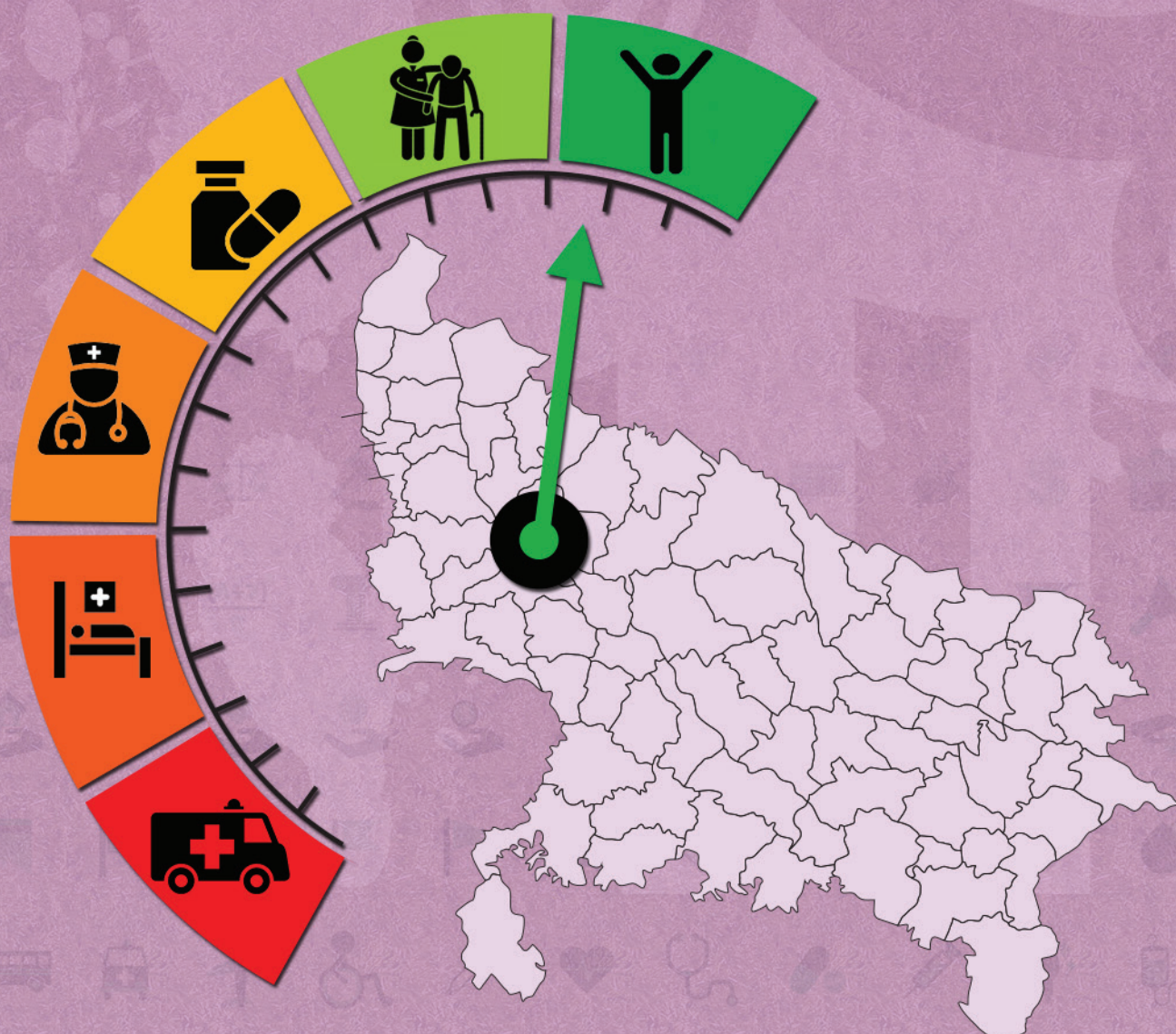


# HEALTH DOSSIER 2021

## Reflections on Key Health Indicators



UTTAR PRADESH

## DISTRICTS VISITED IN COMMON REVIEW MISSIONS

CRM	Districts Visited	
1 <sup>st</sup>	Rae Bareilly	Jhansi
2 <sup>nd</sup>	Unnao	Bahraich
3 <sup>rd</sup>	Kanpur	Allahabad
4 <sup>th</sup>	Lakhimpur Kheri	Sonbhadra
5 <sup>th</sup>	Badaun	Jalaun
6 <sup>th</sup>	Jhansi	Hardoi
7 <sup>th</sup>	Pratapgarh	Mathura
8 <sup>th</sup>	Meerut	Shrawasti
9 <sup>th</sup>	Jalaun	Sitapur
10 <sup>th</sup>	Firozabad	Gonda
11 <sup>th</sup>	Kaushambi	Kanpur
12 <sup>th</sup>	Varanasi	Farukhabad
13 <sup>th</sup>	Meerut	Bahraich
14 <sup>th</sup>	Fatehpur	Mahoba



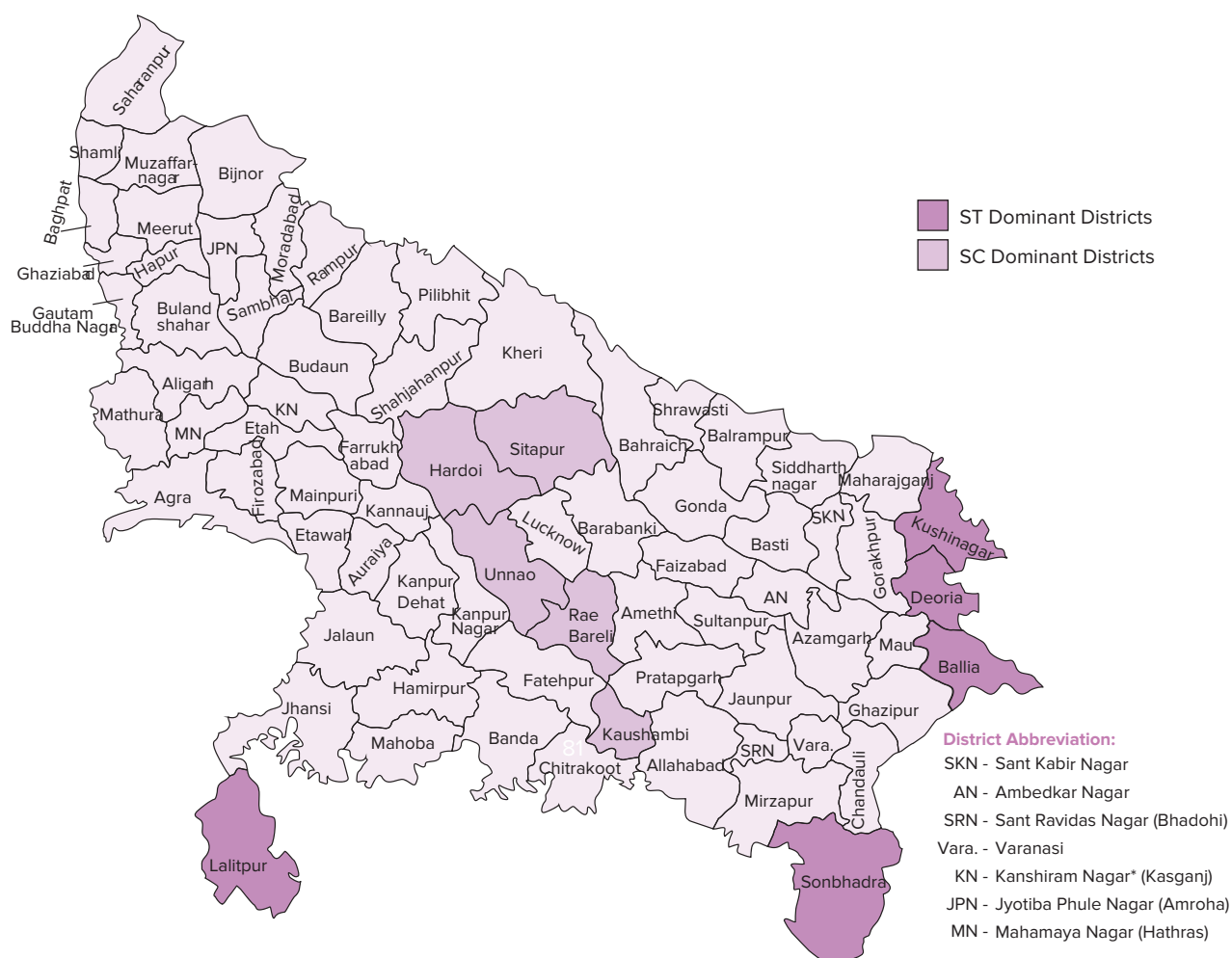
# UTTAR PRADESH

## 1. BACKGROUND

### 1.1 State Profile

**Uttar Pradesh** is the 4<sup>th</sup> largest state in India with a geographical spread of 2,40,928 km<sup>2</sup> and is divided into 75 districts<sup>a</sup>. It is the most populous State in the country with a population of over 19.98 crores<sup>b</sup>

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



<sup>a</sup> RHS 2019

<sup>b</sup> Census 2011

and is projected to increase over 23 Crores by 2021<sup>c</sup>. As per Census 2011, the Scheduled Caste (SC) and Scheduled Tribe (ST) population is 4.13 crores (20.69%) and 0.11 crores (0.56%) respectively. In the State, 77.73% of the population reside in rural areas, while 22.26% in urban areas. Out of the 75 districts, top five SC & ST dominant districts account for 12.71% of SC & 66.73% of ST population in the State (Annexure 1, State Profile).

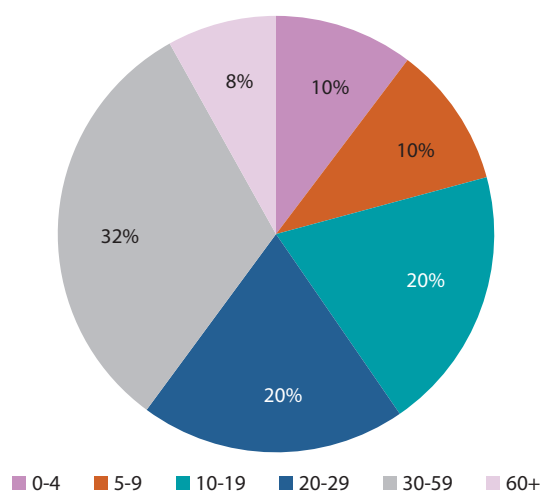
As per the Quarterly Progress Report (2020-21), 131 cities are covered under National Urban Health Mission. There are no Metro cities in the State; however, 7 cities come under the classification of Million plus cities.

The total length of roads<sup>d</sup> in the Uttar Pradesh is 4,28,055 km (8.56%<sup>e</sup>), the length of national highways is 8,712 km (7.6%<sup>f</sup>) and state highways is 7,201 kms (4.1%<sup>g</sup>). Agriculture remains the mainstay of the State's economy with 77.73% of the population living in rural areas.

## 1.2 Demography

In UP, out of the 75 districts, 38 districts have an estimated population of around 30 lakhs and above, 13 districts have a population of around 20-30 lakhs, 22 districts have around 10-20 lakhs population and only 2 districts have less than 10 lakhs population (Annexure 1.1). The State's sex ratio of 880 females per 1000 males is lower than the national average of 899 females per 1000 males (Annexure 1.2). As estimated, in Uttar Pradesh, there are 20% of the total population in the age group of 10-19 years, 52% within 20 to 59 years; and 8% in the age group of 60 years and above (Figure 2). The crude birth and death rates have declined from 30.4 and 8.7 (2005) to 25.4 and 6.5 (2019) respectively (Annexure 2, Figure 2). The literacy rate increased from 56.27% (2001) to 67.68% (2011), with female literacy rate (57.18%) being much lower than the male literacy rate (77.28%). As per ESAG 2018 report, Gross Enrolment Rate<sup>h</sup> is 24.5% for higher education, 60.78% for senior secondary education, 67.75% for secondary education, 86.15% for elementary education and 92.15% for primary education.

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



## 1.3 Elderly

Elderly people aged 60 and above share 8% of the State's total population (Figure 2). The life expectancy at 60 years of age is 16.2 years for males and 17.5 years for females (2014-18 SRS

<sup>c</sup> Census Population Projection Report 2019

<sup>d</sup> Basic Road Statistics 2019, MoRTH

<sup>e</sup> Percentage of total length of roads in the State/UT

<sup>f</sup> Percentage of total length of National Highways in the country

<sup>g</sup> Percentage of total length of State Highways in the country

<sup>h</sup> 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

abridged life table). In Uttar Pradesh - 18% of elderly males and 79% of elderly females in urban areas; and 27% of elderly males and 71% of elderly females in rural areas are economically fully dependent on others. The old age dependency ratio is 13.9 in 2011, 13.9 for males, 13.8 for females; 14.8 in rural and 10.9 in urban areas. The illness (any deviation from the state of physical and mental well-being) perception among the elderly is low, where only around 29% of both men and women reported illness which is lower than the national average of 31% for both (Elderly in India 2016).

## HEALTH STATUS AT A GLANCE

### 2.1 Maternal Health

The RMNCHA+N<sup>i</sup> services improved with the launch of NHM in the Uttar Pradesh. Indicators for Antenatal care (ANC), institutional deliveries, C sections, distribution of IFA<sup>k</sup> tablets, follow up of high-risk pregnancies, provision of postnatal and newborn care have improved since 2005 (NFHS 4 & 5). Maternal mortality ratio has shown a substantial decline from 359<sup>l</sup> in 2007-09<sup>m</sup> to 197 in 2016-18<sup>n</sup> per 1,00,000 live births. In Uttar Pradesh, out of the total ANC registration, 76.5% of pregnant women received 4 ANC check-ups (Annexure 1.4). As per HMIS 2019-20, around 88% of all reported deliveries took place in institutions, out of which 72% took place in public health facilities. Total percentage of reported C-sections (8.6%) is consistent with the WHO's standard (10-15%), and out of which about 19.3% C-sections are conducted at private facilities. Around 51.7% of women are tracked for their first postpartum check-up between 48 hours and 14 days (Annexure 1.4). The prevalence of anaemia in women of reproductive age group decreased from 52.4% (NFHS 4) to 50.4% (NFHS 5). Anemia prevalence among women of reproductive age is more than twice than in men of similar age group (Annexure 2, figure 5).

Refer Annexure 3 for detailed district wise comparison of NFHS 4.

### 2.2 Newborn, Infant & Child Health

Ever since the inception of NHM in 2005, the State has shown a remarkable decline in IMR from 73 (2005) to 41 (2019) (Annexure 2, Figure 1). Similarly, NNMR<sup>o</sup> and Still Birth (per 1,000 live births) Rates have also decreased from 45.1 and 9.8 (2005) to 32 and 3 (2018), respectively (Annexure 2, Figure 4). The life expectancy at birth improved from 62.7 (2006-10) to 65.3 (2014-18) (Annexure 2, Figure 3). As per NFHS 5 report, Bareilly, Ghaziabad, Hardoi, Kushinagar and Prayagraj districts reported high SRBs ranging from 1084 to 1191, while Etawah, Farrukhabad, Gautam Buddha Nagar, Hapur and Jalaun districts reported low SRBs ranging from 735 to 799. Improvement in the indicators can be attributed to interventions at the State level, including infrastructure strengthening under NHM, such as the establishment of SNCUs, NBSUs and NBCCs (Annexure 1.4).

<sup>i</sup> Reproductive, Maternal, Newborn, Child, Adolescent Health & Nutrition

<sup>j</sup> Antenatal Check up

<sup>k</sup> Iron Folic Acid Tablets

<sup>l</sup> Including Uttarakhand

<sup>m</sup> SRS MMR Bulletin

<sup>n</sup> SRS MMR Bulletin

<sup>o</sup> Neonatal Mortality Rate

Full immunization for children aged 12–23 months improved from 66.2% (NFHS 4) to 78.4% (NFHS 5). Prevalence of anaemia in children aged 6–59 months increased from 63.2% to 66.4% (Annexure 2, Figure 5). For under-5 stunting – Baghpat, Gautam Buddha Nagar, Ghaziabad, Mau and Shamli districts reported relatively low burden ranging from 25.5%–28.6%; and Bahraich, Balrampur, Banda, Budaun, and Fatehpur reported high burden ranging from 51% to 52.1%. For under 5-wasting, Bijnor, Firozabad, Meerut, Pratapgarh, and Sant Ravidas Nagar (Bhadohi) reported relatively low burden ranging from 9.4% to 10.2%, and Banda, Deoria, Ghazipur, Jhansi, and Sonbhadra districts reported high burden ranging from 25.2% - 26.8%. The proportion of exclusively breastfed under 6-month children has shown an improvement from 41.6% (NFHS 4) to 66.4% (NFHS 5).

## 2.3 Family Planning

The TFR<sup>p</sup> has reduced from 4.2 (2005) to 2.9 (2018). The total unmet need in the State is reported as 12.9%, and unmet need for spacing as 4.8%. Bahraich reported the highest total unmet need (27.6%), while Budaun and Saharanpur reported the least (4.3%). Around 44.5% of married women availed any modern method of family planning in the State, with sterilization acceptance being 16.9% among females and 0.1% among males.

## 2.4 Communicable Diseases

Uttar Pradesh has 75 functional IDSP units in place<sup>q</sup>. The proportion of Communicable, Maternal, Neonatal, and Nutritional Diseases [CMNND] contribute to 40.5% of total disease burden, in which Diarrheal Diseases, Lower Respiratory Infection, and Tuberculosis remain the major causes of death in Uttar Pradesh (Annexure 2, Figure 6). As per QPR reports, the annualized total case notification rate for TB is 193% and NSP<sup>r</sup> success-rate is 7% as opposed to the national averages of 163% and 79% respectively. For NLEP<sup>s</sup> – the prevalence rate of 0.41 per 10,000 population is lower than the national average of 0.61. In FY 2019-20, 8 deaths due to dengue, and none due to Kala Azar or Malaria<sup>t</sup> are reported in the State.

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

It is reported that 71.6% of total disease burden is from premature deaths and 28.4% from disability and morbidity. As per GBD<sup>u</sup> 2019 report, the leading causes of DALYs are Chronic Obstructive Pulmonary Disease, Ischemic Heart Disease and Diabetes Mellitus Type 2 (Annexure 2, Figure 6). NCDs contribute to 47.9% of DALYs and injuries contribute to around 11.6% of the same (Annexure 1.4). Uttar Pradesh ranks 1<sup>st</sup> in the country for the total number of fatal road accidents with respect to others (Annexure 1.4). As reported 8.4% of women and 44.1% of men used any kind of tobacco; and 0.3% of women and 14.6% men consumed alcohol in the State. In general, malnutrition, air pollution, tobacco use, WASH<sup>v</sup> and dietary risk factors are the major risk factors for DALYs (Annexure 2, Figure 7).

<sup>p</sup> Total Fertility Rate

<sup>q</sup> QPR NHM MIS Report (status as on 01.03.2020)

<sup>r</sup> New Smear Positive

<sup>s</sup> National Leprosy Eradication Programme

<sup>t</sup> March 2020 QPR report

<sup>u</sup> Global Burden of Diseases

<sup>v</sup> Water, Sanitation and Hygiene

## 2.6 Health Care Financing

Uttar Pradesh has a Net State Domestic Product (NSDP) of ₹ 4,91,310.92 crores for the FY 2018-19. The State is positioned only second to last out of 32 States<sup>w</sup> for per capita of ₹ 66,512. According to NHA 2017-18, the per capita Government Health Expenditure in the State is ₹ 801, which is less than the national average of ₹ 1,753. On the other hand, the OOPE<sup>x</sup> as a share of Total Health Expenditure is at 72.6%, which is substantially higher than the national average of 48.8%. As per the NSS (2017-18), the OOPE for inpatient care per hospitalization in rural areas is estimated to be around ₹ 8,530 in public hospitals and ₹ 31,796 in private hospitals and the same in urban areas is ₹ 11,281 in public hospitals and ₹ 39,332 in private hospitals (Annexure 1.6). For child birth, OOPE in public facilities is estimated to be around ₹ 1,653 in rural areas & ₹ 1,864 in urban areas, whereas in private health facilities, it is around ₹ 21,705 in rural areas and ₹ 20,339 in urban areas. In public health facilities, the share of drugs on expenditure is 51% for inpatient care in rural and 40% in urban areas; whereas for diagnostics it is 15% and 16% in rural and urban areas respectively<sup>y</sup>.

## 2.7 Health Infrastructure

As per recent RHS data, the number of public health facilities have been increasing since 2005 (Annexure 1, Figure 8). Though public health facilities have increased over time, a shortfall of 40.83% in SCs, 50.74% in PHCs and 51.33% in CHCs still remain (Annexure 1, Figure 9). Currently, there are 20,778 SCs, 2,880 PHCs and 711 CHCs in place, against the required 35,115 SCs, 5,846 PHCs and 1461 CHCs. In urban settings, there are only 593 PHCs in place against the required 1,083, thereby amounting to a shortfall of 45.24% (Annexure 1.3). UP has 168 DHs, 26 government medical colleges and 29 private medical colleges. In the State, only 55.3% (93) of DHs and 29.2% (208) of CHCs serve as functional FRUs.

Under the recently introduced Ayushman Bharat – Health and Wellness Centres (AB-HWCs), a total of 10,200 HWCs (7518 SHCs, 2205 PHCs & 477 UPHCs) are operationalized in the State as of 22<sup>nd</sup> December 2021<sup>z</sup>.

In the State, 53 districts are equipped with MMUS under NRHM, while none under NUHM. The State has 95% of ASHAs in position under the NRHM and 75% under NUHM, both of which are below the national averages of 96% and 85% respectively. The doctor to staff nurse ratio is 1:1, with 2 public healthcare providers available for every 1000 population (Annexure 1, Table 1.5).

Recent data (Annexure 1.3) reveals that out of 1000 population who availed services from public health facilities, 672.7 availed (events) OPD services and 30.6 availed (events) IPD services. However, as per the NSS data (2017-2018), 14% of all OPD cases and around 24% of all IPD cases used public health facilities, which are substantially lesser than the national averages for the same (Annexure 1.6).

<sup>w</sup> Including 2 UTs with legislative assembly (Delhi and Puducherry); Directorate of Economics & Statistics

<sup>x</sup> Out of Pocket Expenditure

<sup>y</sup> National Sample Survey Office NSSO Figures

<sup>z</sup> AB-HWC Portal

# ANNEXURE 1: KEY INDICATORS

## 1.1 State Profile<sup>aa</sup>

Indicator	Uttar Pradesh 2011 <sup>1</sup>	India
Total Population (In Crore)	19.98	121.08
Rural (%)	77.73	68.85
Urban (%)	22.26	31.14
Scheduled Caste population (SC) (in crore)	4.13 (20.69%)	20.14 (16.63%)
Scheduled Tribe population (ST) (in crore)	0.11 (0.56%)	10.45 (8.63%)
Total Literacy Rate (%)	67.68	72.99
Male Literacy Rate (%)	77.28	80.89
Female Literacy Rate (%)	57.18	64.64
Number of Districts in the Uttar Pradesh <sup>2</sup>	75	
Number of districts per lakh population in <b>Uttar Pradesh</b> (Census 2011)	Population <sup>1</sup>	Districts <sup>1</sup> (Numbers)
	<10 Lakhs	2
	≥ 10 Lakhs - <20 Lakhs	22
	≥20 Lakhs - <30 lakhs	13
	≥30 Lakhs	38
ST SC Dominant (Top 5) Districts of Uttar Pradesh <sup>1</sup>		
ST Dominant Districts (%)	SC Dominant Districts (%)	
Sonbhadra - 20.67%	Kaushambi - 34.72%	
Lalitpur - 5.86%	Sitapur - 32.25%	
Deoria - 3.54%	Hardoi - 31.13%	
Ballia - 3.39%	Unnao - 30.51%	
Khushinagar - 2.25%	Rae Bareli - 30.25	
Top 5 ST dominant district accounts for - 66.73%	Top 5 SC dominant district accounts for - 12.71%	

## 1.2 Key Health Status & Impact Indicators

Indicators	Uttar Pradesh	India
Infant Mortality Rate (IMR) <sup>3</sup>	41	30
Crude Death Rate (CDR) <sup>3</sup>	6.5	6.0

<sup>aa</sup> Sources are mentioned at the end of Annexure 1



Crude Birth Rate (CBR) <sup>3</sup>	25.4	19.7
Maternal Mortality Ratio (MMR) <sup>3</sup>	197	113
Neo Natal Mortality Rate (NNMR) <sup>4</sup>	32	23
Under Five Mortality Rate (U5MR) <sup>4</sup>	47	36
Still Birth Rate <sup>4</sup>	3	4
Total Fertility Rate (TFR) <sup>4</sup>	2.9	2.2
Life expectancy at birth <sup>5</sup>	65.3	69.4
Sex Ratio at Birth <sup>4</sup>	880	899

### 1.3 Key Health Infrastructure Indicators<sup>bb</sup>

Indicators				Numbers (Total)
Number of District Hospitals <sup>2</sup>				168
Number of Sub District Hospital <sup>2</sup>				0
Number of Government Medical College <sup>6</sup>				26
Number of Private Medical Colleges <sup>6</sup>				29
Number of AB-HWCs functional as of 22 <sup>nd</sup> December 2021 <sup>16</sup>	Status (Total)	Target FY (2020-21)	Target FY (2021-22)	Target FY (2022-23)
SHC-HWC	7518	5710	11411	15211
PHC-HWC	2205	3621	3621	3621
UPHC-HWC	477	592	592	592
<b>Total-HWC</b>	<b>10,200</b>	<b>9,923</b>	<b>15,624</b>	<b>19,424</b>
Rural <sup>2</sup>	Required (R)	In place (P)	Shortfall (S) (%)	
Number of Community Health Centres (CHC)	1461	711	51.33	
Number of Primary Health Centres (PHC)	5,846	2,880	50.74	
Number of Sub Centres (SC)	35,115	20,778	40.83	
Number of functional First Referral Units (FRUs)	DH	SDH	CHC	
	93	0	208	
Urban <sup>2</sup>	Required (R)	In place (P)	Shortfall (S) (%)	
Number of PHC	1,083	593	45.24	
Tribal <sup>2</sup>	Required (R)	In place (P)	Shortfall (S)%	
Number of CHC	14	Not Applicable	Not Applicable	
Number of PHC	58	Not Applicable	Not Applicable	
Number of SC	386	Not Applicable	Not Applicable	

<sup>bb</sup> Sources are mentioned at the end of Annexure 1

Patient Service <sup>9</sup>	Uttar Pradesh	India
IPD per 1000 population	30.6	62.6
OPD per 1000 population	672.7	1337.1
Operation (surgeries) major (General and Spinal Anaesthesia) per 10000 population	11.9	36.4

## 1.4 Major Health Indicator<sup>cc</sup>

% Share of DALYs to Total Disease Burden (GBD 2019) <sup>7</sup>	Uttar Pradesh	India
% DALY <sup>dd</sup> accountable for CMNNDs <sup>ee</sup>	40.5	33
% DALY accountable for NCDs	47.9	55
% DALY accountable for Injuries	11.6	12
Birth, Death Registration & Medical Certification of Cause of Death (MCCD) Indicator <sup>8</sup>	Uttar Pradesh	India
Level of Birth Registration (%)	88.7	92.7
Level of Death Registration (%)	63.3	92
Percentage of medically certified deaths to total registered deaths (%)	6.5	20.7
RMNCHA+N		
Maternal Health <sup>9</sup>	Uttar Pradesh	India
% 1st Trimester registration to Total ANC Registrations	57.6	71.9
% Pregnant Woman received 4 ANC check-ups to Total ANC Registrations	76.5	79.4
Total Reported Deliveries	4,095,081	21410780
% Institutional deliveries to Total Reported Deliveries	88	94.5
% Deliveries conducted at Public Institutions to Total Institutional Deliveries	72	67.9
% Deliveries conducted at Private Institutions to Total Institutional Deliveries	28	32.1
% C-section deliveries (Public + Pvt.) to reported institutional (Public + Pvt.) deliveries	8.6	20.5
% C-sections conducted at public facilities to Deliveries conducted at public facilities	4.4	14.1
% C-sections conducted at Private facilities to Deliveries conducted at private facilities	19.3	34.2
% Women getting 1st Post-Partum Checkup between 48 hours and 14 days to Total Reported Deliveries	51.7	53.4
Neonatal <sup>9</sup>	Uttar Pradesh	India
% live birth to Reported Birth	98.9	98.8
% Newborns having weight less than 2.5 kg to Newborns weighed at birth	11.5	12.4
% Newborns breast fed within 1 hour of birth to Total live birth	90.8	89.9

<sup>cc</sup> Sources are mentioned at the end of Annexure 1

<sup>dd</sup> Disability Adjusted Life Years

<sup>ee</sup> Communicable, Maternal, Neonatal, and Nutritional Diseases

<b>New Born Care Units Established<sup>11</sup></b>	<b>Uttar Pradesh</b>	<b>India</b>
Sick New Born Care Unit (SNCU)	82	895
New Born Stabilization Unit (NBSU)	180	2418
New Born Care Corner (NBCC)	1820	20337
<b>Child Health &amp; Nutrition<sup>10</sup></b>	<b>Uttar Pradesh (NFHS 5)</b>	<b>India (NFHS 5)</b>
Prevalence of diarrhoea (reported) in the last 2 weeks preceding the survey (%)	5.6	7.3
Children with diarrhoea in the last 2 weeks who received oral rehydration salts (ORS) (%)	50.7	60.6
Children under 5 years who are underweight (weight-for-age) (%)	32.1	32.1
<b>Child Immunization<sup>10</sup></b>	<b>Uttar Pradesh (NFHS 5)</b>	<b>India (NFHS 5)</b>
Children age 12-23 months fully vaccinated based on information from vaccination card only (%)	78.4	83.8
Children age 12-23 months who have received BCG (%)	93.2	95.2
Children age 12-23 months who have received first dose of measles containing vaccine (%)	83.3	87.9
<b>Family Planning<sup>10</sup></b>	<b>Uttar Pradesh (NFHS 5)</b>	<b>India (NFHS 5)</b>
Unmet need for spacing (%)	4.8	4
<b>Communicable Diseases</b>		
<b>Integrated Disease Surveillance Programme (IDSP)<sup>11</sup></b>	<b>Uttar Pradesh</b>	<b>India</b>
Number of districts with functional IDSP unit	75	720
<b>Revised National Tuberculosis Control Programme (RNTCP)<sup>11</sup></b>	<b>Uttar Pradesh</b>	<b>India</b>
Annualized total case notification rate (%)	193	163
New Smear Positive (NSP) Success rate (in %)	74	79
<b>National Leprosy Eradication Programme (NLEP)<sup>11</sup></b>	<b>Uttar Pradesh</b>	<b>India</b>
Prevalence Rate/10,000 population	0.43	0.61
Number of new cases detected	15,484	114,359
<b>Malaria, Kala Azar, Dengue<sup>11</sup></b>	<b>Uttar Pradesh</b>	<b>India</b>
Deaths due to Malaria <sup>11</sup>	0	79
Deaths due to Kala azar reported <sup>11</sup>	0	0
Deaths due to Dengue reported <sup>11</sup>	8	168
Number of Kala Azar Cases reported <sup>11</sup>	0	3,706
<b>HIV<sup>10</sup></b>	<b>Uttar Pradesh (NFHS 5)</b>	<b>India (NFHS 5)</b>
Women (age 15-49 years) who have comprehensive knowledge of Human Immunodeficiency Virus (HIV)/Acquired immunodeficiency syndrome (AIDS) (%) <sup>10</sup>	13.1	21.6
Men (age 15-49 years) who have comprehensive knowledge of HIV/AIDS (%) <sup>10</sup>	22.1	30.7

Non-Communicable Disease		
Diabeties and Hypertension <sup>10</sup>	Uttar Pradesh (NFHS 5)	India (NFHS 5)
Women - Slightly above normal (Systolic 140-159 mm of Hg and/or Diastolic 90-99 mm of Hg) (%)	11.5	12.4
Men - Slightly above normal (Systolic 140-159 mm of Hg and/or Diastolic 90-99 mm of Hg) (%)	15.2	15.7
Women - Blood sugar level - high (>140 mg/dl) (%)	4.7	6.1
Men - Blood sugar level - high (>140 mg/dl) (%)	5.8	7.3
Tobacco Use and Alcohol Consumption among Adults (age 15 years & above) <sup>10</sup>	Uttar Pradesh (NFHS 5)	India (NFHS 5)
Women who use any kind of tobacco (%)	8.4	8.9
Men who use any kind of tobacco (%)	44.1	38
Women who consume alcohol (%)	0.3	1.3
Men who consume alcohol (%)	14.6	18.8
Injuries		
Road Traffic Accident <sup>12</sup>	Uttar Pradesh	India
Rank (Total number of fatal Road Accidents in State/UT wrt other States/UTs)	1	NA
Total number of fatal Road Accidents	19,731	137,689
Severity (Road accident deaths per 100 accidents) of Road Accidents	53.2	33.7
Number of persons killed in Road Accidents	22665	115113

## 1.5 Access to Care<sup>ff</sup>

Health Systems Strengthening		
Ambulances & Mobile Medical Units (MMU) <sup>11</sup>	Uttar Pradesh	India
Number of Districts equipped with MMU under NRHM	53	506
Number of Districts equipped with MMU/Health Units under NUHM	0	31
Number of ERS vehicles operational in the States/UTs Under NHM	Uttar Pradesh	India
102 Type	2270	9955
104 Type	0	605
108 Type	2200	10993
Others	250	5129
Number of Ambulances functioning in the State/UTs other than NHM (At PHC/CHC/SDH/DH)	0	11070

<sup>ff</sup> Sources are mentioned at the end of Annexure 1



Key Domain Indicators		
ASHA <sup>13</sup>	Uttar Pradesh	India
Total number of ASHA targeted under NRHM	159307	946563
Total number of ASHA in position under NRHM	151213	904211
% of ASHA in position under NRHM	95	96
Total number of ASHA targeted under NUHM	8336	75597
Total number of ASHA in position under NUHM	6281	64272
% of ASHA in position under NUHM	75	85
Community Process <sup>11</sup>	Uttar Pradesh	India
Number of Village Health Sanitation and Nutrition Committees (VHSNCs) constituted	72880	554847
Number of Mahila Arogya Samitis (MAS) formed	6132	81134
Number of Rogi Kalyan Samitis (RKS) registered (Total) <sup>11</sup>	Uttar Pradesh	India
DH	168	796
CHC	988	6036
PHC	0	20273
UCHC	11	126
UPHC	592	3229
Human Resource for Health <sup>14</sup>		
HRH Governance	Uttar Pradesh	
Specialist Cadre Available in the state (Y/N)	No	
HR Policy available (Y/N)	Yes	
Implementation of HRIS (Y/N)	Yes	
HR Integration initiated (Y/N)	No	
Public Health Cadre available (Y/N)	No	
Overall Vacancies (Regular + contractual)	Specialists (%)	30
	Dentists (%)	77
	Nurse (%)	21
	LT (%)	24
	ANM (%)	23
HRH Distribution	Sanctioned	In Place
Doctors (MO & specialists) to staff nurse <sup>14</sup>	1:1	1:1
Availability of public healthcare providers (MO, specialists, staff nurse & ANM) in district healthcare system <sup>14</sup>	3 per 10,000	2 per 10,000
Regular to contractual service delivery staff ratio <sup>14</sup>	2:1	1:1

## Ranking: Human Resource Index of Uttar Pradesh<sup>15</sup>

Category	Total (Regular + NHM)					Ranking: HR Gap Index
	Required (R)	Sanctioned (S)	In-Place (P)	Vacancy (V)	Actual Gap# (R-P)	
MPW <sup>gg</sup>	76360	49918	36387	13531	39973	57.72
Staff Nurse	49346	24929	18320	6609	31026	
Lab Technician	10399	7579	5056	2523	5343	
Pharmacists	7174	6110	5565	545	1609	
MO MBBS <sup>hh</sup>	11234	12208	10193	2015	1041	
Specialist <sup>ii</sup>	9153	10336	3630	6706	5523	

## 1.6 Healthcare Financing<sup>jj</sup>

National Health Accounts (NHA) (2017-18)	Uttar Pradesh		India	
Per Capita Government Health Expenditure (in ₹)	801		1753	
Government Health expenditure as % of Gross Domestic Product (GSDP)	1.2		1.35	
Government Health Expenditure as % of General Government Expenditure (GGE)	5.8		5.12	
OOPE as a Share of Total Health Expenditure (THE) %	72.6		48.8	
National Sample Survey Office (NSSO) (2017-2018)	Uttar Pradesh		India	
	Rural	Urban	Rural	Urban
OPD - % of non-hospitalized cases using public facility	14	14	33	26
IPD - % of hospitalized cases using public facility	28	24	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	1117	1290	472	486
OPD - Per non-hospitalized ailing person (in INR) in last 15 days - Private	853	1173	845	915
IPD - Per hospitalized case (in INR) - Public	8530	11281	5,729	5,939
IPD - Per hospitalized case (in INR) - Private	31796	39332	28,816	34,122
IPD - % of diagnostics expenditure as a proportion of inpatient medical expenditure in Public (NSSO)	15	16	18	17
IPD - % of drugs expenditure as a proportion of inpatient medical expenditure – Public (NSSO)	51	40	53	43

<sup>gg</sup> MPW – Multi Purpose Health Worker (Female + Male)

<sup>hh</sup> MO MBBS (Full Time)

<sup>ii</sup> Specialist (All Specialist)

<sup>jj</sup> Sources are mentioned at the end of Annexure 1

\* 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)	1653	1864	2,402	3,091
Childbirth - Average out of pocket expenditure per delivery in private health facility (₹)	21705	20339	20,692	26,701
<b>State Health Expenditure</b>	<b>Uttar Pradesh</b>		<b>All India Average</b>	
State Health Department expenditure as a share of total expenditure (%) (2017-18)**	5.3		5	

#### Sources used for Annexure 1

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

<sup>kk</sup> Represents data for all states and 2 UTs with legislative assembly (Puducherry + Delhi)

<sup>\*\*</sup> RBI, State Finances: Study of Budgets 2019-20

## ANNEXURE 2

Figure 1: IMR Trend

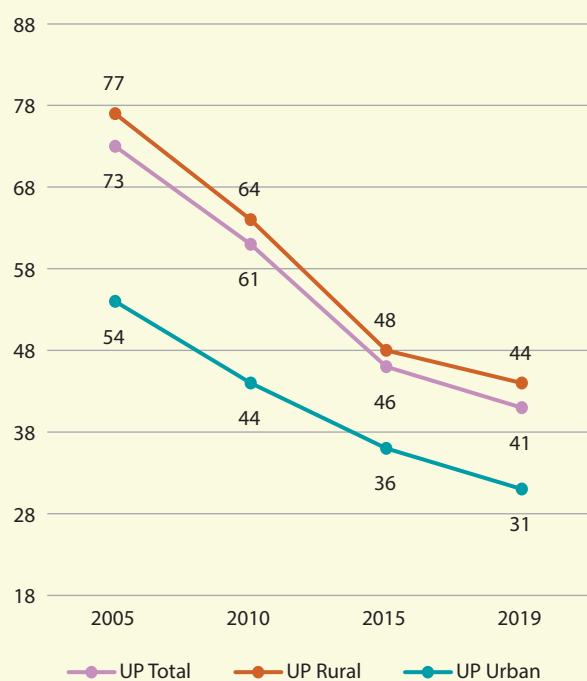


Figure 2: CBR & CDR Trend

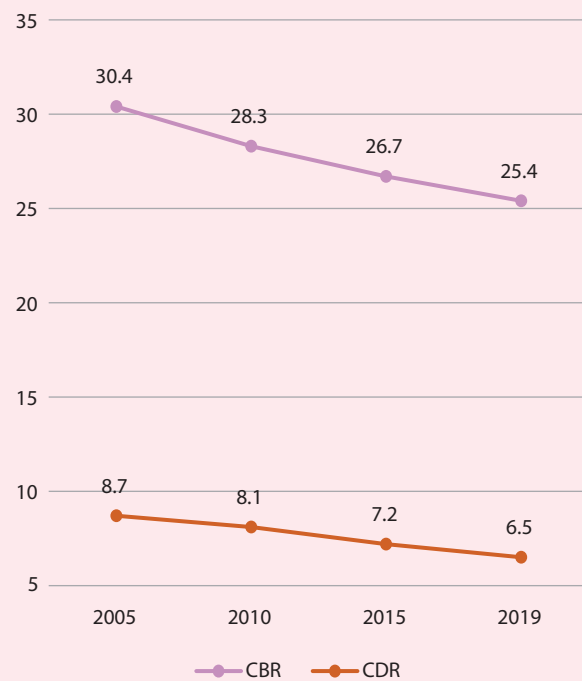


Figure 3: Life Expectancy At Birth Trend

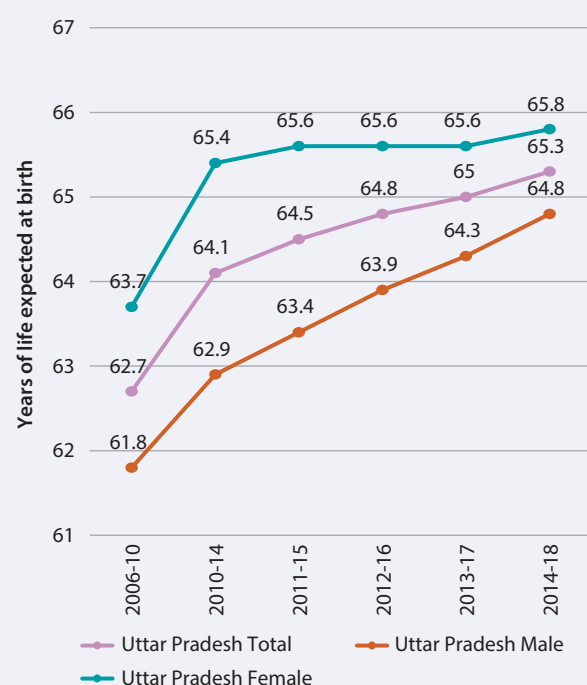


Figure 4: NNMR, TFR & Still Birth Trend

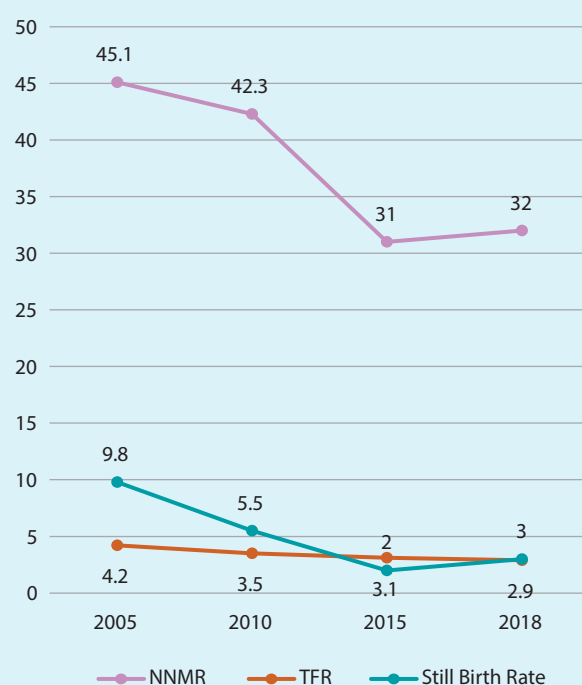




Figure 5: Comparison of Key NFHS 5 & 4 Indicators

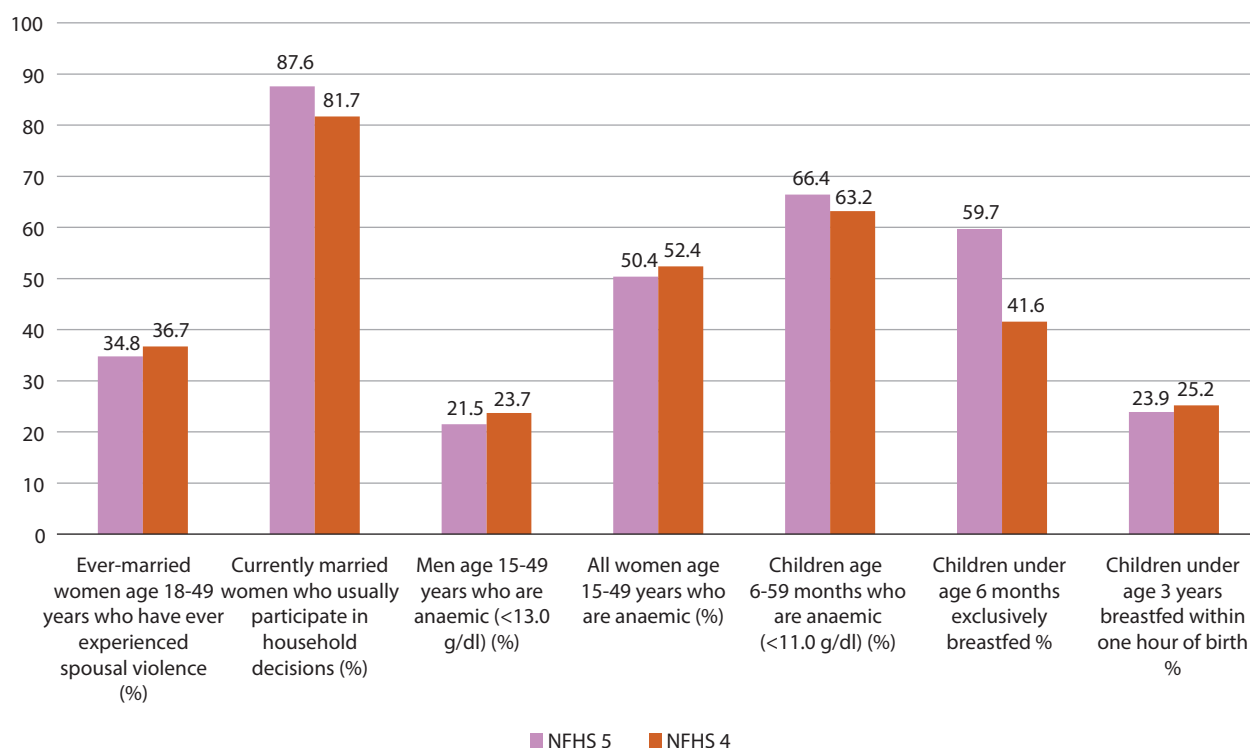


Figure 6: Top 15 causes of DALYs, 1990-2019

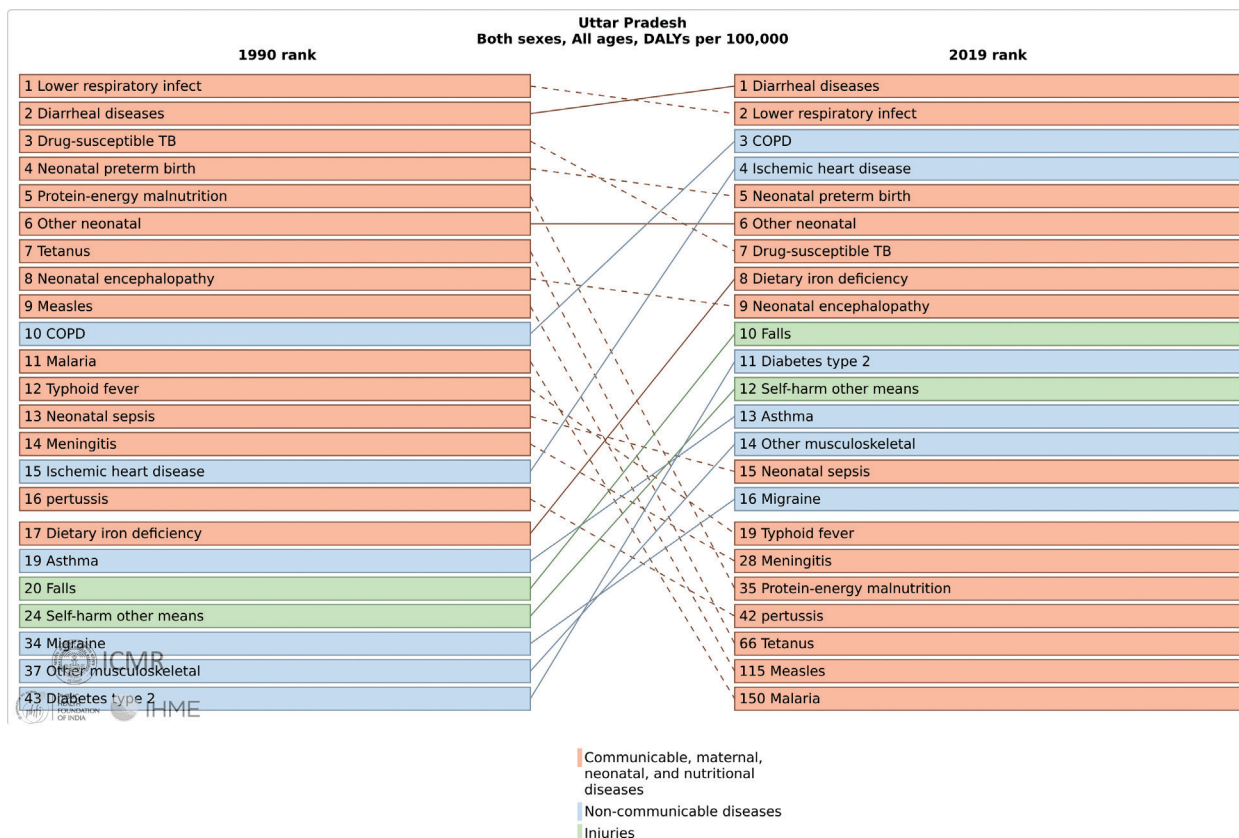


Figure 7: Top 15 risk of DALYs, 1990-2019

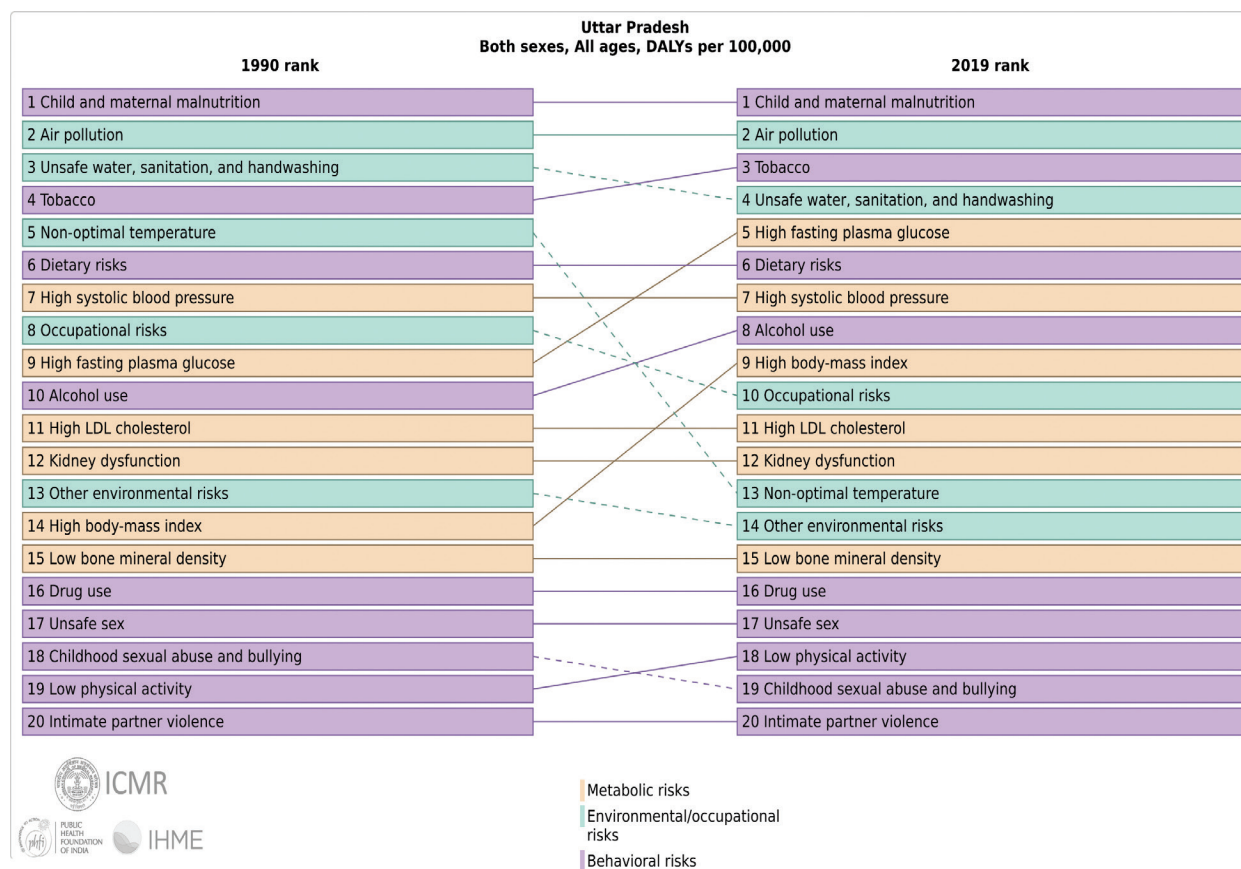


Figure 8: Year Wise Required/In Position Health Infrastructure Status in Rural Area (In numbers)

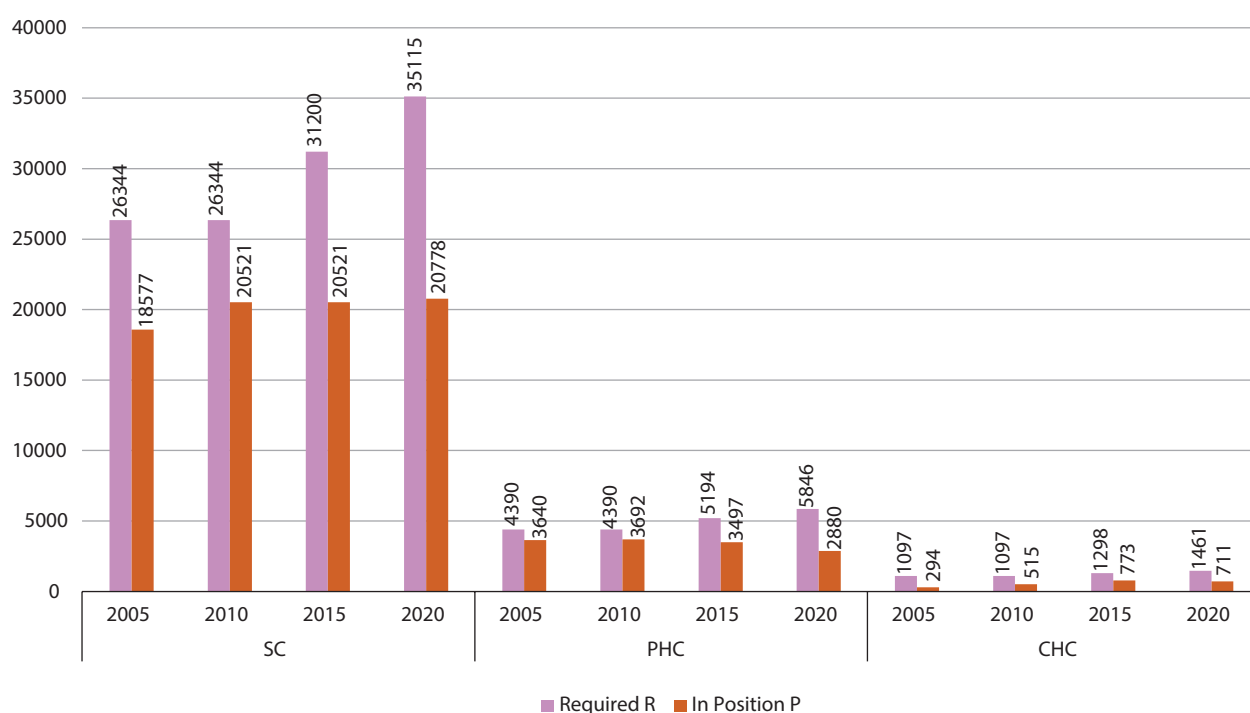


Figure 9: Year Wise Health Infrastructure Shortfall (%)

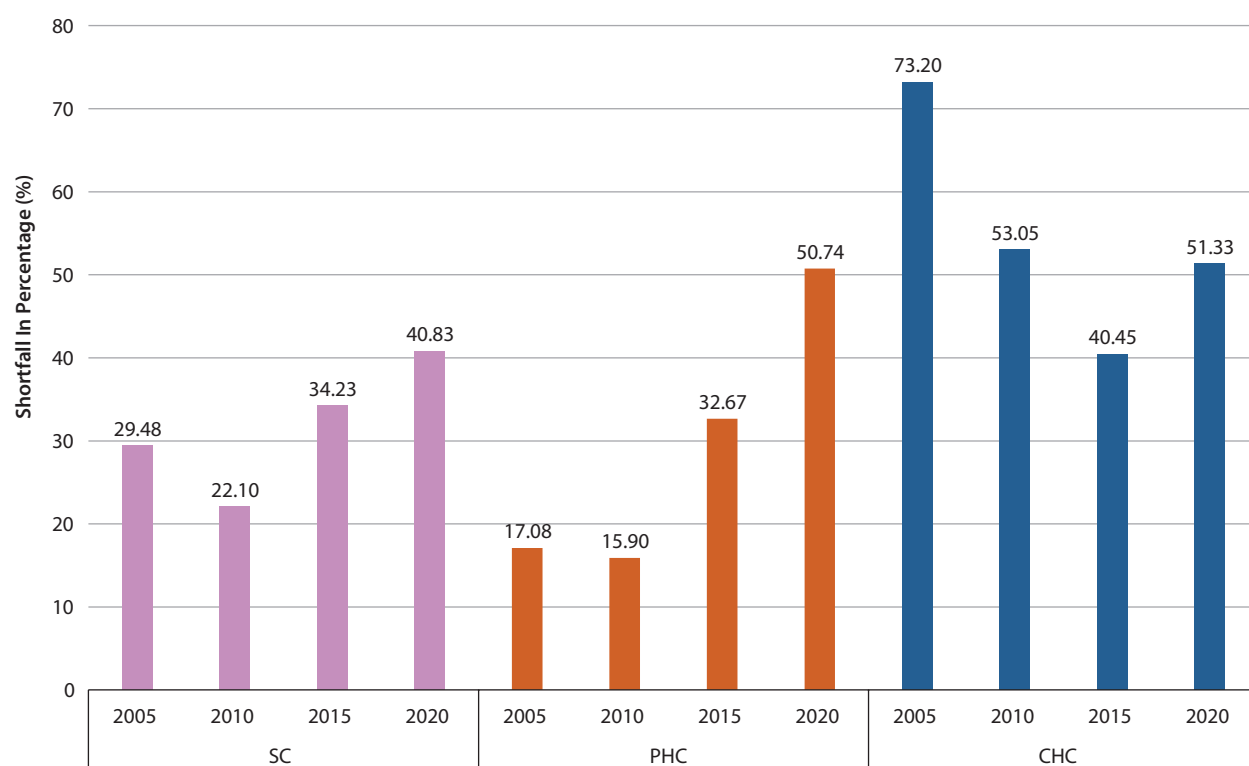
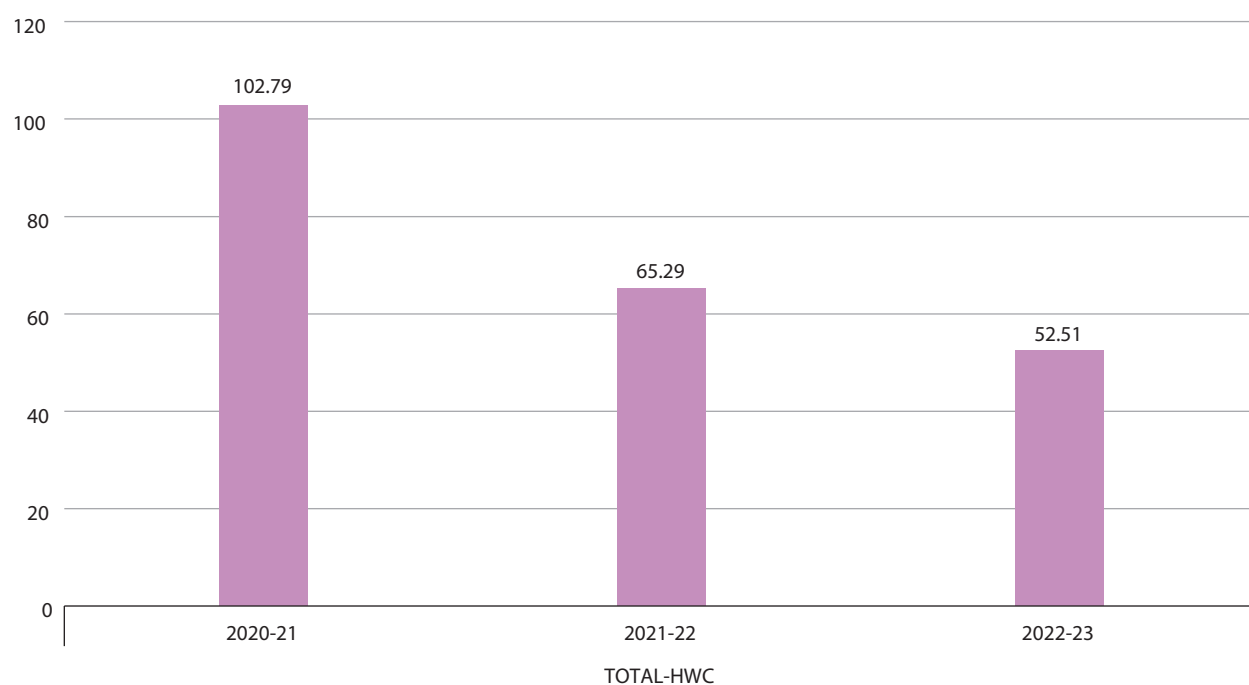


Figure 10: Percentage HWCs progress against target - FY wise (%)

Uttar Pradesh (% HWCs progress as of 22/Dec/2021 against targets - FY wise)



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

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/PIUD (%)	Condom Use (%)	Total Unmet Need (%)	Mother Who Had At Least 4 Antenatal Care Visits (%)	Institutional Births (%)	Children Age 1-23 Months Fully Vaccinated Based On Information From Vaccination Card Only* (%)	Total Children Age 6-23 Months Receiving Adequate Diet**, # (%)	Children Under 5 Years - Stunted <sup>Δ</sup> (Height For Age) (%)	Children Under 5 Years - Wasted <sup>Δ</sup> (Weight For Height) (%)
1	Uttar Pradesh	NFHS 4 Total	903	6.1	NA	21.1	45.5	1.2	10.8	18.1	26.4	67.8	66.2	5.3	46.3	17.9
2	Uttar Pradesh	NFHS 5 Urban	933	16.8	77.2	9.6	67.6	2	27.1	9.2	52.3	85.5	76.6	6.8	33	18.7
3	Uttar Pradesh	NFHS 5 Rural	943	15.5	62.4	17.9	60.8	1.3	16.6	14	39.6	82.9	78.8	5.9	41.3	17
4	Uttar Pradesh	NFHS 5 Total	941	15.9	66.1	15.8	62.4	1.5	19.1	12.9	42.4	83.4	78.4	6.1	39.7	17.3
5	Agra	NFHS 5 Total	902	9.4	63.1	17.9	67.7	2.4	18.7	9	42.7	89.1	78.2	10.6	35.9	16.4
6	Aligarh	NFHS 5 Total	1030	17.6	66	15.8	68.2	2.7	20.3	6.4	44.7	82.6	83.9	9.9	35	10.9
7	Ambedkar Nagar	NFHS 5 Total	818	23	76.2	5.5	48.9	0.4	4.6	22.9	44.5	92.2	91.3	5	31.1	17.8
8	Amethi	NFHS 5 Total	844	20.9	63.3	14.9	48.4	0.7	11.7	19.9	31.7	90.8	86.8	5.7	35.8	19.9
9	Auraiya	NFHS 5 Total	880	18.4	74.9	18.1	51.4	0.7	14.3	18.7	50.4	90.1	84.3	6.1	39.7	19.4
10	Azamgarh	NFHS 5 Total	839	9	76.5	12	52.7	0.6	5.9	20.7	38.5	93.2	80.3	0	33.4	14.4
11	Baghpat	NFHS 5 Total	818	12.5	76.3	8.1	71.7	2.3	22.5	5.2	42.4	80.9	93	9.1	25.5	10.3
12	Bahraich	NFHS 5 Total	848	10.1	38.8	37.5	38.4	1.2	14.4	27.6	34.3	67.7	62.2	9.8	52.1	14.4
13	Ballia	NFHS 5 Total	1062	10.6	70	9.9	55.2	1	10.3	20.2	30.5	90	65.7	0.9	43.8	21.9
14	Balrampur	NFHS 5 Total	1034	13	43.2	35	49	2.6	14.3	22.3	41	69.7	67.9	6.9	41.2	24.9
15	Banda	NFHS 5 Total	971	13.3	57	19	62.4	0.6	20	15.3	39	89.8	64.9	9.5	51	25.7
16	Bara Banki	NFHS 5 Total	951	14.6	56.1	20.4	45.4	1.6	19.3	21.4	22.6	76	67.2	6.7	41.9	18.1
17	Bareilly	NFHS 5 Total	1084	18.7	53.9	11.4	68.8	0.8	21.5	5.9	43.1	75.1	91	10.5	45.9	15.4
18	Basti	NFHS 5 Total	895	15.8	63.2	15.9	72	3.3	14.2	11.1	31.5	93.2	77.4	5.7	35.9	24.2
19	Bijnor	NFHS 5 Total	951	18.8	72.8	5.2	68.1	0.7	30.4	5	48.8	83.7	96.7	6.8	36.2	9.4
20	Budaun	NFHS 5 Total	870	13.6	49.7	22.9	76.9	1.2	26.4	4.3	40.6	72.3	74.5	8.6	51.8	18.2
21	Bulandshahr	NFHS 5 Total	841	20.5	69.2	12.8	72.9	1.9	22.3	5.1	47.6	83.5	84.7	8.9	37.6	13.8
22	Chandauli	NFHS 5 Total	877	28.1	70.6	17.2	60.4	0.6	7.4	15.4	32.9	86.2	82.6	3.5	39.5	17.4
23	Chitrakoot	NFHS 5 Total	889	17.4	56.2	21.8	57.1	1.3	8.8	12.7	30.3	81.1	68.9	8.4	47.5	24.8



24	Deoria	NFHS 5 Total	1002	10.5	71.3	13.7	56.2	3.1	16.4	20.4	42.5	93.4	73.2	2.7	36.8	26.5
25	Etah	NFHS 5 Total	1004	12.8	67.8	20.1	73.1	1.8	24.2	7	33.6	76.7	71.9	5	48.8	15
26	Etawah	NFHS 5 Total	799	17.9	77.4	16.3	71	1.1	26.9	8.3	43.7	85.2	87.2	6.2	38.8	13.9
27	Faizabad	NFHS 5 Total	885	19.8	73.8	7.6	46	0.8	7.6	25.9	33.8	89.1	82.9	2.9	30.6	12.4
28	Farrukhabad	NFHS 5 Total	789	13.5	63.1	18.8	67.2	2.3	24.6	7.7	41.5	69.3	83.7	14.8	47.8	14.3
29	Fatehpur	NFHS 5 Total	890	16.8	62.3	10.4	66.2	0.7	38.9	9.7	38.1	81.4	63.5	3.5	51.1	17.8
30	Firozabad	NFHS 5 Total	871	13.4	71.4	24.8	66.9	1.2	14.7	9.2	39.3	80.1	72.9	6.8	46.9	9.5
31	Gautam Buddha Nagar	NFHS 5 Total	735	23.8	79.9	13.5	76.3	3.2	25	5.3	52.7	86.6	90.4	6.9	25.5	12
32	Ghaziabad	NFHS 5 Total	1182	20	80.1	8	72.7	3	31.9	5.3	62	86.4	83.8	6	28.2	17.1
33	Ghazipur	NFHS 5 Total	972	10.6	72.4	13.5	62.9	1.9	12.1	13.4	29.2	88.3	69.9	4.4	39.3	25.7
34	Gonda	NFHS 5 Total	896	13.4	57.7	25.4	41.1	1.7	15.9	24.5	41.7	81.8	66.2	5	45.9	12.1
35	Gorakhpur	NFHS 5 Total	943	17.9	68.8	14.6	63.8	0.8	20.1	14.7	56.3	91.6	69.3	2.3	29.6	23.3
36	Hamirpur	NFHS 5 Total	882	21.9	69.4	10.5	61.3	0.1	19.1	14.4	43.2	96.3	79.8	5.8	48	20.6
37	Hapur	NFHS 5 Total	785	14.9	73.7	7.1	70.3	2.1	26.5	4.8	53.3	83.3	89.1	10.9	30.2	18.5
38	Hardoi	NFHS 5 Total	1097	16	55	19.3	58.3	1.1	31.5	13.4	39.7	73.9	62.4	7.6	44.5	22.3
39	Jalaun	NFHS 5 Total	797	17.6	66.8	16.9	62.4	0.4	12.2	13.5	62.8	85.1	64.7	2.8	45.1	19.5
40	Jaunpur	NFHS 5 Total	898	12	75.9	11.8	62	2.8	18.7	16.2	47.6	88.8	83.6	5.7	40.5	14.8
41	Jhansi	NFHS 5 Total	927	11.4	69.2	25.1	62	0	19.8	13.8	36.6	92.9	53.9	10.7	40.9	25.2
42	Jyotiba Phule Nagar	NFHS 5 Total	860	8.3	61.2	11.6	65.7	0.8	26.7	6.8	43.9	81.1	91.1	16.8	42.2	22.5
43	Kannauj	NFHS 5 Total	1038	15.3	64.8	10.4	69.4	1.5	43.9	7.2	46.4	76.4	56.8	13.5	43	21.5
44	Kanpur Dehat	NFHS 5 Total	1027	17.9	70.8	12.7	60.1	1.2	22.6	15	54.4	84.3	68	5.4	44.1	12.5
45	Kanpur Nagar	NFHS 5 Total	816	16.1	81.3	10.9	73.7	3	33.1	6.8	69.9	86.6	81.2	3.7	34.6	21.4
46	Kanshiram Nagar	NFHS 5 Total	997	15.1	56.4	23.2	65.2	2.3	17.4	11.8	38.1	74.8	74.6	5.6	45.1	19.3
47	Kaushambi	NFHS 5 Total	972	20.2	58.6	17.6	62.5	1.2	13.5	12.5	34	88.6	77.1	6.1	40.2	18.3
48	Kheri	NFHS 5 Total	901	22	57.5	19.7	54.9	1.5	11.2	16.1	48	82.8	76.2	4.4	47.6	15.8
49	Kushinagar	NFHS 5 Total	1080	15.6	62.5	17.7	64.2	2	10.5	14.5	35.8	89.4	82.9	3	32.2	24.3
50	Lalitpur	NFHS 5 Total	998	11.7	55.3	42.5	73.8	0.3	10.9	7.4	45.7	90.8	73	4.8	46.6	18.7
51	Lucknow	NFHS 5 Total	981	15.8	78.4	9.9	56.5	2	18	15.7	53.1	91.3	84.5	2.3	32.1	11.5
52	Mahamaya Nagar	NFHS 5 Total	989	10.9	65.5	28.1	57.5	2.4	15.2	13.8	27.8	80.3	79.5	5.9	39.1	12
53	Mahoba	NFHS 5 Total	933	18.2	62	24.1	62.9	1.1	9.8	13.7	52.5	93.3	82.8	8	40.5	21.8
54	Mahrajganj	NFHS 5 Total	1056	16.2	65.6	20.8	61.6	0.7	15.3	16.6	46.2	96.3	73.9	7.5	42.3	25
55	Mainpuri	NFHS 5 Total	837	16.1	74.2	16	80.1	1.3	29.2	4.4	38.1	82.7	87.7	10.1	44.3	14.6

56	Mathura	NFHS 5 Total	930	10.8	64.4	21.3	58.2	1.8	14	12.9	39.3	79.5	80.5	2.6	31.6	11
57	Mau	NFHS 5 Total	938	16	72	11	54.2	0.4	16.5	16.8	43.2	94.7	63.3	3.2	25.4	21.2
58	Meerut	NFHS 5 Total	926	18.4	79	7.6	72.4	1.8	29.1	5.6	49.9	80.6	92.2	8.7	32.1	10.2
59	Mirzapur	NFHS 5 Total	812	15	70.9	16.6	61.5	1.8	9	14.5	36.5	91.1	83.3	4.6	43.4	12.5
60	Moradabad	NFHS 5 Total	1022	17.1	66.7	9.6	69.8	0.5	30.7	6.9	33.2	80.3	90.6	12.9	34.7	19.1
61	Muzaffarnagar	NFHS 5 Total	865	8.2	72.1	7.3	73.2	1.6	24.7	5	44	87	79.6	16.1	29.8	20.7
62	Pilibhit	NFHS 5 Total	814	21.4	54.7	16.2	74.1	0.8	27.4	4.9	43.6	76.2	90.4	8.9	38.9	20.1
63	Pratapgarh	NFHS 5 Total	1034	14.9	74.8	11	51.9	0.8	6.7	21.9	30.6	90.8	92.1	4.2	35.5	10
64	Prayagraj	NFHS 5 Total	1191	20.6	67.7	13.8	63.1	1.2	8.6	11.9	45.9	83.2	67.8	0	37.9	15.1
65	Rae Bareilly	NFHS 5 Total	871	16.8	62.8	14.3	69.3	2.5	26.2	12.4	43.6	89.5	77.2	3.4	47	13
66	Rampur	NFHS 5 Total	968	13.1	57	10.5	56.8	0.3	17	12	50.4	81	81.9	6.9	40.4	17.6
67	Saharanpur	NFHS 5 Total	1022	11.8	71.2	7	73.7	0.8	32.8	4.3	52.4	81.7	93.4	5.6	28.8	22
68	Sambhal	NFHS 5 Total	940	13.7	51.3	21.1	65.9	0.6	26.2	8.5	32.9	74.2	89.6	5.6	51.6	14.1
69	Sant Kabir Nagar	NFHS 5 Total	835	20.4	61.3	16.8	69.2	4.1	16.2	13	43.2	90.6	82.9	7.5	42.3	19
70	Sant Ravidas Nagar (Bhadohi)	NFHS 5 Total	839	18.8	69.7	19.6	53.8	0.6	6.1	22.4	25.8	90.3	72.1	2.9	42.7	9.1
71	Shahjahanpur	NFHS 5 Total	1064	14.2	56.8	20.9	70.3	2.1	26.1	6.4	35.3	63.3	84.5	6.7	44.5	17
72	Shamli	NFHS 5 Total	1029	14.8	64.2	10.8	71	0.9	27.7	5.6	41	78.3	95.3	1.8	28.6	24.3
73	Shrawasti	NFHS 5 Total	971	13.5	39.1	51.9	49.8	2	13	20.1	42.4	80.4	69.8	3.4	50.9	20.3
74	Siddharthnagar	NFHS 5 Total	852	12.2	48.3	33.9	65	1.9	22.9	14.4	60.9	69.7	68.1	3.5	37.2	24.8
75	Sitapur	NFHS 5 Total	1011	23.2	53.4	20.8	51.1	1.1	12.9	17.9	35.4	84.8	72.2	4.1	47.8	18.2
76	Sonbhadra	NFHS 5 Total	974	19.7	60.9	17.7	67.1	0.8	9.9	11.6	36.4	76.8	82.3	2.5	38.3	26.8
77	Sultanpur	NFHS 5 Total	997	20.7	71.9	7.9	47.6	0.7	7.1	23.9	47	87	92.7	4.4	33.4	10.7
78	Unnao	NFHS 5 Total	960	15.3	64.4	18.9	48.7	1.6	26.7	19.1	19.8	80.8	62.5	5.2	39.2	12.1
79	Varanasi	NFHS 5 Total	885	12.8	79	10.4	72.5	1.5	23.7	8.7	51.4	95.2	78.6	5.8	37.4	21

\* NFHS5 replaced 'immunized' (word) from NFHS4 to 'Vaccinated'; Out of two indicators with 'either vaccination card or mother's recall' & '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)/MM/MN/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

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