeholders.

This element has three indicators:

1. national monitoring and evaluation (M&E) is based on standards,
2. national digital health/eHealth strategy is based on standards, and
3. foundational elements to promote data use and access are present.

National monitoring and evaluation (M&E) is based on standards

TABLE E3.1
INDICATOR ITEMS AND RESPONSE FOR “NATIONAL MONITORING AND EVALUATION (M&E) IS BASED ON STANDARDS”


Indicator items	Response and score
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 maximum score	21

SCORING METHODOLOGY

The seven indicator items in table E3.1 are scored based on the response; and the total sum score

is compared against the scoring table E3.2 to determine the indicator score.

TABLE E3.2
SCORING TABLE FOR INDICATOR E3.1. NATIONAL MONITORING AND EVALUATION (M&E) IS BASED ON STANDARDS



Nascent capacity	Limited capacity	Moderate capacity	Well-developed capacity	Sustainable capacity
1	2	3	4	5
No M&E or HIS plan exists that is linked to the current national health sector strategic plan	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

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 eHealth or m-Health plans; national policy legal and regulatory frameworks for HIS; M&E coordination mechanism terms or reference.

National digital health/eHealth strategy is based on standards

TABLE E3.3
INDICATOR ITEMS AND RESPONSE FOR “NATIONAL DIGITAL HEALTH/ eHEALTH STRATEGY IS BASED ON STANDARDS”

Indicator items	Response and score
Digital plan/eHealth strategy includes discussion of health data architecture	1 Not there 2 Partially there 3 Mostly/all there
Digital plan/eHealth strategy includes description of health data standards and exchange	
Digital plan/eHealth strategy includes handling of data security issues	
Digital plan/eHealth strategy includes specifications for data confidentiality and data storage	
Digital plan/eHealth strategy specify access to data	
Digital plan/eHealth strategy specifies alignment/is integrated with national HIS strategy	
Total maximum score	18

SCORING METHODOLOGY

The six indicator items in table E3.3 are scored based on the response; and the the total sum score is compared against the scoring table E3.4 to determine the indicator score.

**TABLE E3.4
SCORING TABLE FOR INDICATOR E3.2. NATIONAL DIGITAL HEALTH/
eHEALTH STRATEGY IS BASED ON STANDARDS**

Nascent capacity 1	Limited capacity 2	Moderate capacity 3	Well-developed capacity 4	Sustainable capacity 5
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

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 eHealth or m-Health plans; national policy legal and regulatory frameworks for HIS; M&E coordination mechanism terms or reference.

Foundational elements to promote data use and access are present

TABLE E3.5
INDICATOR ITEMS AND RESPONSE FOR “FOUNDATIONAL ELEMENTS TO PROMOTE DATA USE AND ACCESS ARE PRESENT”

Indicator items*	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

*Items are not included in the calculation of overall element score.

SCORING METHODOLOGY

This indicator is not used in overall scoring but can 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.



Annexes

Annex 1.
SCORE Intervention, elements and indicators

Annex 2.
**SCORE Assessment maturity models for
indicators included in scoring**

Annex 1. SCORE Interventions, elements and indicators

SURVEY POPULATIONS AND HEALTH RISKS

Key elements	Indicators	Key attributes
S1. System of regular population-based health surveys	S1.1. A system of regular and comprehensive population health surveys that meets international standards	<ul style="list-style-type: none"> • 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 (%)*	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Census conducted within last 10 years • Post enumeration survey conducted • Population projections with all disaggregation

*The indicator or attribute is not included in the calculation of overall element score.

COUNT BIRTHS, DEATHS AND CAUSES OF DEATH

Key elements	Indicators	Key attributes
C1. Full birth and death registration	C1.1. Completeness of birth registration (%)	<ul style="list-style-type: none"> • Completeness of birth registration (%)
	C1.2. Completeness of death registration (%)	<ul style="list-style-type: none"> • 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 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

*The indicator or attribute is not included in the calculation of overall element score.

OPTIMIZE HEALTH SERVICE DATA

Key elements	Indicators	Key attributes
O1. Routine facility reporting system with patient monitoring	O1.1. Availability of annual statistics for selected indicators derived from facility data	<ul style="list-style-type: none"> • Annual statistics available for 11 key facility-based indicators, including key disaggregation • 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
	O1.2. Functional facility/ patient reporting system in place based on key criteria*	<ul style="list-style-type: none"> • 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 resources: health financing and health workforce	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 • Private health expenditure • Catastrophic spending
	O3.2. Availability of data on health workforce density and distribution updated annually	<ul style="list-style-type: none"> • Information, including availability at sub-national level and major levels of disaggregation 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

*The indicator or attribute is not included in the calculation of overall element score.

REVIEW PROGRESS AND PERFORMANCE

Key elements	Indicators	Key attributes
R1. Regular analytical reviews of progress and performance, with equity	R1.1. High quality analytical reports on 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 Subnational capacity in ministry of health or institutions to conduct health analysis* Capacity at national ministry of health to conduct health analysis Capacity at national bureau of statistics to: draw sample, implement surveys and conduct analysis

*The indicator or attribute is not included in the calculation of overall element score.

ENABLE DATA USE FOR POLICY AND ACTION

Key elements	Indicators	Key attributes
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 Navigation ease of national database Statistical report publication frequency Statistical report includes disaggregation Bona fide users have access to HMIS data Bona fide users have access to health survey data Open data policy
E3. Strong country-led governance of data	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/eHealth strategy is based on standards	<ul style="list-style-type: none"> National digital health/eHealth 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

*The indicator or attribute is not included in the calculation of overall element score.

Annex 2. SCORE Assessment maturity models for indicators included in scoring

	Nascent capacity 1	Limited capacity 2	Moderate capacity 3	Well-developed capacity 4	Sustainable capacity 5
S1. System of regular population-based health surveys	Overall score 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
S2. Surveillance of public health threats	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%
S3. Regular population census	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
C1.1. Full birth and death registration - birth	There is no data on birth registration completeness	<50%	50-74%	75-89%	≥90%
C1.2. Full birth and death registration - death	There is no data on death registration completeness	<50%	50-74%	75-89%	≥90%
C2.1. Certification and reporting of causes of death - reporting	There is no standardised system for medical certification of cause of death	Score <30%	Score 30-69%	Score 70-89%	Score ≥90%
C2.2. Certification and reporting of causes of death - quality	Not applicable in the absence of data	At least 30% ill-defined or unspecified causes	20-29% ill-defined or unspecified causes	10-19% ill-defined or unspecified causes	Less than 10% ill-defined or unspecified

	Nascent capacity 1	Limited capacity 2	Moderate capacity 3	Well-developed capacity 4	Sustainable capacity 5
O1. Routine facility reporting system with patient monitoring	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
O2. Regular system to monitor service availability, quality and effectiveness	Survey-based system for monitoring of the quality of services = 1 and accreditation system = 1	Survey-based system for monitoring of the quality of services = 2 or accreditation system = 2	Survey-based system for monitoring of the quality of services = 3	Survey-based system for monitoring of the quality of services = 4	Survey-based system for monitoring of the quality of services = 5 or accreditation system = 3
O3.1. Health service resources - health financing	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
O3.2. Health service resources - health workforce	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
R1. Regular analytical reviews of progress and performance, with equity	No report produced in past 5 years	Total weighted score of key indicator items is less than 12	Total weighted score of key indicator items is 12 to less than 20	Total weighted score of key indicator items is 20 to less than 25	Total score of key indicator items is 25 or higher
R2. Institutional capacity for analysis and learning	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

	Nascent capacity	Limited capacity	Moderate capacity	Well- developed capacity	Sustainable capacity
	1	2	3	4	5
E1. Data and evidence drive policy and planning	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
E2. Data access and sharing	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
E3.1. Strong country-led governance of data – M&E	No M&E or HIS plan exists that is linked to the current national health sector strategic plan	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
E3.2. Strong country-led governance of data – eHealth strategy	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



Area	Area (m ²)	Area (m ²)	Area (m ²)	Area (m ²)
Area 1	100	200	300	400
Area 2	150	300	450	600
Area 3	200	400	600	800
Area 4	250	500	750	1000
Area 5	300	600	900	1200
Area 6	350	700	1050	1400
Area 7	400	800	1200	1600
Area 8	450	900	1350	1800
Area 9	500	1000	1500	2000
Area 10	550	1100	1650	2200
Area 11	600	1200	1800	2400
Area 12	650	1300	1950	2600
Area 13	700	1400	2100	2800
Area 14	750	1500	2250	3000
Area 15	800	1600	2400	3200
Area 16	850	1700	2550	3400
Area 17	900	1800	2700	3600
Area 18	950	1900	2850	3800
Area 19	1000	2000	3000	4000
Area 20	1050	2100	3150	4200
Area 21	1100	2200	3300	4400
Area 22	1150	2300	3450	4600
Area 23	1200	2400	3600	4800
Area 24	1250	2500	3750	5000
Area 25	1300	2600	3900	5200
Area 26	1350	2700	4050	5400
Area 27	1400	2800	4200	5600
Area 28	1450	2900	4350	5800
Area 29	1500	3000	4500	6000
Area 30	1550	3100	4650	6200
Area 31	1600	3200	4800	6400
Area 32	1650	3300	4950	6600
Area 33	1700	3400	5100	6800
Area 34	1750	3500	5250	7000
Area 35	1800	3600	5400	7200
Area 36	1850	3700	5550	7400
Area 37	1900	3800	5700	7600
Area 38	1950	3900	5850	7800
Area 39	2000	4000	6000	8000
Area 40	2050	4100	6150	8200
Area 41	2100	4200	6300	8400
Area 42	2150	4300	6450	8600
Area 43	2200	4400	6600	8800
Area 44	2250	4500	6750	9000
Area 45	2300	4600	6900	9200
Area 46	2350	4700	7050	9400
Area 47	2400	4800	7200	9600
Area 48	2450	4900	7350	9800
Area 49	2500	5000	7500	10000
Area 50	2550	5100	7650	10200
Area 51	2600	5200	7800	10400
Area 52	2650	5300	7950	10600
Area 53	2700	5400	8100	10800
Area 54	2750	5500	8250	11000
Area 55	2800	5600	8400	11200
Area 56	2850	5700	8550	11400
Area 57	2900	5800	8700	11600
Area 58	2950	5900	8850	11800
Area 59	3000	6000	9000	12000
Area 60	3050	6100	9150	12200
Area 61	3100	6200	9300	12400
Area 62	3150	6300	9450	12600
Area 63	3200	6400	9600	12800
Area 64	3250	6500	9750	13000
Area 65	3300	6600	9900	13200
Area 66	3350	6700	10050	13400
Area 67	3400	6800	10200	13600
Area 68	3450	6900	10350	13800
Area 69	3500	7000	10500	14000
Area 70	3550	7100	10650	14200
Area 71	3600	7200	10800	14400
Area 72	3650	7300	10950	14600
Area 73	3700	7400	11100	14800
Area 74	3750	7500	11250	15000
Area 75	3800	7600	11400	15200
Area 76	3850	7700	11550	15400
Area 77	3900	7800	11700	15600
Area 78	3950	7900	11850	15800
Area 79	4000	8000	12000	16000
Area 80	4050	8100	12150	16200
Area 81	4100	8200	12300	16400
Area 82	4150	8300	12450	16600
Area 83	4200	8400	12600	16800
Area 84	4250	8500	12750	17000
Area 85	4300	8600	12900	17200
Area 86	4350	8700	13050	17400
Area 87	4400	8800	13200	17600
Area 88	4450	8900	13350	17800
Area 89	4500	9000	13500	18000
Area 90	4550	9100	13650	18200
Area 91	4600	9200	13800	18400
Area 92	4650	9300	13950	18600
Area 93	4700	9400	14100	18800
Area 94	4750	9500	14250	19000
Area 95	4800	9600	14400	19200
Area 96	4850	9700	14550	19400
Area 97	4900	9800	14700	19600
Area 98	4950	9900	14850	19800
Area 99	5000	10000	15000	20000
Area 100	5050	10100	15150	20200
Area 101	5100	10200	15300	20400
Area 102	5150	10300	15450	20600
Area 103	5200	10400	15600	20800
Area 104	5250	10500	15750	21000
Area 105	5300	10600	15900	21200
Area 106	5350	10700	16050	21400
Area 107	5400	10800	16200	21600
Area 108	5450	10900	16350	21800
Area 109	5500	11000	16500	22000
Area 110	5550	11100	16650	22200
Area 111	5600	11200	16800	22400
Area 112	5650	11300	16950	22600
Area 113	5700	11400	17100	22800
Area 114	5750	11500	17250	23000
Area 115	5800	11600	17400	23200
Area 116	5850	11700	17550	23400
Area 117	5900	11800	17700	23600
Area 118	5950	11900	17850	23800
Area 119	6000	12000	18000	24000
Area 120	6050	12100	18150	24200
Area 121	6100	12200	18300	24400
Area 122	6150	12300	18450	24600
Area 123	6200	12400	18600	24800
Area 124	6250	12500	18750	25000
Area 125	6300	12600	18900	25200
Area 126	6350	12700	19050	25400
Area 127	6400	12800	19200	25600
Area 128	6450	12900	19350	25800
Area 129	6500	13000	19500	26000
Area 130	6550	13100	19650	26200
Area 131	6600	13200	19800	26400
Area 132	6650	13300	19950	26600
Area 133	6700	13400	20100	26800
Area 134	6750	13500	20250	27000
Area 135	6800	13600	20400	27200
Area 136	6850	13700	20550	27400
Area 137	6900	13800	20700	27600
Area 138	6950	13900	20850	27800
Area 139	7000	14000	21000	28000
Area 140	7050	14100	21150	28200
Area 141	7100	14200	21300	28400
Area 142	7150	14300	21450	28600
Area 143	7200	14400	21600	28800
Area 144	7250	14500	21750	29000
Area 145	7300	14600	21900	29200
Area 146	7350	14700	22050	29400
Area 147	7400	14800	22200	29600
Area 148	7450	14900	22350	29800
Area 149	7500	15000	22500	30000
Area 150	7550	15100	22650	30200
Area 151	7600	15200	22800	30400
Area 152	7650	15300	22950	30600
Area 153	7700	15400	23100	30800
Area 154	7750	15500	23250	31000
Area 155	7800	15600	23400	31200
Area 156	7850	15700	23550	31400
Area 157	7900	15800	23700	31600
Area 158	7950	15900	23850	31800
Area 159	8000	16000	24000	32000
Area 160	8050	16100	24150	32200
Area 161	8100	16200	24300	32400
Area 162	8150	16300	24450	32600
Area 163	8200	16400	24600	32800
Area 164	8250	16500	24750	33000
Area 165	8300	16600	24900	33200
Area 166	8350	16700	25050	33400
Area 167	8400	16800	25200	33600
Area 168	8450	16900	25350	33800
Area 169	8500	17000	25500	34000
Area 170	8550	17100	25650	34200
Area 171	8600	17200	25800	34400
Area 172	8650	17300	25950	34600
Area 173	8700	17400	26100	34800
Area 174	8750	17500	26250	35000
Area 175	8800	17600	26400	35200
Area 176	8850	17700	26550	35400
Area 177	8900	17800	26700	35600
Area 178	8950	17900	26850	35800
Area 179	9000	18000	27000	36000
Area 180	9050	18100	27150	36200
Area 181	9100	18200	27300	36400
Area 182	9150	18300	27450	36600
Area 183	9200	18400	27600	36800
Area 184	9250	18500	27750	37000
Area 185	9300	18600	27900	37200
Area 186	9350	18700	28050	37400
Area 187	9400	18800	28200	37600
Area 188	9450	18900	28350	37800
Area 189	9500	19000	28500	38000
Area 190	9550	19100	28650	38200
Area 191	9600	19200	28800	38400
Area 192	9650	19300	28950	38600
Area 193	9700	19400	29100	38800
Area 194	9750	19500	29250	39000
Area 195	9800	19600	29400	39200
Area 196	9850	19700	29550	39400
Area 197	9900	19800	29700	39600
Area 198	9950	19900	29850	39800
Area 199	10000	20000	30000	40000

SCORE



World Health
Organization

20 Avenue Appia
CH-1211 Geneva 27
Switzerland

who.int/healthinfo/en

