

EXECUTIVE SUMMARY

BACKGROUND AND METHODOLOGY
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CONCLUSIONS AND WAY FORWARD

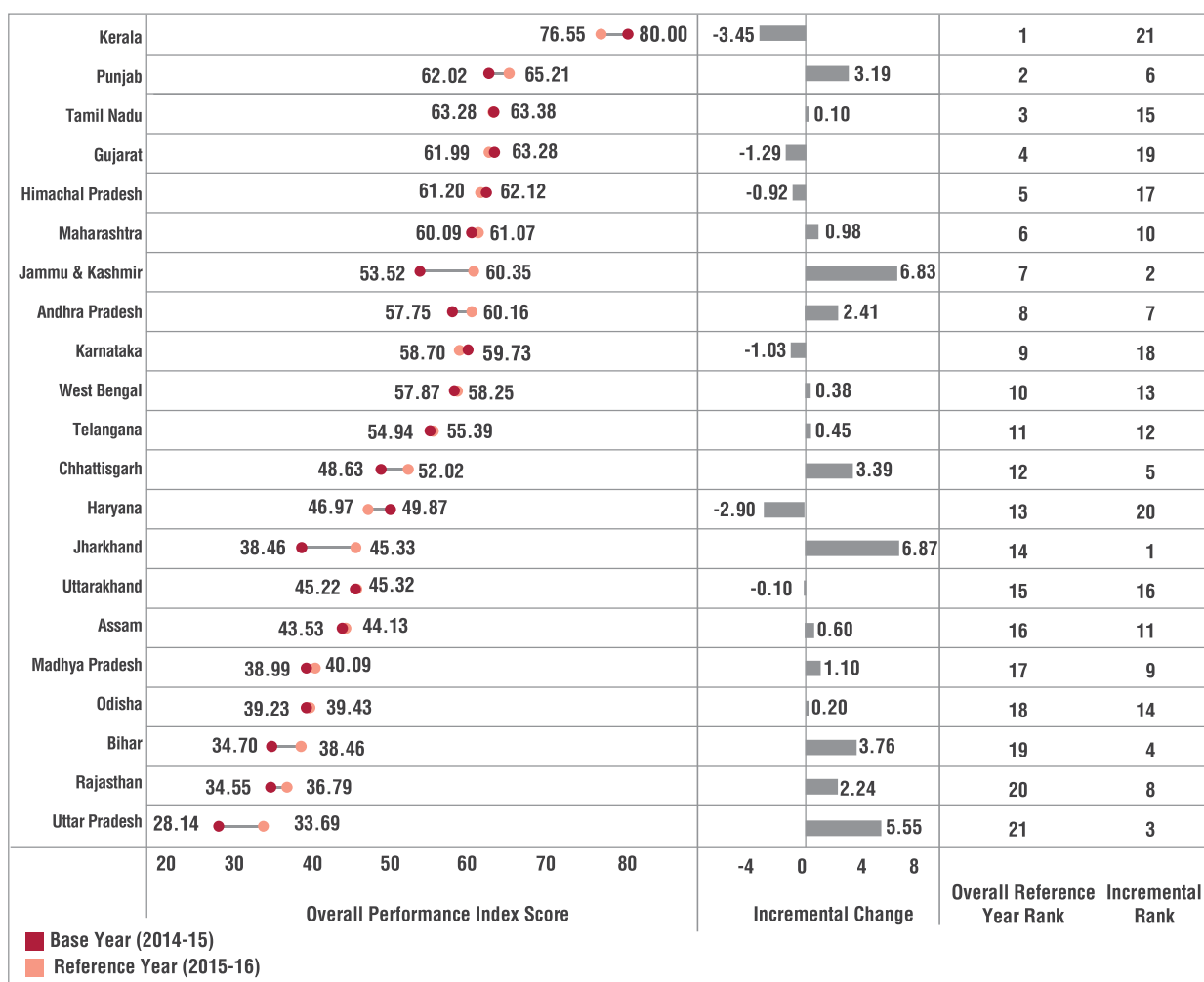
BACKGROUND AND METHODOLOGY

- 1. *The National Institution for Transforming India (NITI) Aayog is spearheading the Health Index initiative to bring about transformational change in achieving desirable health outcomes:*** India has achieved significant economic growth over the past decades, but the progress in health has not been commensurate. Despite notable gains in improving life expectancy, reducing fertility, maternal and child mortality, and addressing other health priorities, the rates of improvement have been insufficient, falling short on several national and global targets. Furthermore, there are wide variations across States in their health outcomes and systems performance. In order to bring about transformational change in population health through a spirit of co-operative and competitive federalism, NITI Aayog has spearheaded the Health Index initiative, to measure the annual performance of States and Union Territories (UTs), and rank States on the basis of incremental change, while also providing an overall status of States' performance and helping identify specific areas of improvement. It is envisaged that this tool will propel States towards undertaking multi-pronged interventions that will bring about the much-desired optimal population health outcomes.
- 2. *Multiple stakeholders contributed to the Index development:*** The Index was developed by NITI Aayog with technical assistance from the World Bank through an iterative process in consultation with the Ministry of Health and Family Welfare (MoHFW), States and UTs, domestic and international sector experts and other development partners (Table 2.3 provides Health Index-indicator details and data sources).
- 3. *States and UTs have been ranked on a composite Health Index in three categories (Larger States, Smaller States and UTs) to ensure comparison among similar entities:*** With a focus on outcomes, outputs and critical inputs, the main criteria for inclusion of indicators was the availability of reliable data for States and UTs, with at least an annual frequency. The Index is a weighted composite Index based on indicators in three domains: (a) Health Outcomes; (b) Governance and Information; and (c) Key Inputs/Processes, with each domain assigned a weight based on its importance. The indicator values are standardized (scaled 0 to 100) and used in generating composite Index scores and overall performance rankings for base year (2014-15) and reference year (2015-16). The annual incremental progress made by the States and UTs from base year to reference year is used to generate incremental ranks (Section 2 provides methodological details of constructing the Index). States and UTs have been ranked in three categories (Larger States, Smaller States and UTs) to ensure comparison among similar entities (Table 2.1 deals with categorization of States and UTs).
- 4. *For generation of Index values and ranks, data was submitted online and validated by an Independent Validation Agency (IVA):*** The States were sensitized about the Health Index including indicator definitions, data sources and process for data submission through a series of regional workshops and mentor support was provided to most States (Table 3.4). Data was submitted by States on the online portal hosted by NITI Aayog and data from sources in the public domain was pre-entered. This data was then validated by an IVA and was used as an input into automated generation of Index values and ranks on the portal (Sections 3.2.4 and 3.2.5).

KEY RESULTS

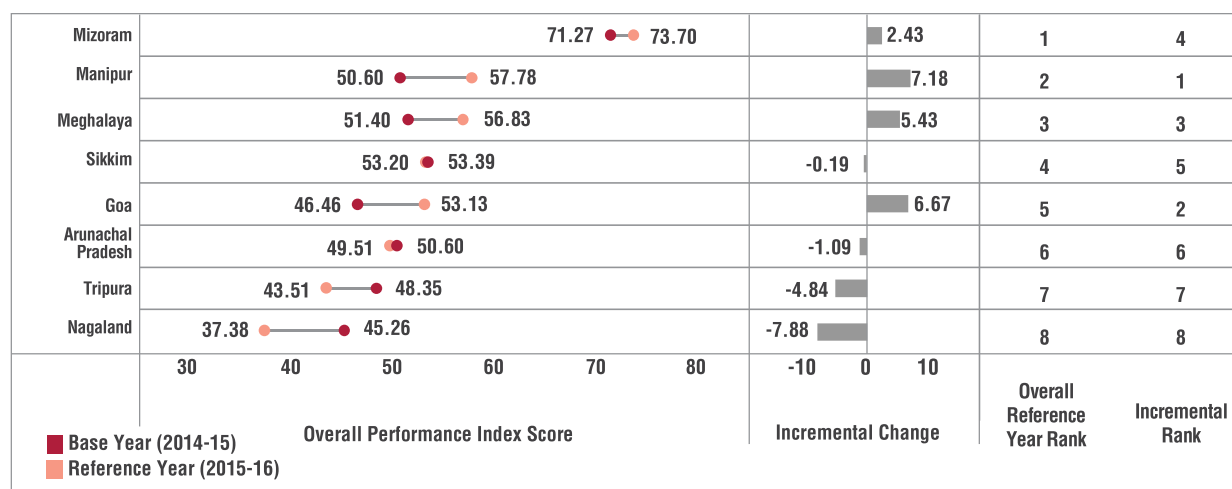
5. **There is a large gap in overall performance between the best and the least performing States and UTs; besides, all States and UTs have substantial scope for improvement:** In the reference year (2015-16) among Larger States, the Index score for overall performance ranged widely between 33.69 in Uttar Pradesh to 76.55 in Kerala. Similarly, among Smaller States, the Index score for overall performance varied between 37.38 in Nagaland to 73.70 in Mizoram, and among UTs this varied between 34.64 in Dadra & Nagar Haveli to 65.79 in Lakshadweep. Among Larger States, the variation between the best and least performing States and UTs was the widest around 43 points as compared with 36 points in Smaller States and 31 points in UTs. However, based on the highest observed overall Index scores in each category of States and UTs, clearly there is room for improvement in all States and UTs.
6. **The States and UTs rank differently on overall performance and annual incremental performance:** States and UTs that start at lower levels of the Health Index (lower levels of development of their health systems) are generally at an advantage in notching up incremental progress over States with high Health Index score due to diminishing marginal returns in outcomes for similar effort levels. It is a challenge for States at high levels of the Index score even to maintain their performance levels. For example, Kerala ranks on top in terms of overall performance and at the bottom in terms of incremental progress mainly as it had already achieved a low level of Neonatal Mortality Rate (NMR) and Under-five Mortality Rate (U5MR) and replacement level fertility, leaving limited space for any further improvements.

Figure E.1 - Larger States: Incremental scores and ranks, with overall performance from base year to reference year and ranks



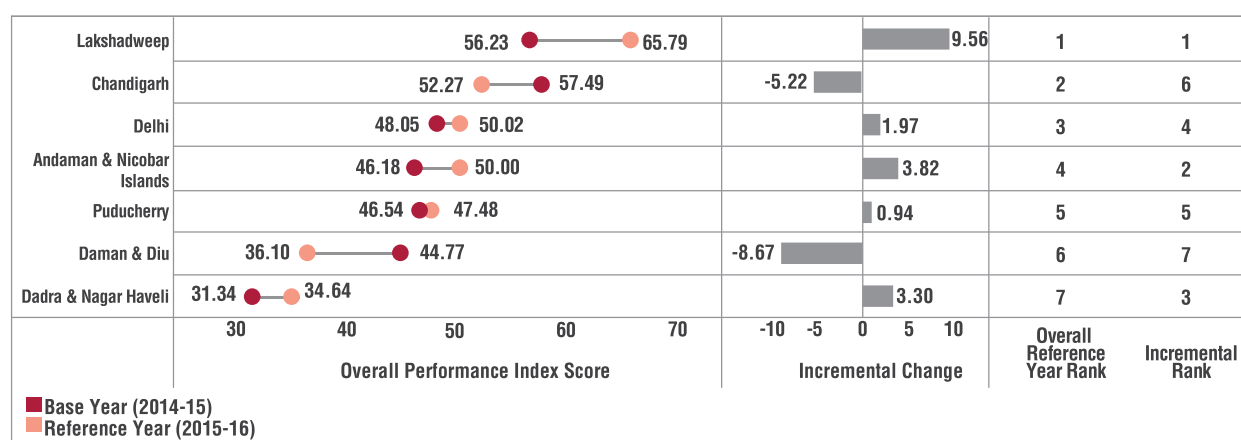
7. **Among the Larger States, Jharkhand, Jammu & Kashmir, and Uttar Pradesh are the top three ranking States in terms of annual incremental performance, while Kerala, Punjab, and Tamil Nadu ranked on top in terms of overall performance:** In terms of annual incremental performance in Index scores from the base to the reference year, the top three ranked States in the group of Larger States are Jharkhand (up 6.87 points), Jammu & Kashmir (up 6.83 points) and Uttar Pradesh (up 5.55 points). However, in terms of overall levels of performance, these States are in the bottom two-third of the range of Index scores, with Kerala (76.55), Punjab (65.21) and Tamil Nadu (63.38) showing the highest scores. Jharkhand, Jammu & Kashmir, and Uttar Pradesh showed the maximum gains in improvement of health outcomes from base to reference year in indicators such as NMR, U5MR, full immunization coverage, institutional deliveries, and people living with HIV (PLHIV) on antiretroviral therapy (ART).
8. **Among Smaller States, Manipur ranked first in terms of annual incremental performance and second in terms of overall performance, while Goa ranked second in terms of annual incremental performance:** Among Smaller States, Mizoram (73.70) followed by Manipur (57.78) are the best overall performers. In annual incremental performance, Manipur (up 7.18 points) and Goa (up 6.67 points) ranked the highest. For Smaller States, among the top performers, the indicators that contributed to higher incremental performance varied. Manipur, ranked at the top and registered maximum incremental progress on indicators such as PLHIV on ART, first trimester antenatal care (ANC) registration, grading of Community Health Centres (CHCs) on quality parameters, average occupancy of three key State-level officers, and good reporting on the Integrated Disease Surveillance Programme (IDSP).

Figure E.2 - Smaller States: Incremental scores and ranks, with overall performance from base year to reference year and ranks



9. **Among UTs, Lakshadweep showed both the highest annual incremental performance as well as the best overall performance:** In annual incremental performance, Lakshadweep ranked at the top (up 9.56 points) followed by Andaman & Nicobar Islands (up 3.82 points). In terms of overall performance, Lakshadweep (65.79) ranked at the top, followed by Chandigarh (52.27). Lakshadweep showed the highest improvement in indicators such as institutional deliveries, tuberculosis (TB) treatment success rate and transfer of Central National Health Mission (NHM) funds from State Treasury to implementation agency.

Figure E.3 - Union Territories: Incremental scores and ranks, with overall performance from base year to reference year and ranks



10. *The incremental measurement shows that about one-third of the States have registered a decline in their Health Indices in the reference year as compared to the base year:* This is a matter of concern and should nudge the States into reviewing and revitalizing their programmatic efforts. Among the Larger States, six States, namely Uttarakhand, Himachal Pradesh, Karnataka, Gujarat, Haryana and Kerala have shown a decline in performance from base year to reference year, despite some of them being among the top ten in overall performance. Among the Smaller States, Sikkim, Arunachal Pradesh, Tripura and Nagaland have shown a decline; and among the UTs, Chandigarh and Daman & Diu have shown a decline. Tables E.1, E.2 and E.3 provide a categorization of States and UTs based on the level of annual incremental performance and the overall performance.

Table E.1 - Categorization of Larger States on incremental performance and overall performance

Incremental Performance	Overall Performance		
	Aspirants	Achievers	Front-runners
Not Improved	Uttarakhand Haryana	Himachal Pradesh Karnataka Gujarat	Kerala
Least Improved	Madhya Pradesh Assam Odisha	Maharashtra Telangana West Bengal	Tamil Nadu
Moderately Improved	Bihar Rajasthan	Chhattisgarh Andhra Pradesh	Punjab
Most Improved	Jharkhand Uttar Pradesh	Jammu & Kashmir	

Note: Overall Performance: The States are categorized on the basis of reference year Index score range: Front-runners: top one-third (Index score>62); Achievers: middle one-third (Index score between 48 and 62), Aspirants: lowest one-third (Index score<48).

Incremental Performance: The States are categorized on the basis of incremental Index score range: 'Not Improved' (incremental Index score<=0), 'Least Improved' (incremental Index score between 0.01 and 2), 'Moderately Improved' (incremental Index score between 2.01 and 4), 'Most Improved' (incremental Index score>4.0).

Table E.2 - Categorization of Smaller States on incremental performance and overall performance

Incremental Performance	Overall Performance →		
	Aspirants	Achievers	Front-runners
Not Improved	Tripura Nagaland	Sikkim Arunachal Pradesh	-
Least Improved	-	-	-
Moderately Improved	-	-	Mizoram
Most Improved	-	Manipur Meghalaya Goa	-

Note: Overall Performance: The States are categorized on the basis of reference year Index score range: Front-runners: top one-third (Index score >61.60), Achievers: middle one-third (Index score between 49.49 and 61.60), Aspirants: lowest one-third (Index score <49.49).

Incremental Performance: The States are categorized on the basis of incremental Index score range: 'Not Improved' (incremental Index score ≤ 0), 'Least Improved' (incremental Index score between 0.01 and 2), 'Moderately Improved' (incremental Index score between 2.01 and 4), 'Most Improved' (incremental Index score >4.0).

Table E.3 - Categorization of Union Territories based on incremental performance and overall performance

Incremental Performance	Overall Performance →		
	Aspirants	Achievers	Front-runners
Not Improved	Daman & Diu	Chandigarh	-
Least Improved	-	Delhi Puducherry	-
Moderately Improved	Dadra & Nagar Haveli	Andaman & Nicobar Islands	-
Most Improved	-	-	Lakshadweep

Note: Overall Performance: The UTs are categorized on the basis of reference year Index score range: Front-runners: top one-third (Index score >55), Achievers: middle one-third (Index score between 45 and 55), Aspirants: lowest one-third (Index score <45).

For Incremental Performance: The UTs are categorized on the basis of incremental Index score range: 'Not Improved' (incremental Index score ≤ 0), 'Least Improved' (incremental Index score between 0.01 and 2), 'Moderately Improved' (incremental Index score between 2.01 and 4), 'Most Improved' (incremental Index score >4.0).

In terms of numbers of indicators, Chhattisgarh, Goa and Delhi showed improvement in the highest number of parameters, within the three categories of States respectively (Figures 4.6, 4.12, 4.18). The specific indicators for which the States' performance has dipped or improved and actual values for these are provided in Annexure 4. The indicators where most States and UTs need to focus include addressing vacancies in key staff, establishment of functional district Cardiac Care Units (CCUs), quality accreditation of public health facilities, and institutionalization of Human Resources Management Information System (HRMIS). Additionally, almost all Larger States need to focus on improving the Sex Ratio at Birth (SRB).

11. The overall performance of States is not always consistent with the domain-specific performance:

Some States fare significantly better in one domain than others, suggesting that there is scope to improve their performance in lagging domains with specific targeted interventions. For example, while most States showed a better performance in Health Outcomes, Tamil Nadu, West Bengal, Assam, Madhya Pradesh, Odisha, Rajasthan, Daman & Diu, and Dadra & Nagar Haveli performed better in terms of Key Inputs/Processes. Domain-wise incremental performance among the three categories of States showed the highest improvement in outcomes, respectively for Jammu & Kashmir, Uttar Pradesh and Jharkhand; Goa and Manipur; Andaman & Nicobar Islands and Lakshadweep.

CONCLUSIONS AND WAY FORWARD

12. The Health Index is a useful tool for systematic measurement of annual performance across States and UTs: Rich learnings have emerged that will guide improvement of both the methods and the data to make the Index better. The Health Index is an important aid in understanding the heterogeneity and complexity of the nation's performance in health. It is the first attempt at establishing an annual systematic tool for measurement of performance across States and UTs on a variety of health parameters within a composite measure. In its first year, it may not have achieved perfection; however, it does set the foundation for a systematic output and outcome based performance measurement. In linking this Index to incentives under the NHM, the MoHFW has underlined the importance of such an exercise. The results and analysis in this report provide an important insight into the areas in which States have improved, stagnated or declined and this will help in better targeting of interventions. Owing to the multiplicity of determinants that impact health outcomes, some of these actions may lie outside the ambit of health departments and, in fact, depend on the actions of the private sector and sectors other than health. The learnings that have emerged during the process of development of the Health Index, will guide in refining the Index for the coming year and also address some of the limitations. The exercise also calls for urgently improving the data systems in health, in terms of representativeness of the priority areas, periodic availability for all States and UTs, and completeness for private sector service delivery.