State Health Index Round 4
2019-20

(Measuring Progress across States and Union Territories)

A Reference Guidebook

December 2020

National Institution for Transforming India (NITI Aayog)
Government of India

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Abbreviations

ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
ART	Antiretroviral Therapy
BY	Base Year
BCG	Bacillus Calmette–Guérin
CCU	Cardiac Care Unit
CHC	Community Health Centre
CMO	Chief Medical Officer
CRS	Civil Registration System
DH	District Hospital
DPT	Diphtheria, Pertussis, and Tetanus
ENT	Ear-Nose-Throat
FRU	First Referral Unit
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HRMIS	Human Resources Management Information System
HWC	Health and Wellness Centre
IDSP	Integrated Disease Surveillance Programme
IT	Information Technology
IPHS	Indian Public Health Standards
IVA	Independent Validation Agency
MIS	Management Information Systems
MMR	Maternal Mortality Ratio
MO	Medical Officer
MoHFW	Ministry of Health and Family Welfare
NABH	National Accreditation Board for Hospitals and Healthcare Providers
NACO	National AIDS Control Organization
NCDs	Non-communicable Diseases
NE	North-east
NFHS	National Family Health Survey
NHM	National Health Mission
NITI	National Institution for Transforming India
NMR	Neonatal Mortality Rate
NTEP	National Tuberculosis Elimination Program
NQAS	National Quality Assurance Standards
OPV	Oral Polio Vaccine
PHC	Primary Health Centre
PLHIV	People living with HIV/AIDS
RNTCP	Revised National Tuberculosis Control Programme
RU	Reporting Unit
RY	Reference Year
SC	Sub-Centre
SDG	Sustainable Development Goals
SDH	Sub District Hospital
SRB	Sex Ratio at Birth
SRS	Sample Registration System
TA	Technical Assistance
TB	Tuberculosis
U5MR	Under Five Mortality Rate
UCHC	Urban Community Health Centre
UPHC	Urban Primary Health Centre

1. Background and Rationale

The National Development Agenda unanimously agreed to by all the State Chief Ministers and the Lieutenant Governors of Union Territories (UTs) in 2015 had inter alia identified education, health, nutrition, women and children as priority sectors requiring urgent action. To fulfill the National Development Agenda, it is imperative to make rapid improvement in these sectors. India, along with other countries, is also committed to achieving the Sustainable Development Goals (SDGs) to end poverty, protect the planet, and ensure prosperity for all by 2030.

As the nodal agency responsible for charting India's quest for attaining the commitments under the SDGs, the National Institution for Transforming India (NITI Aayog) has been mandated with transforming India by exercising thought leadership and by invoking the instruments of co-operative and competitive federalism, focusing the attention of the State Governments and Union Ministries on achieving outcomes. It is in this context that NITI Aayog had spearheaded the Health Index initiative in 2017 in collaboration with the Ministry of Health and Family Welfare (MoHFW) and with technical assistance from the World Bank, to measure the annual performance of States and Union Territories (UTs) on a variety of indicators related to health outcomes, governance and key inputs and processes.

"Healthy States, Progressive India"- the report on the third round of Health Index 2018-19 is scheduled to be released soon. The report has measured the annual performance of the States and UTs, over the period 2017-18 (Base Year) and 2018-19 (Reference Year) and ranked States and UTs on the basis of incremental change, while also providing an overall status of States/UTs' performance and helping identify specific areas of improvement. In this regard, the World Bank continues to provide technical assistance to the NITI Aayog on the fourth round of the Health Index which will cover the period 2019-20 (Reference Year) and 2018-19 (Base Year) and will focus on measuring and highlighting incremental improvement in the States and UTs.

The indicators, methodology and categorization of States and UTs in the fourth round of the Health Index will be broadly consistent with the first round with a total of 24 indicators grouped in the domains of Health Outcomes, Governance and Information, and Key Inputs and Processes. The interactive web portal developed and hosted by NITI Aayog with pre-designed format from the first round will be used by States and UTs to submit data on identified indicators for the Health Index in the fourth round as well. Subsequently, the data will be verified by an independent validation agency (IVA) commissioned by NITI Aayog, prior to computing the Index and ranks for all the States and UTs. As in the previous round, the States will be ranked in three categories to ensure comparison among similar entities - Larger States, Smaller States, and UTs.

2. About the Index

2.1 Aim

To promote a co-operative and competitive spirit amongst the States and UTs to rapidly bring about transformative action in achieving the desired health outcomes.

2.2 Objective

To release a composite Health Index based on key health outcomes and other health systems and service delivery indicators and to generate Health Index scores and rankings for different categories of the States and UTs using year-to-year progress (incremental performance) and overall performance.

2.3 Salient Features

- The Health Index consists of a limited set of relevant indicators categorized in the domains of Health Outcomes, Governance and Information, and Key Inputs and Processes.
- Health Outcomes are assigned the highest weight, as these remain the focus of performance.
- Indicators have been selected on the basis of their importance and availability of reliable data, at least annually, from existing data sources such as the Sample Registration System (SRS), Civil Registration System (CRS) and Health Management Information Systems (HMIS).
- Data on indicators and Index calculations will be validated by the IVA.
- A composite Index will be calculated as a weighted average of various indicators, focused on measuring the state of health in each State and UT for a Base Year (2018-19) and a Reference Year (2019-20).
- The change in the Index score of each State from the Base Year to the Reference Year will measure the incremental progress of each State.
- States and UTs are grouped in three categories to ensure comparison among similar entities, namely 20 Larger States, 8 Smaller States, and 8 UTs.

2.4 Methodology

2.4.1 Computation of Index scores and ranks

After validation of data by the IVA, data submitted by the States and pre-entered from established sources will be used for the Health Index score calculations. Each indicator value will be scaled, based on the nature of the indicator. For positive indicators, where *higher the value, better the performance* (e.g. service coverage indicators), the scaled value (S_i) for the i^{th} indicator, with data value as X_i will be calculated as follows:

$$\text{Scaled value } (S_i) \text{ for positive indicator} = \frac{(X_i - \text{Minimum value}) \times 100}{(\text{Maximum value} - \text{Minimum value})}$$

Similarly, for negative indicators where *lower the value, better the performance* [e.g. Neonatal Mortality Rate **(**NMR)**,** Under 5 Mortality Rate (U5MR), and human resource shortfall], the scaled value will be calculated as follows:

$$\text{Scaled value } (S_i) \text{ for negative indicator} = \frac{(\text{Maximum value} - X_i) \times 100}{(\text{Maximum value} - \text{Minimum value})}$$

The minimum and maximum values of each indicator will be ascertained based on the values for that indicator across States within the grouping of States (Larger States, Smaller States, and UTs) for that year.

The scaled value for each indicator will lie between the range of 0 to 100. Thus, for a positive indicator such as institutional deliveries, the State with the lowest institutional deliveries will get a scaled value of 0, while the State with the highest institutional deliveries will get a scaled value of 100. Similarly, for a negative indicator such as Neonatal Mortality Ratio (NMR), the State with the highest NMR will get a scaled value of 0, while the State with the lowest NMR will get a scaled value of 100. Accordingly, the scaled value of other States will lie between 0 and 100 in both cases.

Based on the above scaled values (S_i), a composite Index score will then be calculated for the Base Year (2018-19) and Reference Year (2019-20) after application of the weights using the following formula:

$$\textbf{Composite Index} = \frac{\Sigma\, Wi * Si}{\Sigma\, Wi}$$

where W_i is the weight for i^{th} indicator.

The composite Index score will provide the overall performance and domain-wise performance for each State and UT and will be used for generating overall performance ranks.

Incremental performance from Base Year (2018-19) composite scores to Reference Year (2019-20) composite scores will also be measured and used in ranking.

2.4.2 Categorization of States for ranking

As in the first round, based on the availability of data and the fact that similar States should be compared, the States will be ranked in three categories, namely Larger States, Smaller States and UTs (Table 2.1). The categorization of the few states and UTs has changed as per the latest changes in administrative provisions of Jammu and Kashmir, Dadra and Nagar Haveli and Daman and Diu. The states have been categorized as follows for the fourth round. This categorization has also been adopted as the SRS data on health outcomes [NMR, U5MR, Sex Ratio at Birth (SRB) and Maternal Mortality Ratio] are not available for eight Smaller States and UTs.

Table 2.1 - Categorization of States and UTs

Category	Number of States and UTs	States and UTs
Larger States	20	Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand, West Bengal
Smaller States	8	Arunachal Pradesh, Goa, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura
Union Territories	8	Andaman & Nicobar, Chandigarh, Dadra and Nagar Haveli and Daman and Diu, Delhi, Jammu and Kashmir, Ladakh, Lakshadweep and Puducherry

2.4.3 The Health Index - list of indicators and weightage

The Health Index is a weighted composite Index based on 24 indicators grouped in the domains of Health Outcomes, Governance and Information, and Key Inputs and Processes.

Each domain has been assigned weights based on its importance. Within a domain or sub- domain, the weight has been equally distributed among the indicators in that domain or sub- domain. Table 2.2 provides a snapshot of the number of indicators in each domain and sub- domain along with weights, while Table 2.3 provides the list of Health Index indicators and with assigned weights.

Table 2.2 - Health Index: Summary

Domain	Sub-domain	Larger States		Smaller States		Union Territories	
		Number of Indicators	Weight	Number of Indicators	Weight	Number of Indicators	Weight
Health Outcomes	Key Outcomes	4	400	-	-	-	-
	Intermediate Outcomes	7	350	7	350	5	250
Governance and Information	Health Monitoring and Data Integrity	1	50	0	0	0	0
	Governance	3	90	3	90	2	60
Key Inputs/ Processes	Health Systems/ Service Delivery	9	180	8	160	8	160
Total		24	1070	18*	600	15**	470

*** For Smaller states: Indicators 1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.1.1 and 3.1.9 not applicable**
****For UTs: Indicators 1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.2.1, 1.2.7, 2.1.1, 2.2.3 and 3.1.9 not applicable**

Table 2.3 - List of Indicators and Weights

S. No.	Indicators
Domain 1 – Health Outcomes	
Sub-domain 1.1 - Key Outcomes (Weight: Larger States – 400, Smaller States and UTs - Nil)	
1.1.1	Neonatal Mortality Rate (NMR)*
1.1.2	Under-five Mortality Rate (U5MR)*
1.1.3	Sex Ratio at Birth (SRB)*
1.1.4	Maternal Mortality Ratio (MMR)*
Sub-domain 1.2 - Intermediate Outcomes (Weight: Larger & Smaller States – 350, UTs – 250)	
1.2.1	Modern Contraceptive Prevalence Rate (MCPR) +
1.2.2	Full immunization coverage
1.2.3	a. Proportion of ANCs registered within first trimester against total registrations
	b. Proportion of pregnant women received 4 or more ANCs
1.2.4	Proportion of institutional deliveries

1.2.5	Total case notification of tuberculosis (TB)
1.2.6	TB Treatment Success Rate
1.2.7	Proportion of people living with HIV (PLHIV) on antiretroviral therapy (ART)+
Domain 2 – Governance and Information	
Sub-domain 2.1 – Health Monitoring and Data Integrity (Weight: Larger States-50), Smaller States and UTs - Nil)	
2.1.1	Institutional births- Percentage deviation of between reported HMIS data and SRS data*
Sub-domain 2.2 – Governance (Weight - Larger States and Smaller States - 90, UTs - 60)	
2.2.1	Average occupancy of an officer (in months), combined for following three posts at State level for last three years
	1. Principal Secretary / Secretary where PS not applicable 2. Mission Director (NHM) 3. Director (Health Services) / DGHS where DHS not applicable
2.2.2	Average occupancy of a full-time officer (in months) for all the districts in last three years - District Chief Medical Officers (CMOs) or equivalent post (heading District Health Services)
2.2.3	Average number of days for transfer of Central NHM fund from State Treasury to implementation agency (Department/ Society) based on the largest tranche of the last financial year+
Domain 3 – Key Inputs and Processes	
Sub-domain 3.1 – Health Systems Service Delivery (Weight – Larger States-180, Smaller States and UTs - 160)	
3.1.1	Proportion of shortfall of health care providers (regular + contractual) against required number of health care providers in public health facilities
3.1.2	Proportion of total staff (regular + contractual) covered under a functional IT enabled integrated Human Resources Management Information System (HRMIS)
3.1.3	a. Proportion of specified type of facilities functioning as First Referral Units (FRUs) against population norm#
	b. Proportion of public health facilities with Kayakalp score >70% against total number of public health facilities
3.1.4	Proportion of functional Health and Wellness Centres (HWCs)
3.1.5	Proportion of district hospitals with functional Cardiac Care Units (CCUs)
3.1.6	a. Level of registration of births
	b. Level of registration of deaths
3.1.7	Completeness of Integrated Disease Surveillance Programme (IDSP) reporting of P and L forms
3.1.8	a. Proportion of public health facilities with accreditation certificates by a standard quality assurance program (NQAS/NABH)
	b. 3.1.8.b Proportion of District Hospitals and CHCs certified under LaQshya (separately for Labour Room and Maternal OT)
3.1.9	Proportion of State Government Health Expenditure to Total State Expenditure*

* Applicable only for Larger States
+ Applicable only for Larger and Smaller States; not applicable for UTs
# one FRU per 500,000 population

Table 2.4: Modifications in Set of Indicators in Health Index Round IV (2019-20)

Indicators dropped from Health Index 2019	New indicators in Health Index Round IV: 2019-2020
• Proportions of CHCs / SDH with grading of 4 points or above	• **1.1.4** Maternal Mortality Ratio • **1.2.3 (b)** Proportion of pregnant women received 4 or more ANCs • **3.1.6 (b)** Level of registration of deaths (%)
Definition of indicators improved/updated	
• 2.1.1 Institutional deliveries - percentage deviation between reported HMIS data and SRS data. This is an alternate indicator between years when the NFHS data for all states/UTs is not available. • 3.1.8 (a) Proportion of public health facilities with accreditation certificates by a standard quality assurance program (NQAS/NABH): District - Sub-District Hospitals/ CHCs / PHCs-UPHCs.	

2.5 Limitations

- Some critical areas such as infectious diseases, non-communicable diseases (NCDs), mental health, governance, and financial risk protection are not fully captured in the Index due to non-availability of acceptable quality of data on an annual basis.
- For several indicators, the data is limited to service delivery in public facilities due to the paucity and uneven availability of private sector data on health services in the HMIS.
- For key outcome indicators, data are available only for Larger States. Hence, the Health Index scores and ranks for Smaller States and UTs will be calculated excluding these indicators.
- As a measure of data integrity in this round, HMIS data on institutional deliveries will be compared with Sample Registration System (SRS) data for Larger States, while for Smaller States and UTs this sub-domain will not be covered as SRS data are not available. This is an alternate indicator between years when the NFHS data for all states/UTs is not available. Even for this round, NFHS-5 data may be considered in case the same is available for all States/UTs before the completion of data validation exercise.

2.6 Processes Involved

2.6.1 Key stakeholders - roles and responsibilities

Multiple stakeholders are involved in the entire exercise and their roles and responsibilities are summarized in Table 2.5

Table 2.5 - Key stakeholders: Roles and responsibilities- Health Index Round IV: 2019-2020

NITI Aayog	States	Technical Assistance (TA) Agency (The World Bank)	Independent Validation Agency
Review, finalize and disseminate- the Health Index Round IV 2019-20 details along with necessary guidance in close partnership with MoHFW and World Bank	Adopt and share Health Index Round IV 2019-20 with various departments and districts	TA to NITI Aayog in reviewing, finalizing, and disseminating the Round IV 2019-20, protocols and guidelines	Validation and acceptance of the data submitted by the States/pre-entered centrally for various indicators including comparison with other data sources as needed
Facilitate interaction between States and TA agency and independent validation agency	Enter and submit data in a timely manner on the indicators as per identified sources in the web portal	Technical oversight to the portal agency and the independent validation agency	Review and verification of supporting documents, including all excel documents used for generation of Index Scores and ranks and participation in data validation workshops with States
Host a web portal for States/UTs to enter data, its validation and dissemination of State/UT Index Scores and rankings	Coordination with different districts and independent validation agencies	Provide technical support for generation of composite Index	Submission of a comprehensive report on validation with State/UT- wise details to NITI Aayog
Overall coordination and management		Provide technical support for drafting and disseminating the report	Generation and validation of ranks and final certification of data, Health Index Scores and ranks on the portal

2.6.1 Process flow

The process of development of the Health Index for 2020 involves various steps (Table 2.6)

Table 2.6 - Timeline for development of Health Index 2020

S. No.	Step/Activity	2020	2021	2021	2021	2021	2021
		December	January	February	March	April	May-June
1	Finalization of Guidebook for Health Index and dissemination to States						
2	Mentorship to States and submission of data on portal						
3	Validation of Data						
4	Index and rank generation						
5	Report and dissemination of ranks						

3. Indicator wise details

General Guidelines

1. For the Base Year (2018-19), data validated in the last round will be used, except for new / modified indicators, the Base Year (2018-19) data will be collected and validated. Any variation in Base Year (2018-19) for common indicators may be duly justified.
2. Total Number of districts, district hospitals, sub-district hospitals, CHCs, UCHCs, PHCs, UPHCs, sub-centres should be consistent across indicators, wherever applicable.

Domain 1: Health Outcomes

Sub-Domain 1.1: Key Outcomes

Indicator 1.1.1 – Neonatal Mortality Rate (NMR)	
Indicator definition	Number of infant deaths of less than 29 days per thousand live births during a specific year.
Reference Year	2019 (Jan-Dec 2019)
Base Year	2018 (Jan-Dec 2018)
Numerator	Not applicable as ready figures of NMR are available
Denominator	
Data source(s)	Sample Registration System (SRS) [pre-entered]
Remark	Indicator not applicable for the category of Smaller States and UTs

Indicator 1.1.2 - Under-five Mortality Rate (U5MR)	
Indicator definition	Number of child deaths of less than 5 years per thousand live births during a specific year.
Reference Year	2019 (Jan-Dec 2019)
Base Year	2018 (Jan-Dec 2018)
Numerator	Not applicable as ready figures of U5MR are available
Denominator	
Data source(s)	Sample Registration System (SRS) [pre-entered]
Remark	Indicator not applicable for the category of Smaller States and UTs

Indicator 1.1.3 - Sex Ratio at Birth (SRB)	
Indicator definition	The number of girls born for every 1,000 boys born during a specific year.
Reference Year	2017-19 (Jan-Dec)
Base Year	2016-18 (Jan-Dec)
Numerator	Not applicable as ready figures of SRB are available

Denominator	
Data source(s)	Sample Registration System (SRS) [pre-entered]
Remark	Indicator not applicable for the category of Smaller States and UTs

Indicator 1.1.4 – Maternal Mortality Ratio (MMR)	
Indicator definition	Number of maternal deaths per 100,000 live births during a given time period
Reference Year	2017-19 (Jan-Dec)
Base Year	2016-18 (Jan-Dec)
Numerator	Not applicable as ready figures of MMR are available
Denominator	
Data source(s)	Sample Registration System (SRS) [pre-entered]
Remark	Indicator not applicable for the category of Smaller States and UTs

Sub-Domain 1.2: Intermediate Outcomes

Indicator 1.2.1 - Modern Contraceptive Prevalence Rate (MCPR)	
Indicator definition	The percentage of women of reproductive age who are using (or whose partner is using) a modern contraceptive method at a specific point in time.
Reference Year	2019 (As on 31st December 2019)
Base Year	2018 (As on 31st December 2018)
Numerator	Not applicable as ready figures of MCPR are available
Denominator	
Data source(s)	FP Division, MOHFW based on FP estimation tool [pre-entered], Indicator not applicable for the category of UTs

Indicator 1.2.2 - Full immunization coverage	
Indicator definition	Proportion of infants 9-11 months old who have received BCG, 3 doses of DPT, 3 doses of OPV and measles against estimated number of infants during a specific year.
Reference Year	2019-20 (Apr 2019-Mar 2020)
Base Year	2018-19 (Apr 2018-Mar 2019)

Numerator	Total number of infants aged 9-11 months fully immunized for the specific year
Denominator	Estimated number of infants for the specific year (estimates to be provided by MoHFW) [pre-entered]
Data source(s)	Health Management Information System (HMIS)

Indicator 1.2.3(a) - Proportion of ANC registered within first trimester against total registrations	
Indicator definition	Proportion of pregnant women registered for ANC within 12 weeks of pregnancy during a specific year.
Reference Year	2019-20 (Apr 2019-Mar 2020)
Base Year	2018-19 (Apr 2018-Mar 2019)
Numerator	Number of ANC registered during the first trimester of pregnancy for the specific year
Denominator	Total number of ANC registrations for the specific year
Data source(s)	Health Management Information System (HMIS)

Indicator 1.2.3(b) - Proportion of pregnant women received 4 or more ANCs	
Indicator definition	Proportion of pregnant women received 4 or more ANCs against total number of women registered for ANC during a specific year.
Reference Year	2019-20 (Apr 2019-Mar 2020)
Base Year	2018-19 (Apr 2018-Mar 2019)
Numerator	Number of pregnant women received 4 or more ANCs for the specific year
Denominator	Total number of women registered for ANC for the specific year
Data source(s)	Health Management Information System (HMIS)

Indicator 1.2.4 - Proportion of institutional deliveries	
Indicator definition	Proportion of deliveries conducted in public and private health facilities against the number of estimated deliveries during a specific year.
Reference Year	2019-20 (Apr 2019-Mar 2020)
Base Year	2018-19 (Apr 2018-Mar 2019)

Numerator	Total number of institutional deliveries {Public + Private} for the specific year
Denominator	Number of estimated deliveries for the specific year (estimates to be provided by MoHFW) [pre-entered]
Data source(s)	Health Management Information System (HMIS)

Indicator 1.2.5 - Total case notification of tuberculosis (TB)	
Indicator definition	Proportion of new and previously treated TB cases notified (public + private) against the target of TB cases to be notified during a specific year.
Reference Year	2019 (Jan- Dec 2019)
Base Year	2018 (Jan- Dec 2018)
Numerator	Number of new and previously treated TB cases notified (public + private) during the specific year
Denominator	Target number of TB cases to be notified during the specific year
Data source(s)	Revised National Tuberculosis Control Programme (RNTCP)/NTEP MIS, MoHFW [pre-entered]

Indicator 1.2.6 - TB treatment success rate	
Indicator definition	Proportion of total TB notified cases (public + private) with successful Treatment outcome (cured + treatment completed) against TB cases notified a year prior to the specific year.
Reference Year	Numerator: 2019 (Jan-Dec 2019), Denominator: 2018 (Jan- Dec 2018)
Base Year	Numerator: 2018 (Jan-Dec 2018), Denominator: 2017 (Jan-Dec 2017)
Numerator	Number of total TB cases (public + private) with successful treatment outcome (cured and treatment completed out of those in denominator) for the specific year
Denominator	Number of TB cases notified a year prior to which the numerator relates
Data source(s)	RNTCP/NTEP MIS, MoHFW [pre-entered]

Indicator 1.2.7 - Proportion of people living with HIV (PLHIV) on antiretroviral therapy (ART)	
Indicator definition	Proportion of PLHIVs receiving ART treatment against the number of estimated PLHIVs who needed ART treatment for the specific year.
Reference Year	2019-20 (Apr 2019-Mar 2020)

Base Year	2018-19 (Apr 2018-Mar 2019)
Numerator	Number of PLHIVs receiving ART treatment for the specific year [pre-entered]
Denominator	Number of estimated PLHIVs who needed ART treatment for the specific year (estimates to be provided by MoHFW) [pre-entered]
Data source(s)	NACO, MoHFW [pre-entered]
Remark	Indicator not applicable for the category of UTs.

Domain 2: Governance and Information

Sub-Domain 2.1: Health Monitoring Data Integrity

Indicator 2.1.1 - Data Integrity Measure: Institutional deliveries	
Indicator definition	Percentage deviation of reported HMIS data from SRS for Institutional Deliveries to assess the quality/integrity of reported data for a specific period.
Reference Year	2019 (SRS), 2019-20 (HMIS)
Base Year	2018 (SRS), 2018-19 (HMIS)
Numerator	Proportion of institutional deliveries (SRS) minus proportion of institutional deliveries (HMIS), for the specific period
Denominator	Proportion of institutional deliveries (SRS)
Data source(s)	Health Management Information System (HMIS) and Sample Registration System (SRS) [pre-entered]
Remark	In round-III (2018-19), the percentage deviation between NFHS-4 and HMIS data was used as data integrity measure for indicators on 'institutional delivery' and 'first trimester ANC registration'. In this round, NFHS-5 data were to be used. However, NFHS-5 results are currently available only for 22 States/UTs. An alternative source of data on 'institutional deliveries' is SRS which is updated annually but is only available for Larger States. Therefore, the percentage deviation between SRS and HMIS data on institutional deliveries will be used as data integrity measure in round-IV (2019-20) of the Health index for Larger States. If NFHS-5 data becomes available before finalization of the validation exercise, then deviation of HMIS data from NFHS-5 data for the indicators 'average proportion of institutional deliveries' and 'ANC registered within first trimester' (these indicators to be calculated separately corresponding to the NFHS-5 reference period for these indicators) will be considered for use as data integrity measure. This indicator will then be applicable for all the categories of states/UTs.

Sub-Domain 2.2: Governance

Indicator 2.2.1 - Average occupancy of an officer (in months), combined for three key posts at State level for last three years	
Indicator definition	Average occupancy of an officer (in months), combined for following posts in last three years: 1. Principal Secretary / Secretary (where PS not applicable) 2. Mission Director (NHM) 3. Director- Health Services / DGHS where DHS not applicable
Reference Year	Last 3 years as of March 31, 2020 [Apr 1, 2017-Mar 31, 2020]
Base Year	Last 3 years as of March 31, 2019 [Apr 1, 2016-Mar 31, 2019]
Numerator	Sum of average tenure per officer combined for all 3 posts (in months)
Denominator	3 (posts)
Data source(s)	State Report
Remark	The average tenure per officer of all 3 posts needs to be calculated separately by using the • Number of months the post remained filled with full time officer(s) in the specific last three years, and • Number of full-time officers that occupied the post in the specific three years.

Indicator 2.2.2 - Average occupancy of a full-time officer (in months) for all the districts in last three years - District Chief Medical Officers (CMOs) or equivalent post (heading District Health Services)	
Indicator definition	Average occupancy of a full time CMO (in months) for all the districts in last three years.
Reference Year	Last 3 years as of March 31, 2020 [Apr 1, 2017-Mar 31, 2020]
Base Year	Last 3 years as of March 31, 2019 [Apr 1, 2016-Mar 31, 2019]
Numerator	Sum of average tenure of a full-time officer in last three years for all districts
Denominator	Number of districts
Data source(s)	State Report
Remark	The average tenure per officer for all districts needs to be calculated separately by using the • Number of months the post remained filled with full time officer(s) in the specific last three years, and • Number of full time officers that occupied the post in the specific three years

Indicator 2.2.3 - Average number of days for transfer of Central National Health Mission (NHM) fund from State Treasury to implementation agency (Department/Society) based on largest tranche of the last financial year	
Indicator definition	Average time taken (in number of days) by the State Treasury to transfer funds to implementation agency for the largest amount tranche during a specific year.
Reference Year	2019-20 (Apr 2019-Mar 2020)
Base Year	2018-19 (Apr 2018-Mar 2019)
Numerator	Number of days taken by the State Treasury to transfer Central NHM funds for the tranche with the largest amount
Denominator	1
Data source(s)	Centre NHM Finance Data [pre-entered]
Supporting documents to be uploaded	Evidence relating to the largest amount tranche received by State Treasury from GoI (with date) and the corresponding amount released by the State Treasury to the implementation agency [Department/Society], with date
Remark	Centre NHM Finance data includes the RCH flexi-pool and NHM-Health System Strengthening flexi-pool data (representing a substantial portion of the NHM funds), for calculating delay in transfer of funds.

Domain 3: Key Inputs and Processes

Sub-Domain 3.1: Health Systems / Service Delivery

Indicator 3.1.1. - Proportion of shortfall of health care providers (regular + contractual) against required number of health care providers in public health facilities	
Indicator definition	Proportion of shortfall of healthcare providers in public health facilities against total number of required health care providers (essential number as per IPHS 2012) / NUHM for each of the following cadres during a specific year: a. Auxiliary Nurse Mid-wife (ANM) at Sub-Centres (SCs), including SC-HWCs b. Staff nurse at Primary Health Centres (PHCs/UPHCs, including PHC-HWCs and UPHC-HWCs) and Community Health Centres (CHCs/UCHCs) c. Medical Officer (MOs) at PHCs/UPHCs d. Specialists at District Hospitals (Medicine, Surgery, Obstetrics and Gynaecology, Paediatrics, Anaesthesia, Ophthalmology, Orthopaedics, Radiology, Pathology, ENT, Dental, Psychiatry)
Reference Year	As on March 31, 2020
Base Year	As on March 31, 2019
Numerator	Shortfall ('essential number required as per IPHS 2012' *minus* 'number in position', separately for each category of staff
Denominator	Number of required health care providers (essential number as per IPHS 2012/), separately for each category of staff
Data source(s)	State Report
Remarks	IPHS 2012 norms to be used for calculating essential number required for rural health facilities and for Urban Health facilities (UPHCs/UCHCs) norms provided by National Urban Health Mission to be used.

Indicator 3.1.2 - Proportion of total staff (regular + contractual) covered under a functional IT enabled integrated Human Resources Management Information System (HRMIS)	
Indicator definition	Proportion of staff (regular + contractual) for whom pay-slip and transfer / postings are generated in the IT enabled HRMIS against total number of staff (regular + contractual) during a specific year.
Reference Year	As on March 31, 2020
Base Year	As on March 31, 2019
Numerator	Number of total staff (regular + contractual) for whom pay-slip and transfer/ postings are generated in the IT-enabled HRMIS
Denominator	Total number of staff (regular + contractual)
Data source(s)	State Report. The independent validation agency will verify the following to ascertain the functionality of IT enabled HRMIS: i) Facility wise generation of line listing of HR (regular and contractual), ii) Pay slip generation of all HR, iii) Generation of all transfer / postings and iv) HR numbers in HRMIS match with HMIS (within a variation of 5 percent)

Indicator 3.1.3.a - Proportion of specified type of facilities functioning as First Referral Units (FRUs) as against population norm	
Indicator definition	Proportion of public sector facilities conducting specified number of C-sections per year (FRUs) against the norm of one FRU per 500,000 population during a specific year.
Reference Year	2019-20 (Apr 2019-Mar 2020)
Base Year	2018-19 (Apr 2018-Mar 2019)
Numerator	Number of functional FRUs (CHCs/SDHs/DHs) based on specified number of C-sections conducted per year
Denominator	Required number of FRUs as per the MoHFW norm of one FRU per 500,000 population (Pre-entered)
Data source(s)	State Report on number of functional FRUs MoHFW data on required number of FRUs (pre-entered)
Remark	• Criteria for fully operational FRUs: ✓ For SDHs/CHCs - conducting minimum 60 C-Sections per year (36 C-sections per year for Hilly and North-Eastern States except Assam) ✓ For DHs - conducting minimum 120 C-Sections per year (72 C-sections per year for Hilly and North-Eastern States except Assam)

Indicator 3.1.3.b - Proportion of public health facilities with Kayakalp score >70% against total number of public health facilities	
Indicator definition	Proportion of public health facilities (district hospitals, sub-district hospitals, community health centres, primary health centres and UPHCs) with Kayakalp score of >70% against total number of public health facilities (district hospitals, sub-district hospitals, community health centres, primary health centres and UPHCs)
Reference Year	As on 31st March, 2020
Base Year	As on 31st March, 2019
Numerator	Number of public health facilities (district hospitals, sub-district hospitals, community health centres, primary health centres and UPHCs) with Kayakalp score of >70%, separately for each category
Denominator	Total number of public health facilities (district hospitals, sub-district hospitals, community health centres, primary health centres and UPHCs), separately for each category
Data source(s)	MoHFW data (pre-entered)

Indicator 3.1.4 - Proportion of functional Health and Wellness Centres	
Indicator definition	Proportion of sub-centres, primary health centres (PHCs) and UPHCs functional as Health and Wellness Centres at the end of specific year against the total number of sub-centres, PHCs and UPHCs
Reference Year	As on March 31, 2020
Base Year	As on March 31, 2019
Numerator	Number of sub centres, PHCs and UPHCs functional as Health and Wellness Centres, separately for each category
Denominator	Total number of Sub centres, PHCs and UPHCs, separately for each category
Data source(s)	MoHFW data (pre-entered)
Remarks	A validation check of at least 2% of reported Functional HWCs in each state/UT will be conducted by MoHFW through an independent agency. A correction factor will be applied based on MoHFW's validation check. The functionality of the Health and Wellness center at Sub-center, PHCs and UPHCs will be defined as per the guidelines of Health and Wellness Centers.
Supporting documents to be uploaded	District wise number (numerator and denominator), separately for each category

Indicator 3.1.5 - Proportion of district hospitals with functional Cardiac Care Units (CCUs)	
Indicator definition	Proportion of district hospitals with functional CCUs [with ventilator, monitor, defibrillator, CCU beds, portable ECG machine, pulse oxymeter etc.), drugs, diagnostics and desired staff as per programme guidelines] against total number of district hospitals
Reference Year	As on March 31, 2020
Base Year	As on March 31, 2019
Numerator	Number of district hospitals with functional CCUs
Denominator	Total number of district hospitals
Data source(s)	State Report
Supporting documents to be uploaded	States to provide district wise status of CCUs along with necessary details for data validation.

Indicator 3.1.6 a - Level of registration of births	
Indicator definition	Proportion of births registered under Civil Registration System (CRS) against the estimated number of births during a specific year.
Reference Year	2019 (Jan-Dec 2019)
Base Year	2018 (Jan-Dec 2018)

Numerator	Not applicable as ready figures for CRS are available
Denominator	
Data source(s)	Civil Registration System (CRS) [pre-entered]

Indicator 3.1.6 b - Level of registration of deaths	
Indicator definition	Proportion of deaths registered under Civil Registration System (CRS) against the estimated number of deaths during a specific year.
Reference Year	2019 (Jan-Dec 2019)
Base Year	2018 (Jan-Dec 2018)
Numerator	Not applicable as ready figures for CRS are available
Denominator	
Data source(s)	Civil Registration System (CRS) [pre-entered]

Indicator 3.1.7 - Completeness of Integrated Disease Surveillance Programme (IDSP) reporting of P and L forms	
Indicator definition	Proportion of Reporting Units (RUs) reporting in stipulated time period against total RUs, for P and L forms during a specific year.
Reference Year	2019 (Jan-Dec 2019)
Base Year	2018 (Jan-Dec 2018)
Numerator	Not applicable as ready figures are available
Denominator	
Data source(s)	Central IDSP, MoHFW Data [pre-entered]
Remarks	Average scaled value for P and L forms to be calculated based on scaled values of P and L forms

Indicator 3.1.8.a - Proportion of public health facilities with accreditation certificates by a standard quality assurance programme (NQAS/NABH)	
Indicator definition	Proportion of specified type of public health facilities with accreditation certificates by a standard quality assurance programme against the total number of following specified type of facilities during a specific year. 1. District hospital (DH) / Sub-district hospital (SDH) 2. CHC 3. PHC-UPHC
Reference Year	As on March 31, 2020
Base Year	As on March 31, 2019
Numerator	Number of specified type of public health facilities (DH-SDH / CHC/PHC-UPHC) with accreditation certificates (NQAS / NABH)
Denominator	Total number of specified type (DH-SDH / CHC/PHCs-UPHCs) of facilities
Data source(s)	State Report
Supporting documents to be uploaded	List of accredited facilities with type of accreditation.
Remarks	Average scaled value for DH-SDH/CHC,/PHCs-UPHCs to be calculated based on scaled values of above type of facilities.

Indicator 3.1.8.b Proportion of District Hospitals and CHCs certified under LaQshya	
Indicator definition	Proportion of facilities (DH and CHCs) certified under LaQshya (Labour Room and Maternal OT, separately), against total number of DHs and CHCs,
Reference Year	2019-20 (Apr 2019-Mar 2020)
Base Year	2018-19 (Apr 2018-Mar 2019)
Numerator	Number of facilities (DH and CHCs) certified under LaQshya (Labour Rooms and Maternal OTs, separately), separately for each category of facility
Denominator	Total number of DH and CHCs, separately for each category
Data source(s)	MoHFW data [pre-entered]
Remarks	Average scaled values for DH-SDH and CHC-Block PHCs to be calculated based on scaled values of above type of facilities

Indicator 3.1.9 - Proportion of State Government Health Expenditure to Total State Expenditure	
Indicator definition	Proportion of State government health expenditure to total State expenditure, during the specific year
Reference Year	2017-18 (Apr 2017-Mar 2018)
Base Year	2016-17 (Apr 2016-Mar 2017)
Numerator	Health expenditure of State Government's
Denominator	Total State Expenditure
Data source(s)	National Health Profile/ National Health Accounts Cell MoHFW [pre-entered]
Remark	Indicator not applicable for the category of Smaller States and UTs.

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