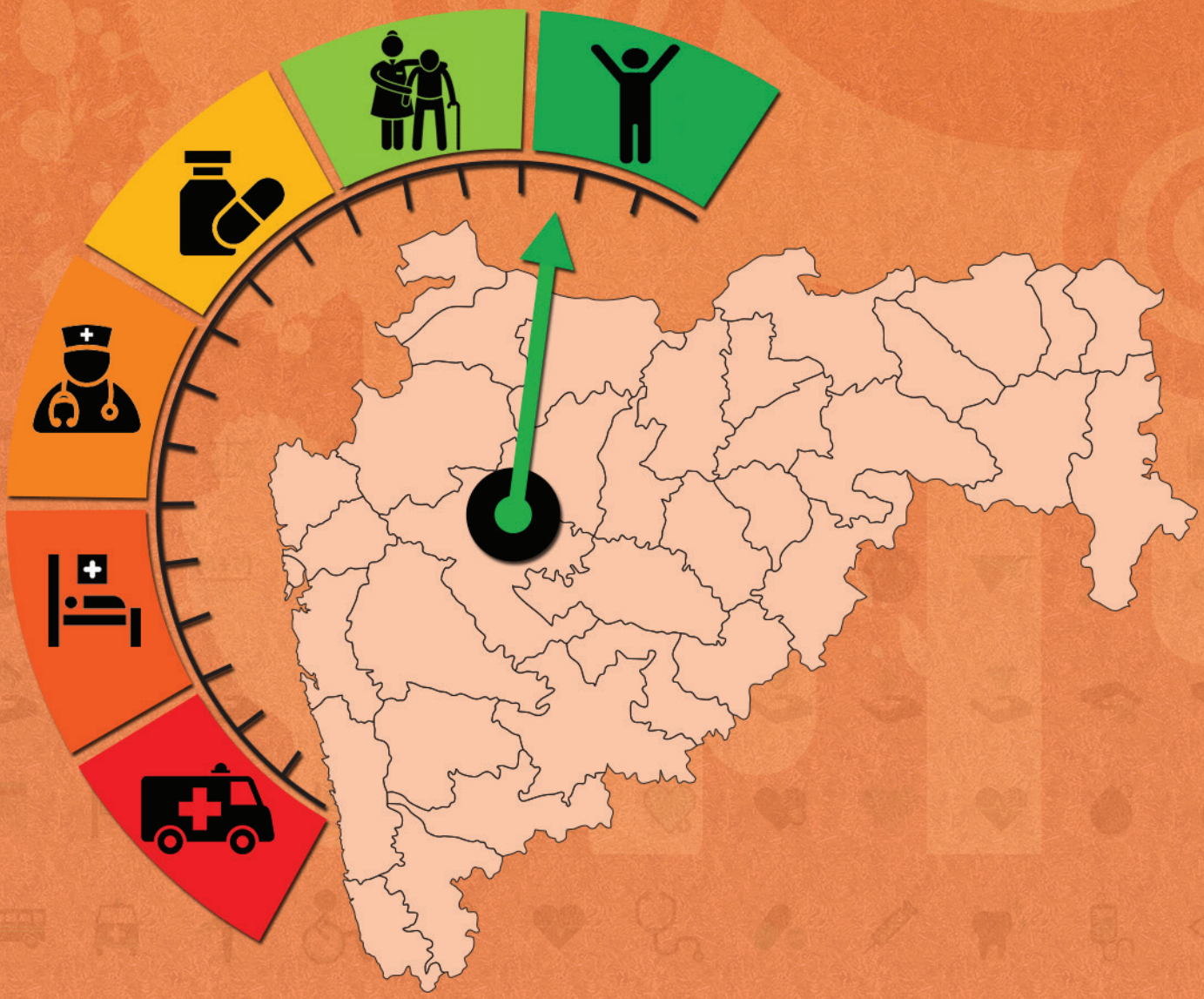
# HEALTH DOSSIER 2021

## Reflections on Key Health Indicators



## MAHARASHTRA

## DISTRICTS VISITED IN

# COMMON REVIEW MISSIONS

| CRM | Districts Visited | |
|---|---|---|
| 2nd | Pune | Nashik |
| 4th | Kolhapur | Gondia |
| 7th | Ratnagiri | Nandurbar |
| 9th | Bhandara | Osmanabad |
| 10th | Nashik | Nagpur |
| 11th | Wardha | Parbhani |
| 12th | Satara | Gadchiroli |

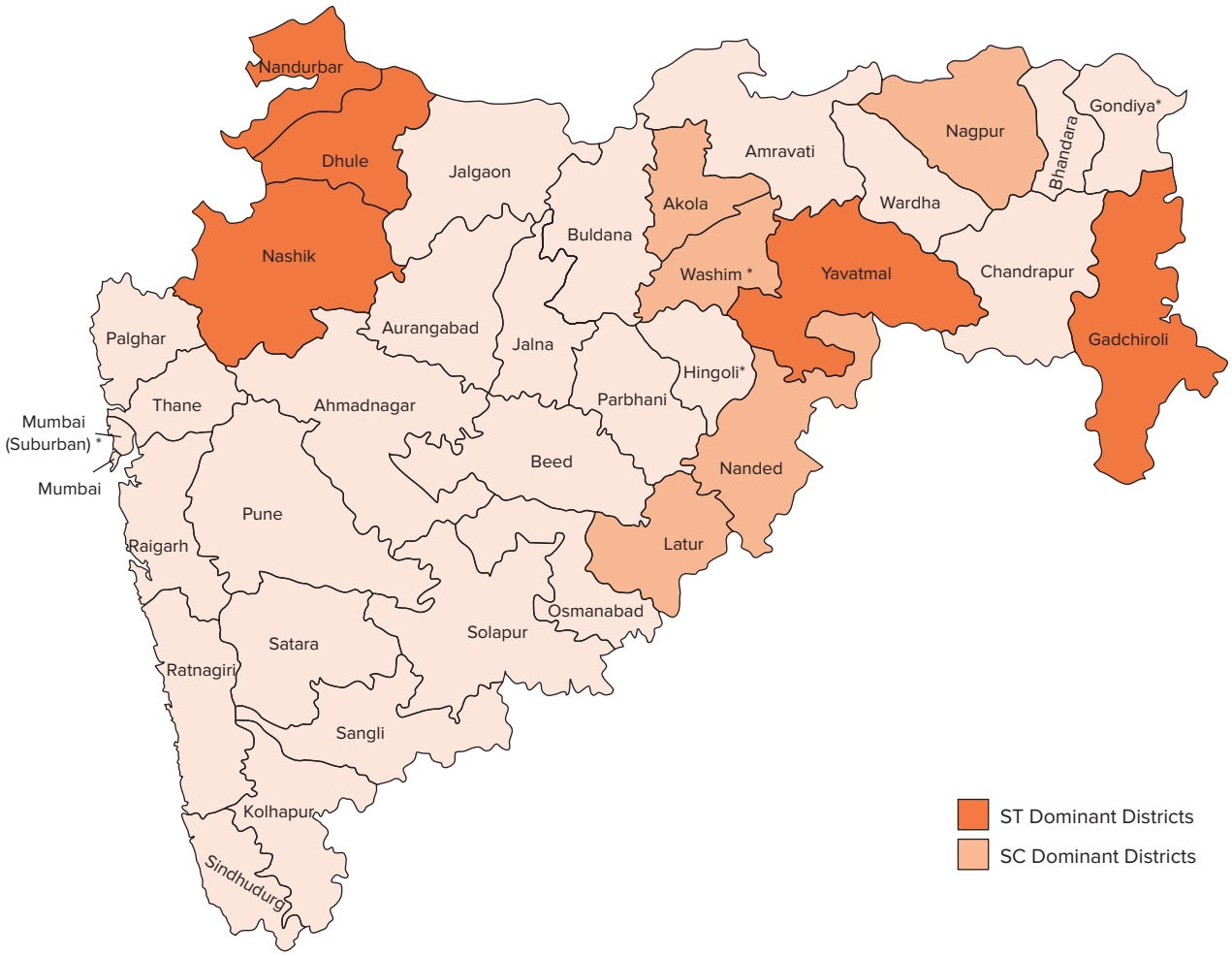
# MAHARASHTRA

## 1. BACKGROUND

### 1.1 State Profile

**Maharashtra** is the 3rd largest state[a] in India with a geographical spread of 3,07,713 km$^2$. The State is divided into 36 districts. It is the second most populous State in the country with a population of over 11.23 crores, accounting for 9.28% of the total population[b] of India, with a projection to increase over

**Figure 1: Top 5 ST & SC Dominant Districts**




[a] Including all states & UTs; RHS 2020

[b] Census 2011

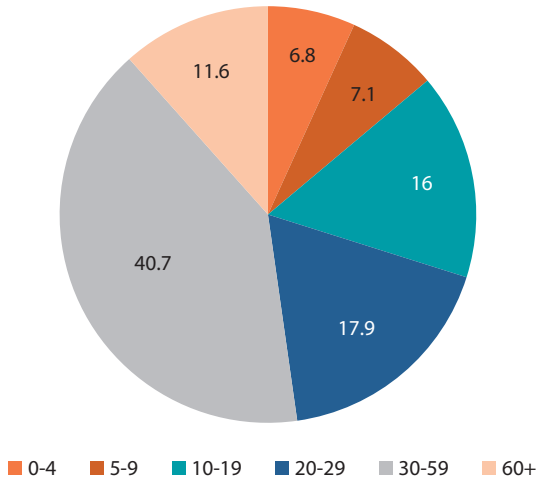
12.4 crores by 2021[c]. As per Census 2011, the Scheduled Caste (SC) and Scheduled Tribe (ST) population is 1.32 crores (11.81%) and 1.05 crores (9.35%), respectively. Out of the 36 districts, top five ST & SC dominant districts account for 40.75% of ST & 19.45% of SC population in the State(Annexure 1, State Profile). In Maharashtra 54.77% of the population reside in rural areas, while the remaining 45.22% reside in urban areas. There are 3 metro cities and 6 Million plus cities in the State. At present, 95 cities[d] are covered under the National Urban Health Mission. The total length of roads in the State is 6,23,972 km (12.48%[e]), with national highways constituting 15,437 km (13.52%[f]) and state highways constituting 39,000 km (22.28%[g]). Agriculture is the mainstay of the state of Maharashtra. Nearly 65% of the total workers in the State depend on agriculture and allied activities[h].

A detail report on the key indicators has been attached as Annexure 1

## 1.2 Demography

In Maharashtra, out of the 36 districts -13 districts have a population of over 30 lakhs, 9 districts have a population between 20-30 lakhs, 12 districts have a population between 10-20 lakhs and only 1 district has a population less than 10 lakhs (Annexure 1.1, State Profile). The State's sex ratio at birth (880 females for every 1000 males) is lower than the national average (899 females for every 1000 males) (Annexure 1.2). It is estimated that 16% of the total population is in 10-19 years age group, 58.6% between 20 to 59 years age group; and 11.6% is 60 years and above(Figure 2).The crude birth and death rates have declined from 19 and 6.7 in 2005 to 15.3 and 5.4 in 2019 respectively (Annexure 2, Figure 2). The literacy rate increased from 76.88% in 2001 to 82.33% in 2011, with male & female literacy rates being 88.38% and 75.87% respectively (Annexure 1). As per ESAG 2018 report, the Gross Enrollment Rate (GER)[i]is 29.9% for higher education, 67.81% for senior secondary education, 89.95% for secondary education, 98.3% for elementary education, and 97.74% for primary education.

**Figure 2: Maharashtra - distribution of estimated population 2021 (%)**




## 1.3 Elderly

Population ageing has profound social, economic, and political implications. Elderly people over 60 years constitute 11.6% of the State's total population. The life expectancy at 60 years of age is 18.8 years for males, and 19.7 years for females (2014-2018)[j]. 79% of elderly females and 31% elderly males

[c] Census Population Projection 2019

[d] QPR NHM MIS Report as on 31 Dec 2020

[e] Percentage of total length of roads in Maharashtra

[f] Percentage of total length of National Highways in the country

[g] Percentage of total length of State Highways in the country

[h] Maharashtra - State Agricultural Portal; https://agricoop.nic.in/sites/default/files/Maharashtra-SAP_V1.3-2.pdf

[i] Gross Enrolment Rate (GER): Total enrolment in a specific level of education, regardless of age, expressed as a percentage of the eligible official school-age population corresponding to the same level of education in a given school-year. School-age Population: Population of the age group which officially corresponds to the relevant level of education; senior secondary education is XI-XII, secondary is IX-X, primary is I-V and elementary is I-VIII

[j] SRS Based Life Abridged Tables

in urban areas, and 61% of elderly females and 26% elderly males in rural areas are economically fully dependent on others. The old age dependency ratio is 15.7 in 2011; which are 14.2 for males, 17.2 for females, 18.8 in rural and 12.2 in urban areas. The illness (any deviation from the state of physical and mental well-being) perception among the elderly men and women is 35% each, which is higher than the national average of 31% for both.

# 2. HEALTH STATUS AT A GLANCE

## 2.1 Maternal Health

The State has been able to provide RMNCHA+N[k] services with major focus on primary and secondary care services under NHM. Indicators for Antenatal care (ANC)[l], institutional deliveries, C sections, distribution of IFA[m] tablets, follow up of high-risk pregnancies, provision of postnatal and newborn care, have shown substantial improvement since 2005 (NFHS 4 & 5). The maternal mortality ratio has significantly declined[n] from 104 (2007-09)to 46 (2016-18). In Maharashtra, 94.7% of women received 4 ANC check-ups (Annexure 1.4). As per NFHS 5, Parbhani, Nanded, Bid/Beed, Aurangabad & Nandurbar districts reported poor full ANC coverage(mother who has at least 4 ANC) ranging from 47.4% to 58.2%. As reported, around 99.4% of total reported deliveries took place in institutions, out of which 49% took place in public institutions. Total percentage of C-sections (23.9%) is higher than that of the WHO's standard (10-15%); and out of the total reported C-sections, 26.4% is conducted at private facilities in the State. Around 61.1% of women are tracked for their first postpartum checkup between 48 hours and 14 days (Annexure 1.4). Prevalence of Anaemia aged 15-49 years increased in women from 49.7% (NFHS 4) to 57.2% (NFHS 5). Anaemia in females of reproductive age group is more than twicethan in men of similar age group (Annexure 2, Figure 5).

Refer Annexure 3 for detailed district wise comparison of NFHS 5 key indicators.

## 2.2 Newborn, Infant & Child Health

Ever since the inception of NHM in 2005, the State has shown a significant decline in IMR from 36 (2005) to 17 (2019), which is exceptionally lower than the national average of 30 (Annexure 2, Figure 1). Additionally, NNMR[o] and Still Birth (per 1,000 live births) Rates have also significantly declined from 25.1 and 11.9 (2005) to 13 and 5 (2018), respectively (Annexure 2, Figure 4). Improvement in the indicators can be attributed to several interventions at the State level, including infrastructure strengthening under NHM, such as establishment of SNCUs, NBSUs and NBCCs. The life expectancy at birth has also improved from 69.9 (2006-10) to 72.5 (2014-18), which is higher than the national average of 69.4(Annexure 2, Figure 3). As per NFHS 5, Mumbai Suburban, Palghar, Nashik, Hingoli & Bid/Beed districts reported low SRBs[p] ranging from 703 to 843; whereas Latur, Wardha, Gadchiroli, Amravati, Gondiya & Osmanabad districts reported high SRB, ranging from 1265 to 1050.

---

[k] Reproductive, Maternal, Newborn, Child, Adolescent Health & Nutrition
[l] Antenatal Check up
[m] Iron Folic Acid Tablets
[n] SRS MMR Bulletin
[o] Neonatal Mortality Rate
[p] Sex Ratio at Birth

Full vaccination[q] coverage for children between 12 – 23 months improved from 78.4% (NFHS 4) to 81.7% (NFHS 5). The percentage of under 6-months children exclusively breastfed also improved from 56.6% (NFHS 4) to 71% (NFHS 5). An increase in childhood anaemia from 53.8% to 68.9% in children aged 6-59 months is reported (Annexure 2, Figure 5). For under-5 years stunting - Satara, Mumbai, Nagpur, Wardha & Amravati districts reported comparatively low burden ranging from 20.2% to 29%, while Nandurbar, Buldhana, Latur, Nashik, Thane & Bid/Beed districts reported high burden ranging from 40.8% to 45.8%. For under 5 years stunting - Osmanabad, Thane, Latur, Mumbai Suburban and Sangli districts reported comparatively low burden, ranging between 16.1% - 18.6%; whereas Dhule, Chandrapur, Nagpur, Buldhana and Washim districts reported high burden ranging from 31.7% to 38.9%,

## 2.3 Family Planning

The TFR[r] reduced from 2.2 in 2005 to 1.7 in 2018, which is lower than the national average of 2.2 (Annexure 2Figure 4). The total unmet need in the State is reported as 9.6%, while unmet need for spacing is 3.9% (NFHS 5). Parbhani district reported the highest total unmet need (18.5%) and Nagpur reported the lowest (4.2%) (NFHS 5). Around 63.8% of married women reported to avail any modern method of family planning in the State (NFHS 5), with sterilization acceptance being 49.1% among females and 0.4% among males.

## 2.4 Communicable Diseases

The State has 36 functional IDSP units in place[s]. The proportion of Communicable, Maternal, Neonatal, and Nutritional Diseases [CMNND] contribute to 22.27% of total disease burden (GBD 2019) with diarrheal diseases, lower respiratory infections & drug-susceptible TB being the major causes of death in the State(Annexure 2, Figure 6)[t]. As per QPR reports, the annualized total case notification rate for TB is 161% and NSP[u] success rate is 74% as opposed to the national average of 163% and 79%, respectively. For NLEP[v], the reported prevalence rate of 1.19 per 10,000 population is higher than the national average of 0.61. In FY 2019-20, deaths from vector borne diseases include 8 due to malaria, 29 due to dengue, while none due toKala azar.

## 2.5 Non-Communicable Diseases (NCDs) and Injuries

It is reported that 63.7% of total disease burden in the State is due to premature deaths, while disability or morbidity accounts for 36.3%. Ischaemic heart disease, COPD & Diabetes Mellitus Type 2 remain the major causes for DALYs (Annexure 2, Figure 6). NCDs contribute to 66% of DALYs, while injuries contribute to 11.72% of DALYs in the State (GBD 2019). The State ranks second in the country for the total number of fatal road accidents with respect to other states (Annexure 1.4). The recent NFHS5 report revealed that 10.9% of women and 33.8 % of men used any kind of tobacco, while 0.4% of women and 13.9% of men consumed alcohol. High systolic blood pressure, high fasting plasma glucose, ambient particulate matter pollution and smoking are the major risk factors for all DALYs (Annexure 2, Figure 7).

[q] NFHS 5 Maharashtra Factsheet, based on information from vaccination card only
[r] Total Fertility Rate
[s] QPR NHM MIS Report (Status as on 01.03.2020)
[t] https://vizhub.healthdata.org/gbd-compare/india
[u] New Smear Positive
[v] National Leprosy Eradication Programme

## 2.6 Health Care Financing

The State's Net State Domestic Product (NSDP) for FY 2018-19 is ₹ 23,32,992 crores. The State is positioned 13th out of 32 States in terms of per capita[w] of ₹ 1,91,736. According to NHA (2017-18), the per capita Government Health Expenditure in the State is ₹ 1,356, which is less than the national average of ₹ 1753. On the other hand, the OOPE[x] as a share of Total Health Expenditure is 49.1%, which is more than the national average of 48.8%. As per NSS 2017-18, the OOPE for IPD care per hospitalized case in rural areas is estimated as ₹ 25,843 in private hospitals and ₹ 6,844 in public hospitals, while the same in urban areas is estimated as ₹ 37,057 in private hospitals and ₹ 8,369 in public hospitals. For childbirth, OOPE in public facilities is estimated to be around ₹ 2,104 in rural areas and ₹ 2,984 in urban areas, whereas in private health facilities, it is estimated as₹ 15,801 in rural areas and ₹ 23,229 in urban areas. In public health facilities, the share of expenditure on medicines for in-patient care is estimated as 41% and 36% for rural and urban areas, respectively; whereas for diagnostics, it is around 22% and 11% in rural and urban areas, respectively (Annexure 1.6, Healthcare Financing).

## 2.7 Health Infrastructure

As per the recent RHS data, the number of SCs, PHCs and CHCs have been increasing since 2005 (Annexure 2, Figure 8). Though public health facilities have increased over time, 24.86% shortfall in HWC-SCs, 20.79% shortfall in PHCs and 51.82% shortfall in CHCs still remain in the State (Annexure 2, Figure 9). Currently, there are 10,647 SCs, 1,829 PHCs, 278 CHCs in place against the required 14,170 SCs, 2,309 PHCs and 577 CHCs. Similarly, in urban settings, there are 846 PHCs in place against the required 1,182;thereby accounting to a shortfall of 28.43%. The State has 49 DHs, 100 SDH and 26 Government medical colleges. In the State, 84% of DHs (41), 89% of SDH (89) and only 42.8% of CHCs (119) serve as functional FRUs. In tribal catchments, there are 2,568 SCs, 397 PHCs and 64 CHCs in place against the required 3,148, 472 and 118 respectively; thereby amounting to a shortfall of 18.61%, 15.89% and 45.76% respectively.

Under the recently introduced Ayushman Bharat – Health and Wellness Centres (AB-HWCs), a total of 8,864 HWCs (6,573 SHCs, 1,828 PHCs& 463 UPHCs) are operationalized in the State as of 22nd December 2021[y].

In the State, 33 districts are equipped with MMUs under NHRM, and 10 under NUHM. The State has 99% of ASHAs in position under NRHM and 87% under NUHM, which are higher than the national average of 96% and 85%, respectively. The doctors to staff nurse ratio in place is 1:1, with 3 public healthcare providers available for every 10,000 populations (Annexure 1, Table 1.5)

Recent data (Annexure 1.3) reveals that out of 1000 population who availed services from public health facilities, 906.41 availed (events) OPD services and 49.15 availed (events) IPD services. However, as per the NSSO data (2017-18), only 29% of all OPD cases in rural and 22% in urban used public facilities, respectively. Similarly, 26% of all IPD cases in rural and 18% in urban utilized public facilities. Utilization of public health facilities in the State is lower than the national average.

[w] Directorate of Economics and Statistics of Maharashtra State Government

[x] Out of Pocket Expenditure

[y] AB-HWC Portal

# ANNEXURE 1: KEY INDICATORS

## 1.1 State Profile[z]

| Indicator | Maharashtra 2011[1] | India |
|---|---|---|
| Total Population (In Crore) | 11.23 | 121.08 |
| Rural (%) | 54.77 | 68.85 |
| Urban (%) | 45.22 | 31.14 |
| Scheduled Caste population (SC) (in crore) | 1.32 (11.81%) | 20.14 (16.63%) |
| Scheduled Tribe population (ST) (in crore) | 1.05 (9.35%) | 10.45 (8.63%) |
| Total Literacy Rate (%) | 82.3 | 74.04 |
| Male Literacy Rate (%) | 88.4 | 82.14 |
| Female Literacy Rate (%) | 75.9 | 65.46 |
| Number of Districts in the Maharashtra[2] | 36[aa] | |

| Number of districts per lakh population in **Maharashtra** (Census 2011) | Population[1] | Districts[1] (Numbers) |
|---|---|---|
| | <10 Lakhs | 1 |
| | ≥ 10 Lakhs - <20 Lakhs | 12 |
| | ≥20 Lakhs - <30 lakhs | 9 |
| | ≥30 Lakhs | 13 |

| ST SC Dominant (Top 5) Districts of Maharashtra[1] | |
|---|---|
| **ST Dominant Districts (%)** | **SC Dominant Districts (%)** |
| Nandurbar - 69.27% | Akola - 20.07% |
| Gadchiroli - 38.70% | Latur - 19.57% |
| Dhule - 31.56% | Washim - 19.16% |
| Nashik - 25.61% | Nanded - 19.05% |
| Yavatmal - 18.54% | Nagpur - 18.64% |
| Top 5 ST dominant district accounts for - 40.75% | Top 5 SC dominant district accounts for - 19.45% |

## 1.2 Key Health Status & Impact Indicators[bb]

| Indicators | Maharashtra | India |
|---|---|---|
| Infant Mortality Rate (IMR)[3] | 17 | 30 |
| Crude Death Rate (CDR)[3] | 5.4 | 6 |

[z] Sources used are mentioned at Annexure 5
[aa] Palghar district is added in 2014
[bb] Sources used are mentioned at Annexure 5

| | | |
|---|---|---|
| Crude Birth Rate (CBR)[3] | 15.3 | 19.7 |
| Maternal Mortality Ratio (MMR)[3] | 46 | 113 |
| Neo Natal Mortality Rate (NNMR)[4] | 13 | 23 |
| Under Five Mortality Rate (U5MR)[4] | 22 | 36 |
| Still Birth Rate[4] | 5 | 4 |
| Total Fertility Rate (TFR)[4] | 1.7 | 2.2 |
| Life expectancy at birth[5] | 72.5 | 69.4 |
| Sex Ratio at Birth[4] | 880 | 899 |

## 1.3 Key Health Infrastructure Indicators

| **Indicators** | **Numbers (Total)** |
|---|---|
| Number of District Hospitals[2] | 49 |
| Number of Sub District Hospital[2] | 100 |
| Number of Government (Central + State) Medical College[6] | 26 |
| Number of Private (Society + Trust) Medical Colleges[6] | 31 |

| **Number of AB-HWCs functional as of 22nd December 2021[16]** | **Status (Total)** | **Target FY (2020-21)** | **Target FY (2021-22)** | **Target FY (2022-23)** |
|---|---|---|---|---|
| SHC-HWC | 6573 | 2849 | 5888 | 7915 |
| PHC-HWC | 1828 | 1823 | 1823 | 1823 |
| UPHC-HWC | 463 | 618 | 618 | 618 |
| **Total-HWC** | **8864** | **5290** | **8329** | **10356** |

| **Rural[2]** | **Required (R)** | **In place (P)** | **Shortfall (S) (%)** |
|---|---|---|---|
| Number of Community Health Centres (CHC) | 577 | 278 | 51.82 |
| Number of Primary Health Centres (PHC) | 2,309 | 1,829 | 20.79 |
| Number of Sub Centres (SC) | 14,170 | 10,647 | 24.86 |
| Number of functional First Referral Units (FRUs) | **DH** | **SDH** | **CHC** |
| | 41 | 89 | 119 |
| **Urban[2]** | **Required (R)** | **In place (P)** | **Shortfall (S) (%)** |
| Number of PHC | 1,182 | 846 | 28.43 |
| **Tribal[2]** | **Required (R)** | **In place (P)** | **Shortfall (S)%** |
| Number of CHC | 118 | 64 | 45.76 |
| Number of PHC | 472 | 397 | 15.89 |
| Number of SC | 3,148 | 2,562 | 18.61 |

| Patient Service[9] | Maharashtra | India |
|---|---|---|
| IPD per 1000 population | 49.15 | 62.6 |
| OPD per 1000 population | 906.41 | 1337.1 |
| Operation (surgeries) major (General and Spinal Anaesthesia) per 10000 population | 26.54 | 36.4 |

## 1.4 Major Health Indicator[cc]

| % Share of DALYs to Total Disease Burden (GBD 2019)[7] | Maharashtra | India |
|---|---|---|
| % DALY[dd] accountable for CMNNDs[ee] | 22.27 | 27.46 |
| % DALY accountable for NCDs | 66 | 61.43 |
| % DALY accountable for Injuries | 11.72 | 11.11 |
| **Birth, Death Registration & Medical Certification of Cause of Death (MCCD) Indicator[8]** | **Maharashtra** | **India** |
| Level of Birth Registration (%) | 91.4 | 92.7 |
| Level of Death Registration (%) | 100 | 92 |
| Percentage of medically certified deaths to total registered deaths (%) | 38.2 | 20.7 |
| **RMNCHA+N** | | |
| **Maternal Health[9]** | **Maharashtra** | **India** |
| % 1st Trimester registration to Total ANC Registrations | 85.7 | 71.9 |
| % Pregnant Woman received 4 ANC check-ups to Total ANC Registrations | 94.7 | 79.4 |
| Total Reported Deliveries | 1798428 | 21410780 |
| % Institutional deliveries to Total Reported Deliveries | 99.4 | 94.5 |
| % Deliveries conducted at Public Institutions to Total Institutional Deliveries | 49 | 67.9 |
| % Deliveries conducted at Private Institutions to Total Institutional Deliveries | 51 | 32.1 |
| % C-section deliveries (Public + Pvt.) to reported institutional (Public + Pvt.) deliveries | 23.9 | 20.5 |
| % C-sections conducted at public facilities to Deliveries conducted at public facilities | 21.2 | 14.1 |
| % C-sections conducted at Private facilities to Deliveries conducted at private facilities | 26.4 | 34.2 |
| % Women getting 1st Post-Partum Checkup between 48 hours and 14 days to Total Reported Deliveries | 61.1 | 53.4 |
| **Neonatal[9]** | **Maharashtra** | **India** |
| % live birth to Reported Birth | 99.2 | 98.8 |
| % Newborns having weight less than 2.5 kg to Newborns weighed at birth | 12.1 | 12.4 |
| % Newborns breast fed within 1 hour of birth to Total live birth | 92.3 | 89.9 |

[cc] Sources used are mentioned at Annexure 5
[dd] Disability Adjusted Life Years
[ee] Communicable, Maternal, Neonatal, and Nutritional Diseases

| New Born Care Units Established[11] | Maharashtra | India |
|---|---|---|
| Sick New Born Care Unit (SNCU) | 51 | 895 |
| New Born Stabilization Unit (NBSU) | 180 | 2418 |
| New Born Care Corner (NBCC) | 1511 | 20337 |
| **Child Health & Nutrition[10]** | **Maharashtra (NFHS 5)** | **India (NFHS 5)** |
| Prevalence of diarrhoea (reported) in the last 2 weeks preceding the survey (%) | 8.9 | 7.3 |
| Children with diarrhoea in the last 2 weeks who received oral rehydration salts (ORS) (%) | 59.5 | 60.6 |
| Children under 5 years who are underweight (weight-for-age) (%) | 36.1 | 32.1 |
| **Child Immunization[10]** | **Maharashtra (NFHS 5)** | **India (NFHS 5)** |
| Children age 12-23 months fully vaccinated based on information from vaccination card only (%) | 81.7 | 83.8 |
| Children age 12-23 months who have received BCG (%) | 93.8 | 95.2 |
| Children age 12-23 months who have received first dose of measles containing vaccine (%) | 84.7 | 87.9 |
| **Family Planning[10]** | **Maharashtra (NFHS 5)** | **India (NFHS 5)** |
| Unmet need for spacing (%) | 3.9 | 4 |
| **Communicable Diseases** | | |
| **Integrated Disease Surveillance Programme (IDSP)[11]** | **Maharashtra** | **India** |
| Number of districts with functional IDSP unit | 36 | 720 |
| **Revised National Tuberculosis Control Programme (RNTCP)[11]** | **Maharashtra** | **India** |
| Annualized total case notification rate (%) | 161 | 163 |
| New Smear Positive (NSP) Success rate (in %) | 74 | 79 |
| **National Leprosy Eradication Programme (NLEP)[11]** | **Maharashtra** | **India** |
| Prevalence Rate/10,000 population | 1.19 | 0.61 |
| Number of new cases detected | 16,531 | 114,359 |
| **Malaria, Kala Azar, Dengue[11]** | **Maharashtra** | **India** |
| Deaths due to Malaria[11] | 8 | 79 |
| Deaths due to Kala azar reported[11] | 0 | 0 |
| Deaths due to Dengue reported[11] | 29 | 168 |
| Number of Kala Azar Cases reported[11] | 0 | 3,706 |
| **HIV[10]** | **Maharashtra (NFHS 5)** | **India (NFHS 5)** |
| Women (age 15-49 years) who have comprehensive knowledge of Human Immunodeficiency Virus (HIV)/Acquired immunodeficiency syndrome (AIDS) (%)[10] | 34.4 | 21.6 |
| Men (age 15-49 years) who have comprehensive knowledge of HIV/AIDS (%)[10] | 42.6 | 30.7 |

| Non-Communicable Disease | | |
|---|---|---|
| **Diabeties and Hypertension[10]** | **Maharashtra (NFHS 5)** | **India (NFHS 5)** |
| Women - Mildly elevated Blood Pressure (Systolic 140-159 mm of Hg and/or Diastolic 90-99 mm of Hg) (%) | 13.7 | 12.4 |
| Men - Mildly elevated Blood Pressure (Systolic 140-159 mm of Hg and/or Diastolic 90-99 mm of Hg) (%) | 16 | 15.7 |
| Women - Blood sugar level - high (141-160 mg/dl) (%) | 5.7 | 6.1 |
| Men - Blood sugar level - high (141-160 mg/dl) (%) | 6.5 | 7.3 |
| **Tobacco Use and Alcohol Consumption among Adults (age 15 years & above)[10]** | **Maharashtra (NFHS 5)** | **India (NFHS 5)** |
| Women who use any kind of tobacco (%) | 10.9 | 8.9 |
| Men who use any kind of tobacco (%) | 33.8 | 38 |
| Women who consume alcohol (%) | 0.4 | 1.3 |
| Men who consume alcohol (%) | 13.9 | 18.8 |
| **Injuries** | | |
| **Road Traffic Accident[12]** | **Maharashtra** | **India** |
| Rank (Total number of fatal Road Accidents in State/UT wrt other States/UTs) | 2 | NA |
| Total number of fatal Road Accidents | 11,787 | 137,689 |
| Severity (Road accident deaths per 100 accidents) of Road Accidents | 38.8 | 33.7 |
| Number of persons killed in Road Accidents | 12788 | 115113 |

## 1.5 Access to Care[ff]

| Health Systems Strengthening | | |
|---|---|---|
| **Ambulances & Mobile Medical Units (MMU)[11]** | **Maharashtra** | **India** |
| Number of Districts equipped with MMU under NRHM | 33 | 506 |
| Number of Districts equipped with MMU/Health Units under NUHM | 10 | 31 |
| **Number of ERS vehicles operational in the States/UTs Under NHM** | **Maharashtra** | **India** |
| 102 Type | 2674 | 9955 |
| 104 Type | 0 | 605 |
| 108 Type | 937 | 10993 |
| Others | 0 | 5129 |
| Number of Ambulances functioning in the State/UTs other than NHM (At PHC/CHC/SDH/DH) | 3293 | 11070 |

[ff] Sources used are mentioned at Annexure 5

| Key Domain Indicators | | |
|---|---|---|
| **ASHA[13]** | **Maharashtra** | **India** |
| Total number of ASHA targeted under NRHM | 61260 | 946563 |
| Total number of ASHA in position under NRHM | 60816 | 904211 |
| % of ASHA in position under NRHM | 99 | 96 |
| Total number of ASHA targeted under NUHM | 9845 | 75597 |
| Total number of ASHA in position under NUHM | 8562 | 64272 |
| % of ASHA in position under NUHM | 87 | 85 |
| **Community Process[11]** | **Maharashtra** | **India** |
| Number of Village Health Sanitation and Nutrition Committees (VHSNCs) constituted | 39770 | 554847 |
| Number of Mahila Arogya Samitis (MAS) formed | 5557 | 81134 |
| **Number of Rogi Kalyan Samitis (RKS) registered (Total)[11]** | **Maharashtra** | **India** |
| DH | 24 | 796 |
| CHC | 469 | 6036 |
| PHC | 1835 | 20273 |
| UCHC | 31 | 126 |
| UPHC | 347 | 3229 |

| Human Resource for Health[14] | | |
|---|---|---|
| **HRH Governance** | | **Maharashtra** |
| Specialist Cadre Available in the state (Y/N) | | Yes |
| HR Policy available (Y/N) | | No |
| Implementation of HRIS (Y/N) | | No |
| HR Integration initiated (Y/N) | | Yes |
| Public Health Cadre available (Y/N) | | Yes |
| Overall Vacancies (Regular + contractual) | Specialists (%) | 48 |
| | Dentists (%) | 12 |
| | MO MBBS (%) | 26 |
| | Nurse (%) | 26 |
| | LT (%) | 32 |
| | ANM (%) | 14 |

| **HRH Distribution** | **Sanctioned** | **In Place** |
|---|---|---|
| Doctors (MO & specialists) to staff nurse[14] | 1:1 | 1:1 |
| Availability of public healthcare providers (MO, specialists, staff nurse & ANM) in district healthcare system[14] | 4 per 10,000 | 3 per 10,000 |
| Regular to contractual service delivery staff ratio[14] | 2:1 | 1:1 |

| Ranking: Human Resource Index of Maharashtra[15] | | | | | | |
|---|---|---|---|---|---|---|
| Category | Total (Regular + NHM) | | | | | |
| | Required (R) | Sanctioned (S) | In-Place (P) | Vacancy (V) | Actual Gap# (R-P) | Ranking: HR Gap Index |
| MPW[gg] | 35891 | 40192 | 27265 | 12927 | 8626 | 71.41 |
| Staff Nurse | 24551 | 16123 | 11451 | 4672 | 13100 | |
| Lab Technician | 6496 | 4513 | 2875 | 1638 | 3621 | |
| Pharmacists | 3588 | 4210 | 3585 | 625 | 3 | |
| MO MBBS[hh] | 6015 | 6258 | 5886 | 372 | 129 | |
| Specialist[ii] | 4502 | 4126 | 2662 | 1464 | 1840 | |

## 1.6 Healthcare Financing[jj]

| National Health Accounts (NHA) (2017-18) | Maharashtra | India |
|---|---|---|
| Per Capita Government Health Expenditure (in ₹) | 1356 | 1753 |
| Government Health expenditure as % of Gross Domestic Product (GSDP) | 0.7 | 1.35 |
| Government Health Expenditure as % of General Government Expenditure (GGE) | 6.1 | 5.12 |
| OOPE as a Share of Total Health Expenditure (THE) % | 49.1 | 48.8 |

| National Sample Survey Office (NSSO) (2017-2018) | Maharashtra | | India | |
|---|---|---|---|---|
| | Rural | Urban | Rural | Urban |
| OPD - % of non-hospitalized cases using public facility | 29 | 22 | 33 | 26 |
| IPD - % of hospitalized cases using public facility | 26 | 18 | 46 | 35 |
| **Out of Pocket Expenditure (OOPE) (NSSO)*** | **Rural** | **Urban** | **Rural** | **Urban** |
| OPD - Per non-hospitalized ailing person (in INR) in last 15 days - Public | 194 | 287 | 472 | 486 |
| OPD - Per non-hospitalized ailing person (in INR) in last 15 days - Private | 689 | 734 | 845 | 915 |
| IPD - Per hospitalized case (in INR) - Public | 6,844 | 8,369 | 5,729 | 5,939 |
| IPD - Per hospitalized case (in INR) - Private | 25,843 | 37,057 | 28,816 | 34,122 |
| IPD - % of diagnostics expenditure as a proportion of inpatient medical expenditure in Public (NSSO) | 22 | 11 | 18 | 17 |
| IPD - % of drugs expenditure as a proportion of inpatient medical expenditure – Public (NSSO) | 41 | 36 | 53 | 43 |

[gg] MPW – Multi Purpose Health Worker (Female + Male)
[hh] MO MBBS (Full Time)
[ii] Specialist (All Specialist)
[jj] Sources used are mentioned at Annexure 5
* Estimated by NHSRC using unit level data of NSSO 2017-18, where OOPE = [Total Medical Expenditure + Transportation Cost] – Reimbursement

| | | | | |
|---|---|---|---|---|
| Childbirth - Average out of pocket expenditure per delivery in public health facility (₹) (NSSO) | 2,104 | 2,984 | 2,402 | 3,091 |
| Childbirth - Average out of pocket expenditure per delivery in private health facility (₹) | 15,801 | 23,229 | 20,692 | 26,701 |
| **State Health Expenditure** | **Maharashtra** | | **All India Average** | |
| State Health Department expenditure as a share of total expenditure (%) (2017-18)** | 4.3 | | 5[kk] | |

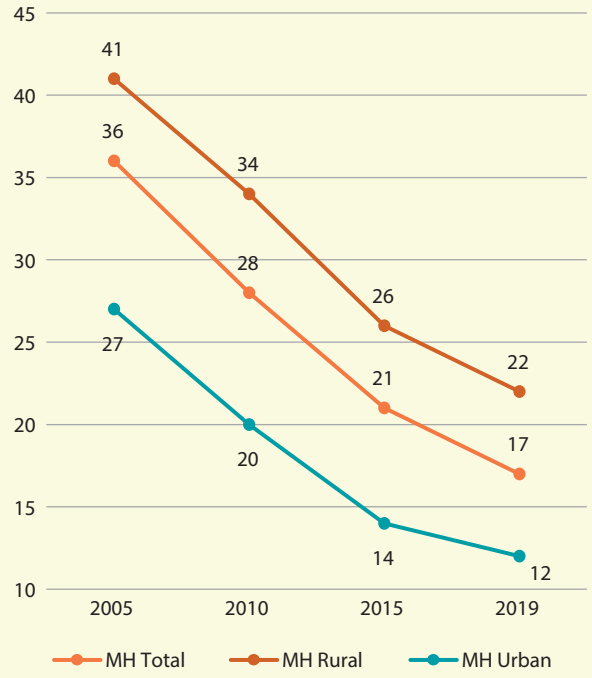
**Sources used for Annexure 1**

1 Census 2011
2 Rural Health Statistic (RHS) 2019-20
3 Sample Registration Survey (SRS) Bulletin 2018 & 2019
4 Registrar General of India (RGI) Statistical Report (SRS) 2018
5 SRS Based Abridged Life Tables 2014-18
6 National Health Profile 2020
7 Global Burden of Disease Data 2019, https://vizhub.healthdata.org/gbd-compare/
8 Annual Report on Vital Statistics of India based on CRS 2019 & Medical Certification of Cause of Death 2019
9 HMIS (2019-20)
10 NFHS 4 & 5
11 QPR NHM MIS Report [Status as on 01.03.2020 & recent 31.12.2020 (some indicators removed from the recent report have been taken from report released on 01.03.2020)
12 Ministry of Road Transport & Highways (MoRTH) - Road Accidents in India 2019
13 Update on ASHA Programme July 2019 (NHSRC Publication)
14 Human Resources for Health in District Public Health Systems of India: State Wise Report 2020
15 HRH Division NHSRC
16 As per HWC Portal

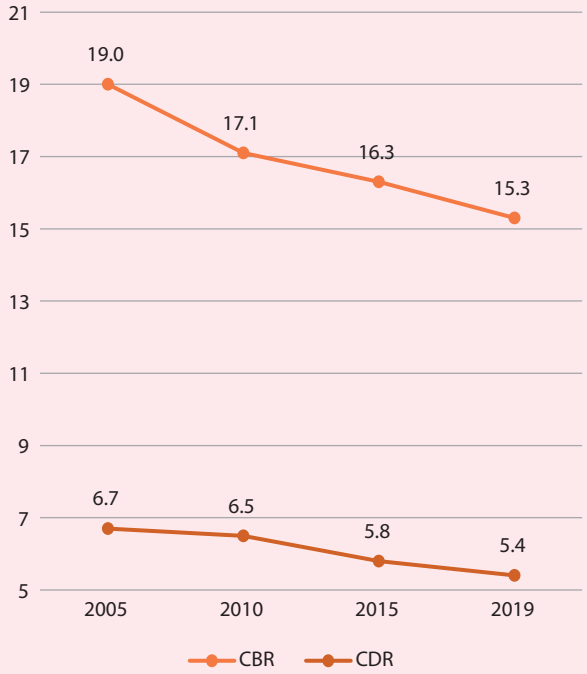
[kk] Represents data for all states and 2 UTs with legislative assembly (Puducherry + Delhi)
** RBI, State Finances: Study of Budgets 2019-20

# ANNEXURE 2

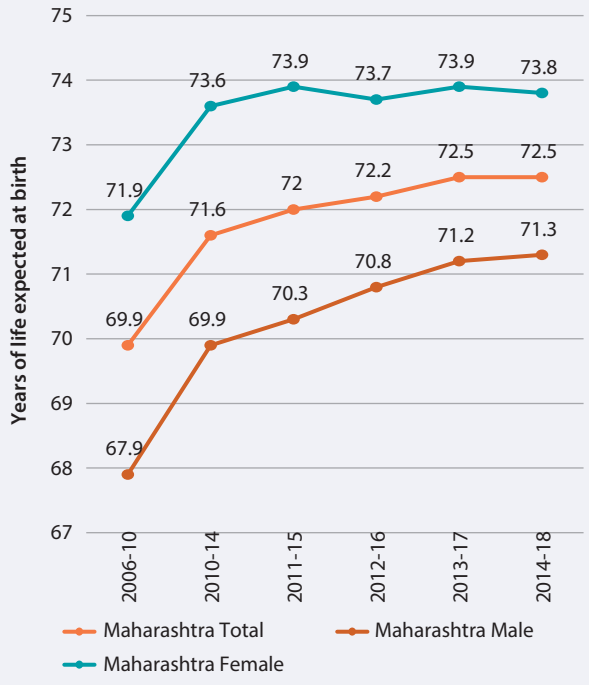
## Figure 1: IMR Trend



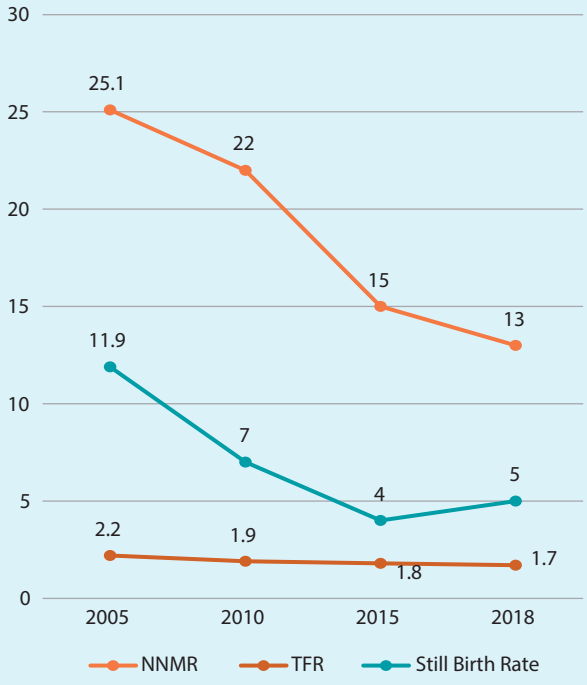

## Figure 2: CBR & CDR Trend



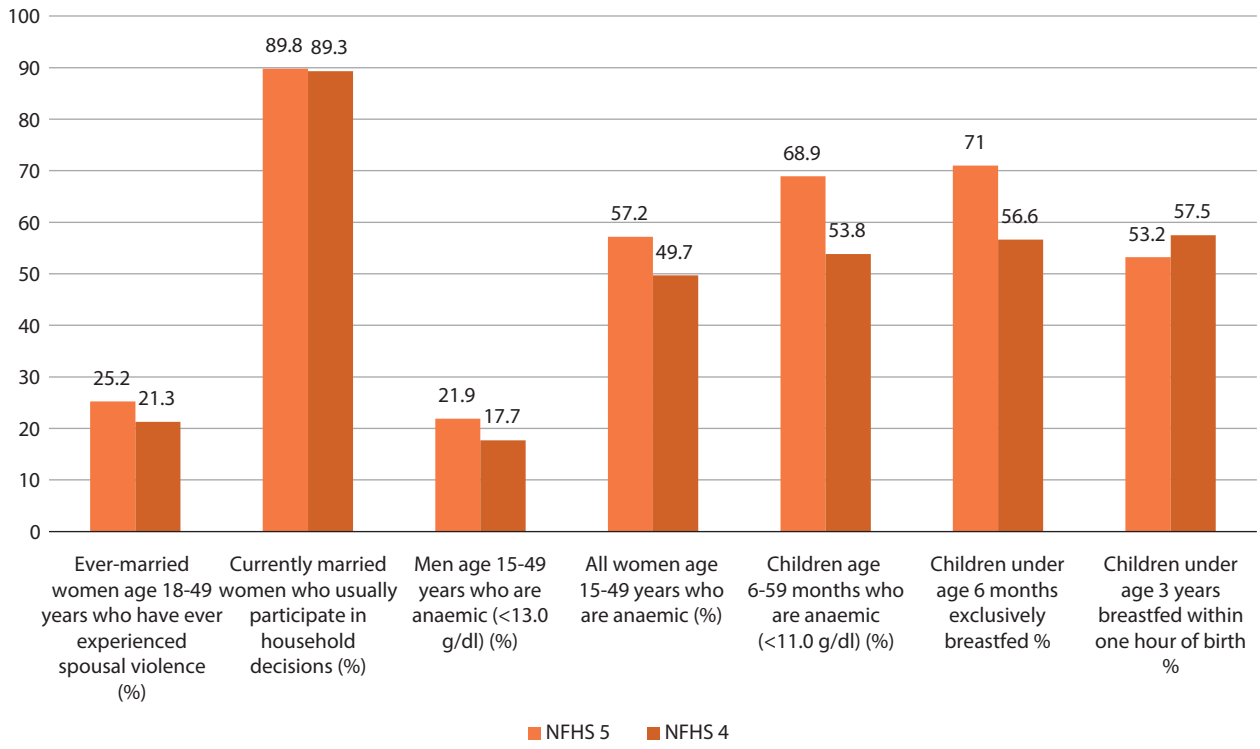

## Figure 3: Life Expectancy At Birth Trend



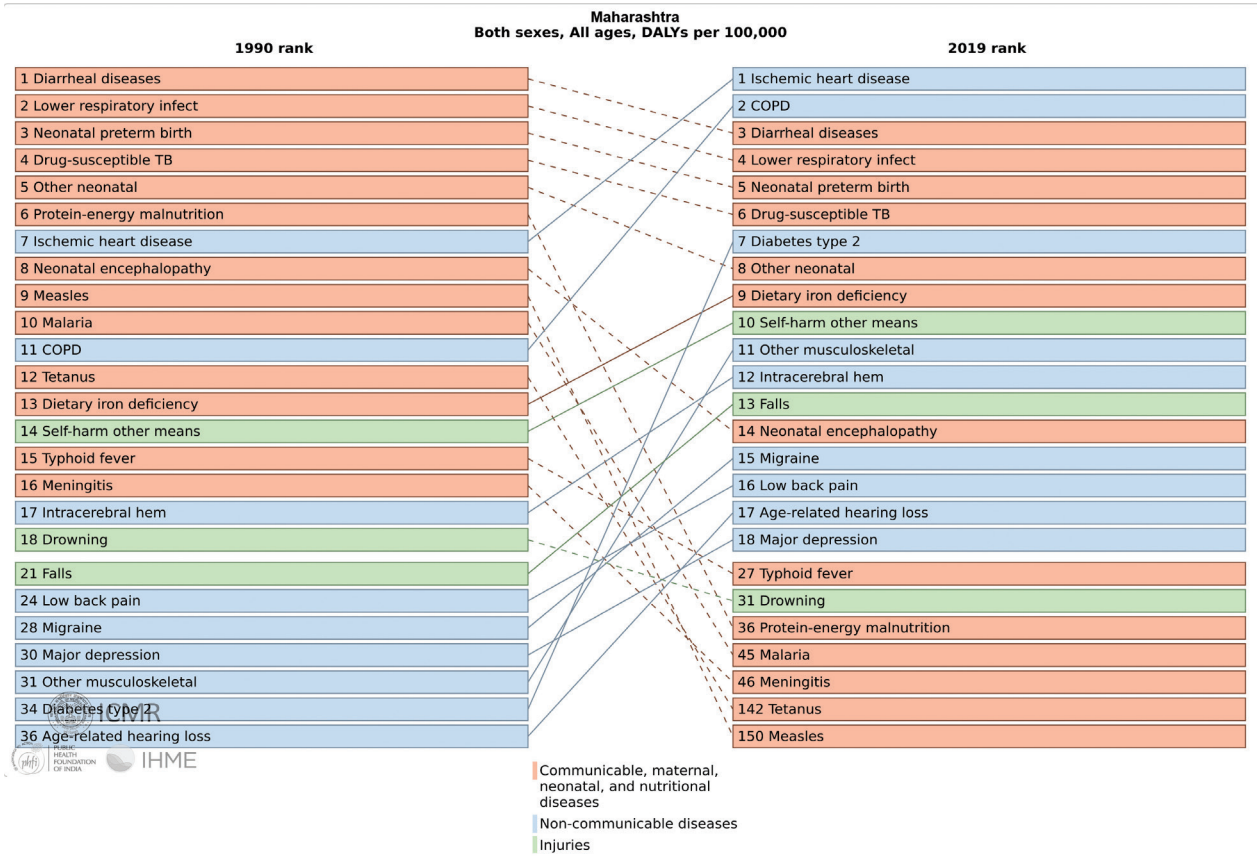

## Figure 4: NNMR, TFR & Still Birth Trend



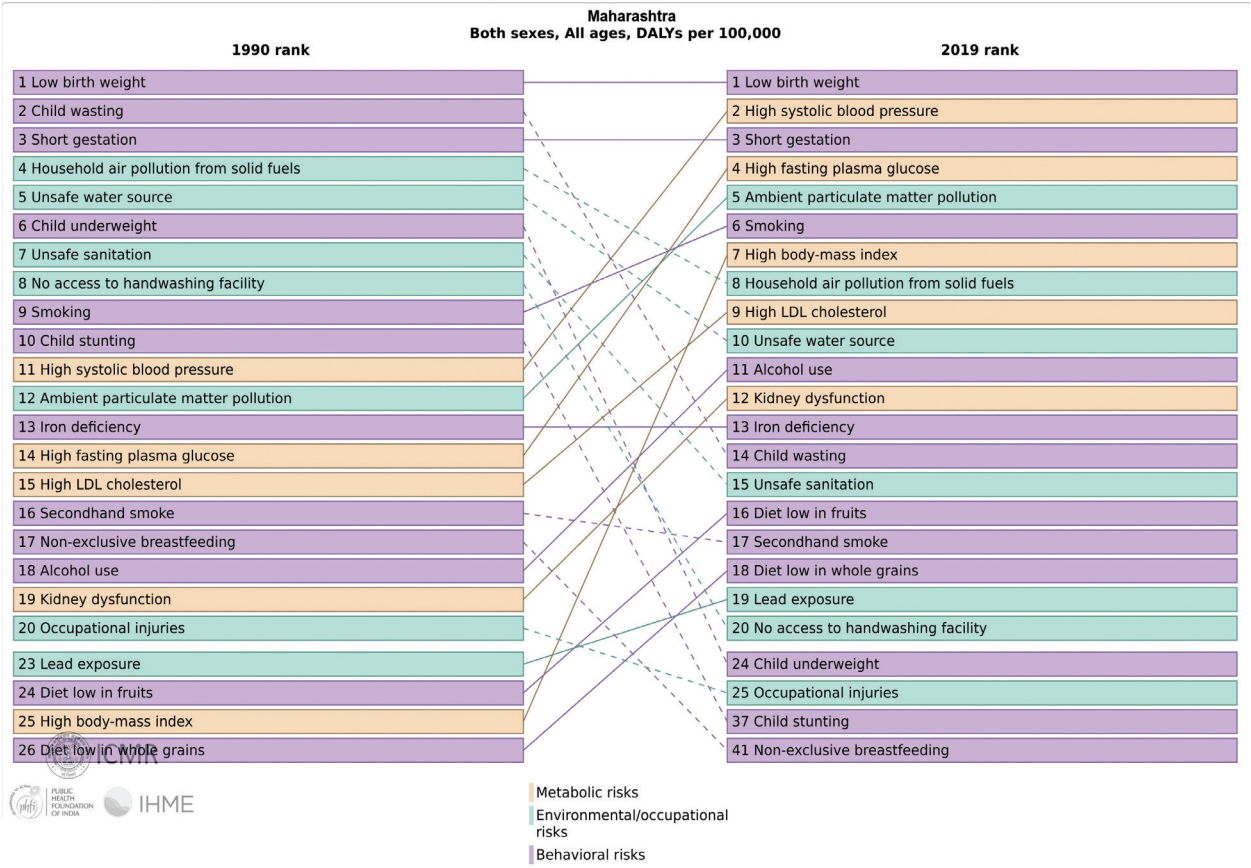
## Figure 5: Comparison of Key NFHS 5 & 4 Indicators



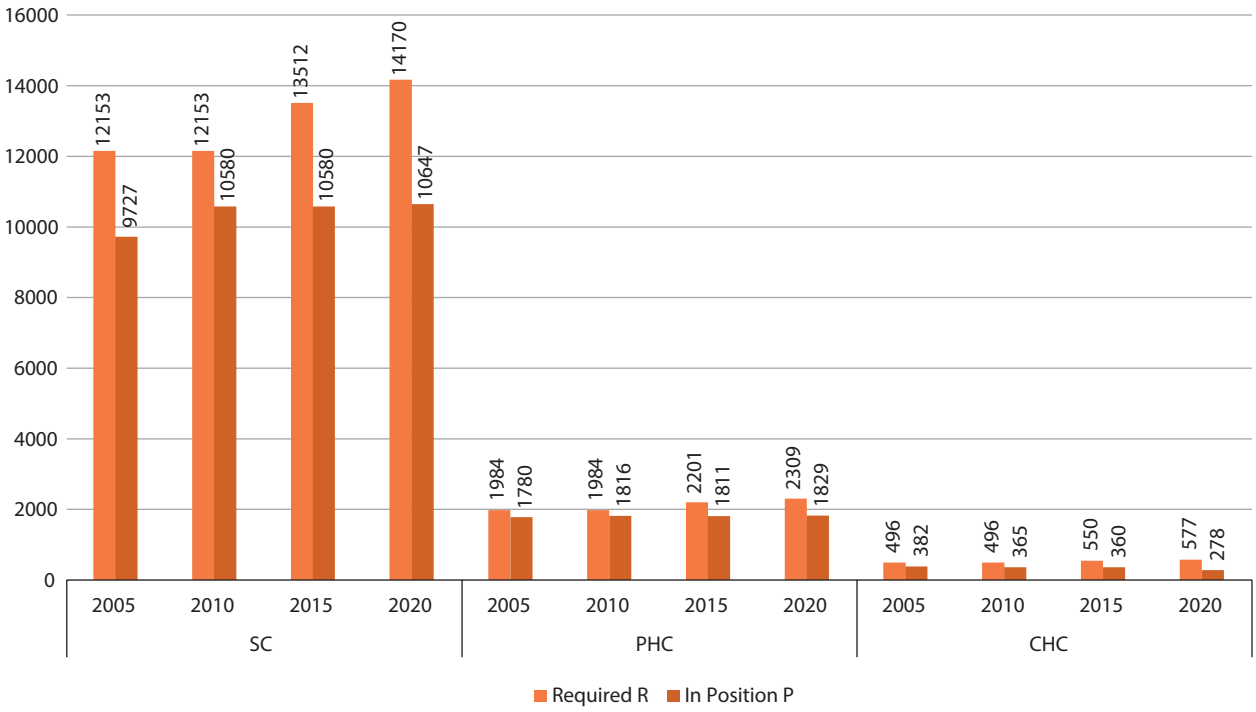

## Figure 6: Top 15 causes of DALYs, 1990-2019



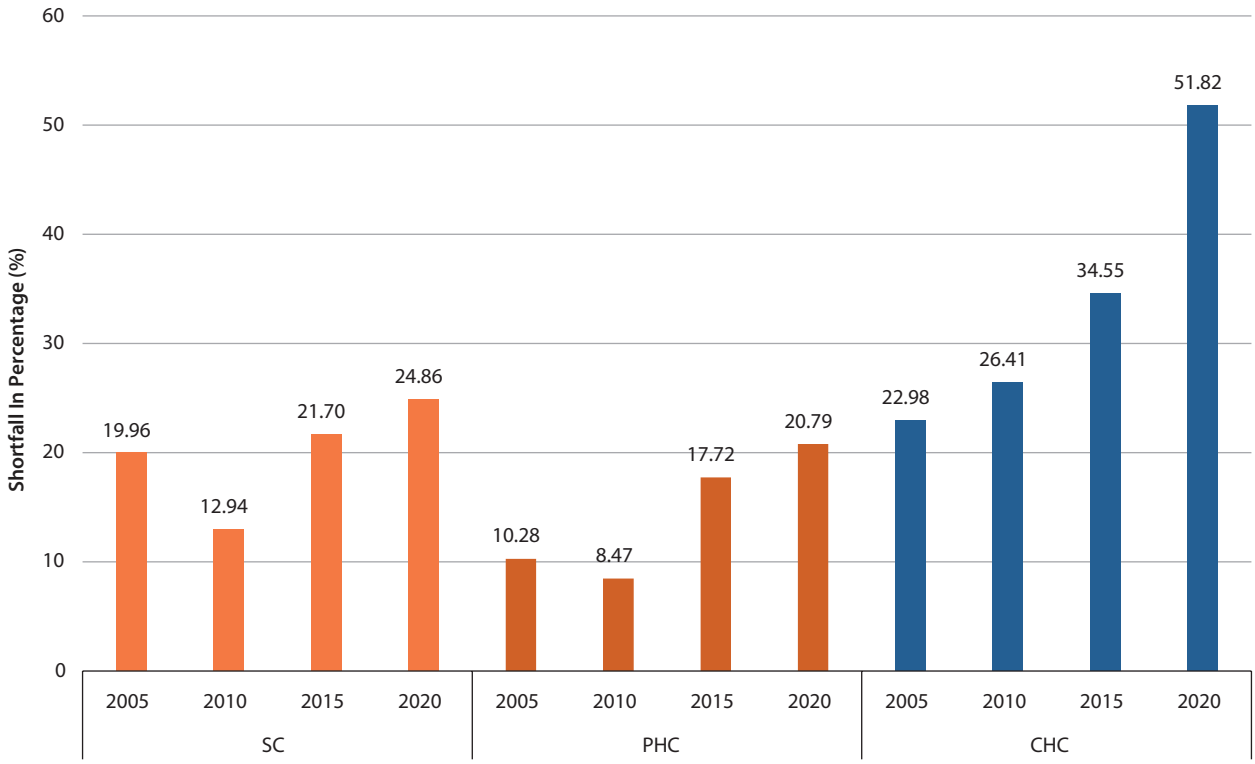
## Figure 7: Top 15 risk of DALYs, 1990-2019



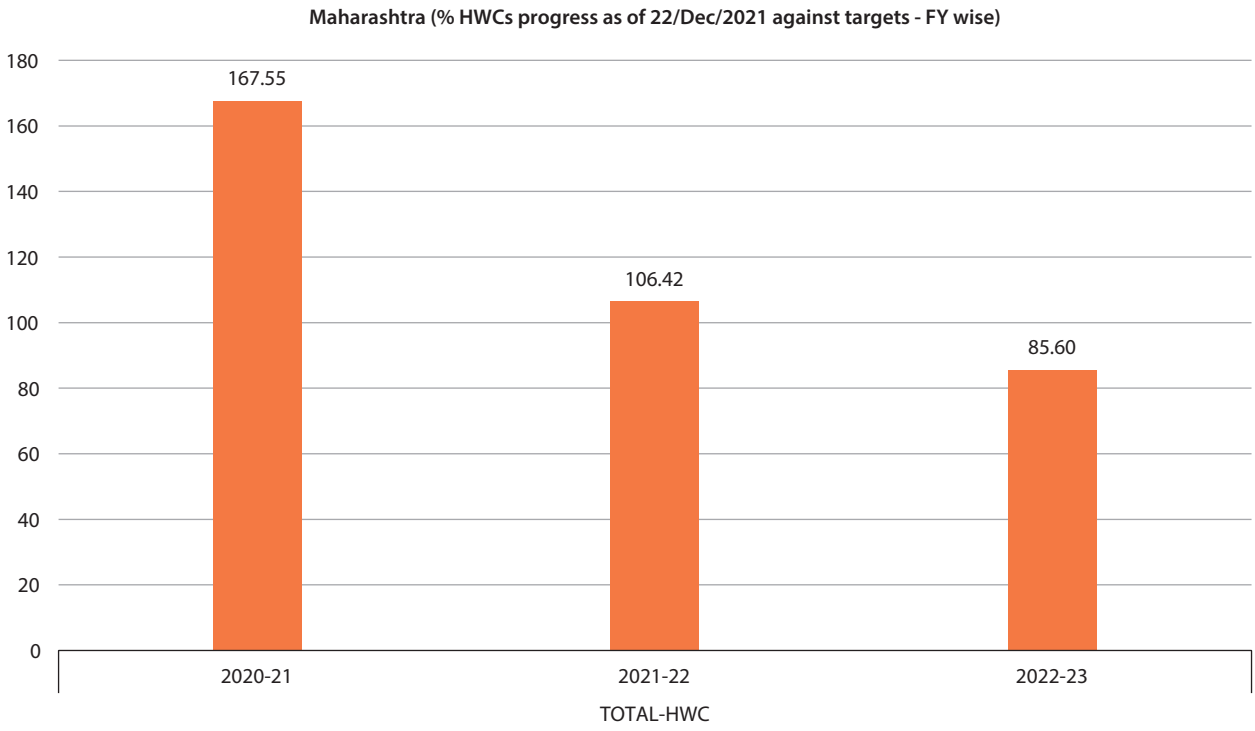

## Figure 8: Year Wise Required/In Position Health Infrastructure Status in Rural Area (In numbers)



## Figure 9: Year Wise Health Infrastructure Shortfall (%)




## Figure 10: Percentage HWCs progress against target - FY wise (%)



# ANNEXURE 3: DISTRICT WISE PERFORMANCE WITH RESPECT TO KEY NFHS 5 INDICATORS

(Green – Good Performance, Red – Poor Performance)
(District Wise Rural Urban Stats Not Available)

| S. No. | States/Districts | Data Source | Sex Ratio At Birth (Females/1000 Males) | Households with any usual member covered under a health insurance/financing scheme (%) | Women Literate 15-49 Age (%) | Women Age 20-24 Years Married Before 18 (%) | Any Method Used For Family Planning By Currently Married Women Age 15-49 years (%) | IUD/PPIUD (%) | Condom Use (%) | Total Unmet Need (%) | Mother Who Had At Least 4 Antenatal Care Visits (%) | Institutional Births (%) | Children Age 12-23 Months Fully Vaccinated Based On Information From Vaccination Card Only* (%) | Total Children Age 6-23 Months Receiving Adequate Diet**, # (%) | Children Under 5 Years - Stunted^ (Height For Age) (%) | Children Under 5 Years - Wasted^ (Weight For Height) (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Maharashtra | NFHS 4 Total | 924 | 15 | N/A | 26.3 | 64.8 | 1.6 | 7.1 | 9.7 | 72.2 | 90.3 | 78.4 | 6.5 | 34.4 | 25.6 |
| 2 | Maharashtra | NFHS 5 Urban | 878 | 20.1 | 90.2 | 15.7 | 65.8 | 2.2 | 14.1 | 9.9 | 72.2 | 96.7 | 81.6 | 9.2 | 34.9 | 23 |
| 3 | Maharashtra | NFHS 5 Rural | 941 | 19.9 | 79.5 | 27.6 | 66.5 | 1.6 | 7.1 | 9.3 | 68.7 | 93.1 | 81.7 | 9 | 35.5 | 27.3 |
| 4 | Maharashtra | NFHS 5 Total | 913 | 20 | 84.6 | 21.9 | 66.2 | 1.9 | 10.2 | 9.6 | 70.3 | 94.7 | 81.7 | 9 | 35.2 | 25.6 |
| 5 | Ahmednagar | NFHS 5 Total | 845 | 12 | 86.2 | 26.9 | 69.5 | 1.7 | 8 | 8.3 | 76.6 | 97.9 | 88.3 | 9.8 | 31.7 | 24.9 |
| 6 | Akola | NFHS 5 Total | 896 | **40.1** | 87.5 | 13.5 | 77 | **2.9** | **16.3** | 6.8 | 76.3 | 97.7 | **66.1** | 4 | 31.8 | 29.4 |
| 7 | Amravati | NFHS 5 Total | **1090** | **31.9** | 87.8 | 9.8 | **79.2** | 1.3 | 14.4 | **4.6** | 71.7 | 91.3 | **92.5** | 13.4 | **29** | 26.2 |
| 8 | Aurangabad | NFHS 5 Total | 875 | 12.4 | 83.1 | 35.8 | **48.1** | 2.4 | 11.7 | **17.1** | **57.2** | 94.8 | 81.7 | 11.7 | 34.2 | 26.4 |
| 9 | Bhandara | NFHS 5 Total | 897 | 30 | 89.1 | **1.5** | 77.5 | 1.1 | 6.7 | 6.1 | 79 | **100** | **91.9** | 8.4 | 31.3 | 28.4 |
| 10 | Bid | NFHS 5 Total | **843** | **9.3** | 76.3 | **43.7** | 58.1 | **3** | 8.4 | **13.9** | **56.8** | 94 | 79.1 | **3.2** | **40.8** | 28.4 |
| 11 | Buldana | NFHS 5 Total | 1036 | **37.9** | 79.9 | 24.1 | **81.1** | **2.9** | **14.7** | **4.4** | 72.7 | 93.9 | 78.5 | 4.1 | **45** | **31.7** |
| 12 | Chandrapur | NFHS 5 Total | 1025 | 28.9 | 87.8 | 9 | **80.1** | **3.1** | 11.9 | **4.5** | 68.5 | **99.6** | 87.6 | 6.8 | 37.3 | **38.5** |
| 13 | Dhule | NFHS 5 Total | 919 | 19.8 | **68.8** | **40.5** | **51.9** | **1** | 6.7 | 13.1 | 63.2 | **77.2** | **69.1** | 11.4 | 37.6 | **38.9** |
| 14 | Gadchiroli | NFHS 5 Total | **1098** | **33.3** | 79.4 | 10.1 | 76.5 | **0.6** | 10.1 | 5.6 | **86.8** | 97.3 | **95.6** | 4.5 | 35.7 | 30 |
| 15 | Gondiya | NFHS 5 Total | **1050** | 30.6 | 87.5 | **6.5** | 78.3 | **0.9** | 6.6 | 7.8 | 66.2 | 99.1 | 90.4 | 7.2 | 36.9 | 23.7 |
| 16 | Hingoli | NFHS 5 Total | **838** | 14.7 | 76.5 | **37.1** | 73.1 | 1.3 | 8.8 | 10.4 | 66.6 | 94 | 79.4 | 11.5 | 37.4 | 25.8 |
| 17 | Jalgaon | NFHS 5 Total | 857 | **11.9** | 76.5 | 28 | **44** | 1.8 | **5.6** | **14.9** | 58.4 | **86.5** | 79.9 | **15.6** | 36.3 | 30.5 |
| 18 | Jalna | NFHS 5 Total | 867 | **9.7** | **71.8** | 35 | **49.7** | 1.6 | 9.6 | 13.1 | 58.4 | 92.8 | **68.9** | 5.2 | 38 | 22.2 |
| 19 | Kolhapur | NFHS 5 Total | 937 | 16.5 | 90.7 | 21 | 71.4 | **0.4** | 6.6 | 8.1 | 81.8 | 99.2 | 78 | **15.1** | 33.6 | 18.9 |
| 20 | Latur | NFHS 5 Total | **1265** | **33.6** | 83.3 | 31 | 78.2 | **0.9** | 9.5 | **4.6** | 72.6 | 94.7 | 77.9 | 14 | **43.2** | **18** |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | Mumbai | NFHS 5 Total | 1019 | 30.7 | **94.3** | **4.5** | 74.3 | **4.1** | **18.1** | 4.9 | **87.1** | **99.5** | N/A | **14.1** | **26.6** | 25.3 |
| 22 | Mumbai Suburban | NFHS 5 Total | **703** | 20.2 | **91.6** | 10 | 64.6 | 2.2 | **18** | 10.4 | 72.2 | 98.1 | N/A | **17.8** | 37.2 | **18.6** |
| 23 | Nagpur | NFHS 5 Total | 926 | 25.6 | **94.6** | 7.1 | **84.1** | **3.5** | 14 | **4.2** | 71.4 | **100** | 87.4 | 4.6 | **27.6** | **34** |
| 24 | Nanded | NFHS 5 Total | 888 | 15.7 | **71.9** | 32.2 | 68.1 | 1.5 | **5.3** | 9.2 | **53.5** | 94.8 | 84.9 | 3.8 | 36 | 19 |
| 25 | Nandurbar | NFHS 5 Total | 885 | 15.3 | **57.7** | 24 | 62.6 | 1.2 | **3.6** | 9.7 | **58.2** | **76.3** | 77.9 | 9.6 | **45.8** | 30.7 |
| 26 | Nashik | NFHS 5 Total | **816** | 14.7 | 80 | 29.6 | 55 | 1.5 | 8.8 | 12 | 66.4 | **90.5** | 82.8 | 13.5 | **42.2** | 27.2 |
| 27 | Osmanabad | NFHS 5 Total | **1050** | 14.8 | 83.7 | 36.6 | 78.9 | 1.7 | 9.7 | 6.4 | **89.2** | 98.1 | 85.3 | 12.8 | 37.2 | **16.1** |
| 28 | Palghar | NFHS 5 Total | **747** | 18.8 | 77.6 | 14.6 | 71.8 | 1.2 | 12.4 | 8.2 | **86.3** | 94.2 | **90.8** | 5.2 | 33 | 23.9 |
| 29 | Parbhani | NFHS 5 Total | 983 | **10.5** | **73.4** | **48** | **42** | 1.3 | **5.4** | **18.5** | **47.4** | **85.6** | **75.4** | **1.9** | 37.6 | 22.8 |
| 30 | Pune | NFHS 5 Total | 873 | 14.4 | 89 | 24 | 57.8 | 2.3 | 7.6 | **13.7** | 68.6 | 98 | 79.2 | 9.6 | 30.7 | 31.4 |
| 31 | Raigarh | NFHS 5 Total | 871 | 26.3 | 79.2 | 16 | 73.6 | 1.5 | 11.6 | 6.1 | **83.1** | 96.6 | 88.3 | 5.9 | 35.8 | 19.1 |
| 32 | Ratnagiri | NFHS 5 Total | 948 | 16.6 | 87.2 | **4.4** | 62.3 | 1.6 | 7.6 | 10.4 | 78.6 | 97.8 | **95.2** | 8.6 | 31.7 | 23.7 |
| 33 | Sangli | NFHS 5 Total | 1012 | 12.3 | 90.3 | 27 | 67.1 | 1.1 | 5.7 | 10.4 | 80.1 | 98 | 83.3 | 5.3 | 35 | **18.6** |
| 34 | Satara | NFHS 5 Total | 958 | **11.4** | 87.2 | 18.1 | 74.7 | 2.4 | 7.4 | 6.2 | 81.7 | 97.1 | 76.3 | **15.9** | **20.2** | 20.5 |
| 35 | Sindhudurg | NFHS 5 Total | 874 | 13.2 | **92.1** | **5** | 58.7 | 1.2 | 8.5 | 12.1 | 73.4 | **100** | 76.3 | **2.6** | 30.8 | 27.7 |
| 36 | Solapur | NFHS 5 Total | 960 | 20.5 | 76.4 | **40.3** | 75.7 | 1.7 | **3.7** | 5.6 | 81.9 | 96.2 | 86.3 | 7.9 | 36.3 | 23.2 |
| 37 | Thane | NFHS 5 Total | 1029 | 22.7 | 90.5 | 18.4 | 61.6 | 1.7 | **16.1** | 10.3 | 70.2 | 93.6 | 86.8 | 4.6 | **40.8** | **17.8** |
| 38 | Wardha | NFHS 5 Total | **1173** | 27.1 | **93** | 9 | **79.2** | 1.5 | 8.6 | 6.6 | 70.4 | 98.8 | 87.4 | 7.3 | **27.7** | 28.1 |
| 39 | Washim | NFHS 5 Total | 991 | 24.1 | 78 | 27.7 | 71.3 | 1.3 | 10.7 | 8 | 60 | 92.9 | **75.5** | **3.3** | 35.3 | **31.7** |
| 40 | Yavatmal | NFHS 5 Total | 1012 | 29 | 80.8 | 11.7 | 78.3 | 1.7 | 7.5 | 5.5 | 66.9 | 96.3 | 77.6 | **2.6** | 36.6 | 27.5 |

* NFHS5 replaced 'Immunized' (word) from NFHS4 to 'Vaccinated', Out of two Indicators with 'either vaccination card or mother's recall' & 'vaccination card only' - 'vaccination card only' indicator was used to reduce the recall bias, among children whose vaccination card was shown to the interviewer, percentage vaccinated with BCG, measles-containing vaccine (MCV)/MR/MMR/Measles, and 3 doses each of polio (excluding polio vaccine given at birth) and DPT or penta vaccine

** Based on the youngest child living with the mother

# Breastfed children receiving 4 or more food groups and a minimum meal frequency, non-breastfed children fed with a minimum of 3 Infant and Young Child Feeding Practices (fed with other milk or milk products at least twice a day, a minimum meal frequency that is receiving solid or semi-solid food at least twice a day for breastfed infants 6-8 months and at least three times a day for breastfed children 9-23 months, and solid or semi-solid foods from at least four food groups not including the milk or milk products food group)

^ Below -2 standard deviations, based on the WHO standard. 13 Below -3 standard deviations, based on the WHO standard

A. Green Color – Best five performing districts within the districts for a particular indicator

B. Red – Worst five performing districts within the districts for a particular indicator

C. * Full antenatal care is at least four antenatal visits, at least one tetanus toxoid (TT) injection and iron folic acid tablets or syrup taken for 100 or more days

D. ** Based on the youngest child living with the mother

E. # Breastfed children receiving 4 or more food groups and a minimum meal frequency, non-breastfed children fed with a minimum of 3 Infant and Young Child Feeding Practices (fed with other milk or milk products at least twice a day, a minimum meal frequency that is receiving solid or semi-solid food at least twice a day for breastfed infants 6-8 months and at least three times a day for breastfed children 9-23 months, and solid or semi-solid foods from at least four food groups not including the milk or milk products food group)

F. ^ Below -2 standard deviations, based on the WHO standard. 13 Below -3 standard deviations, based on the WHO standard

# NOTES

# LIST OF CONTRIBUTORS

Maj Gen (Prof) Dr. Atul Kotwal, Executive Director, NHSRC

**KNOWLEDGE MANAGEMENT DIVISION, NHSRC**

Dr. Neha Dumka, Lead Consultant

Dr. Deepak Bhagat, Consultant

Dr. Erin Hannah, Fellow

Dr. Vineeta Sharma, Consultant

Dr. Padam Khanna, Senior Consultant

Mr. Arun Srivastava, Senior Consultant

Dr. Rajnesh Kumar, Consultant

Dr. Vineet Kumar Pathak, Senior Consultant

Dr. Devaki, Senior Consultant

Dr. Tarannum Ahmed, Consultant

Dr. Roopani, Consultant

Dr. Diksha Dhupar, Consultant


NATIONAL HEALTH SYSTEMS RESOURCE CENTRE