

# Proxima – PHFI Pandemic and Epidemic Management System

**COVID 19: India's 150 days of journey: Review**

**18 July 2020**

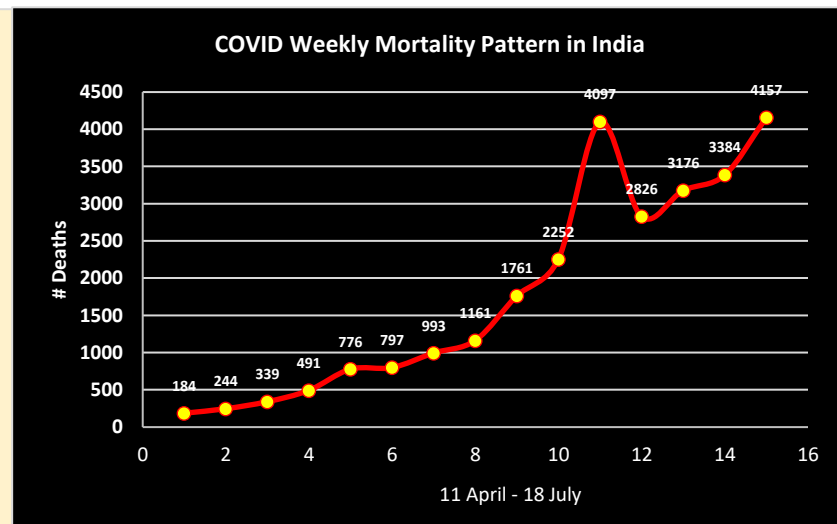
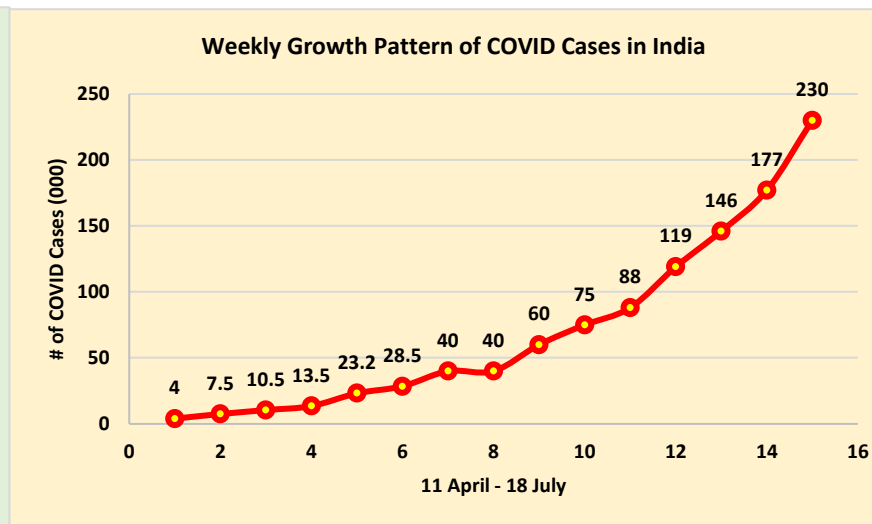
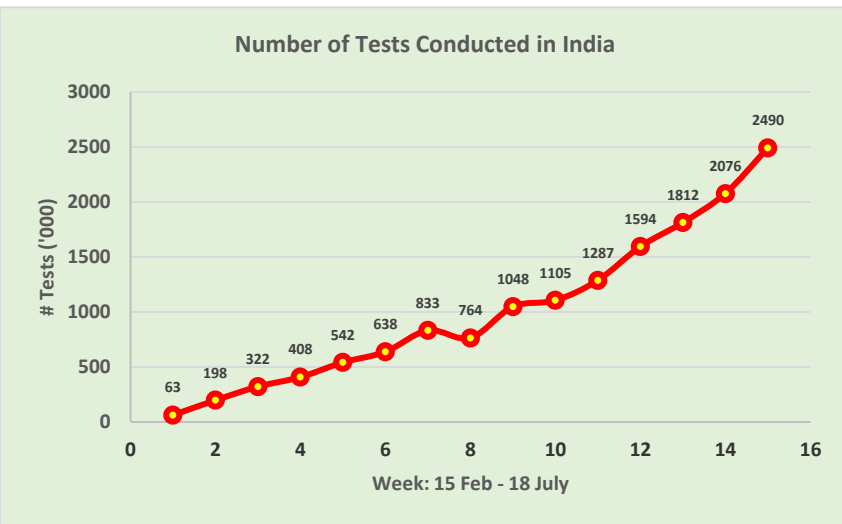


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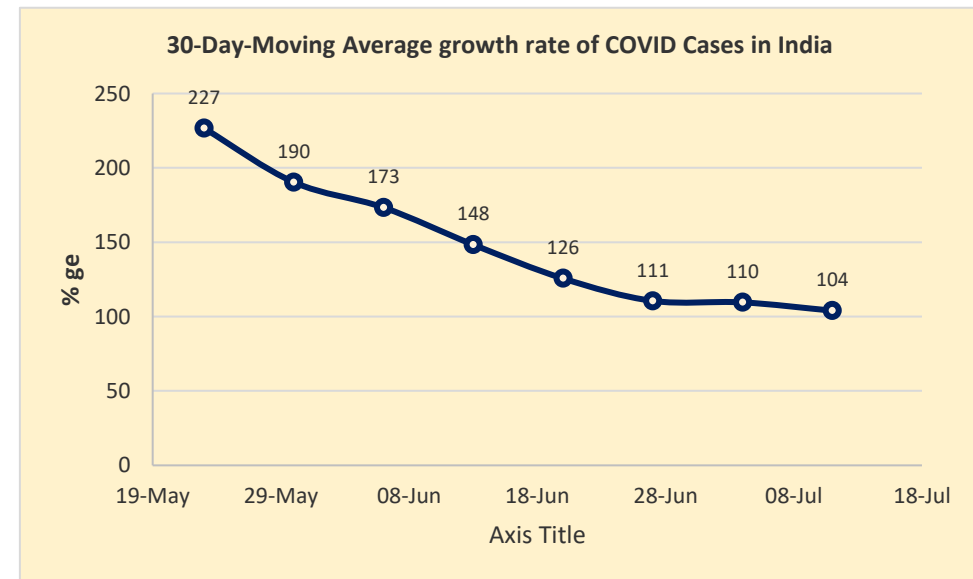
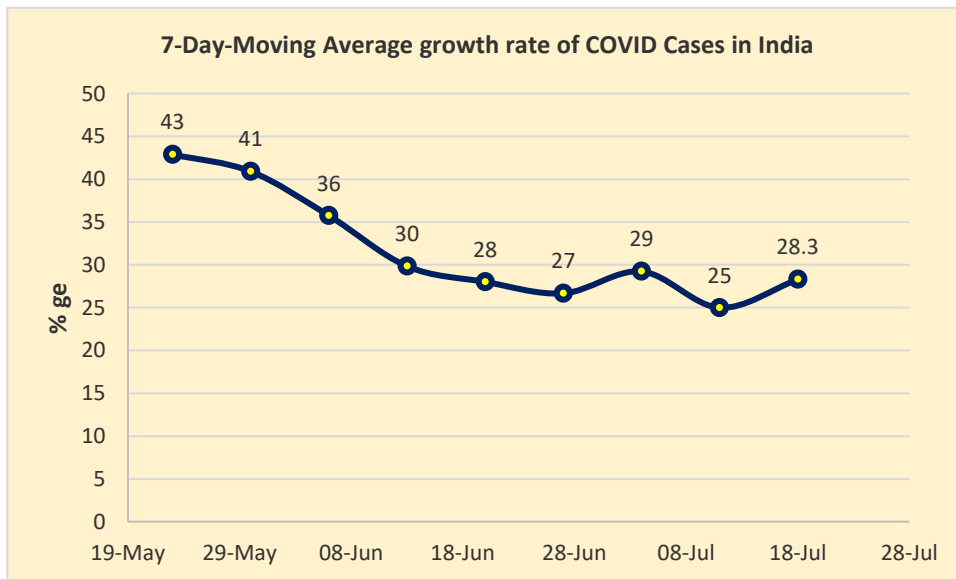
- Growth Pattern: Testing, Positivity, and Mortality
- Projection: Number of Positivity and Mortality
- Rapid Ag Test and RT - PCR Test – Case Study
- 150 days of COVID Management: Analysis of major 12 States
  - Mega States, EAG States, and Union Territory / National Capital
  - COVID & Rural India
- Analysis of districts having highest Positivity and Mortality Growth Pattern
- Classification of States

In India, the following are the latest weekly incremental increase in absolute value

- **Testing / Week:** 25 lacs
- **Positive / Cases:** 2.3 lacs
- **Deaths :** 4150



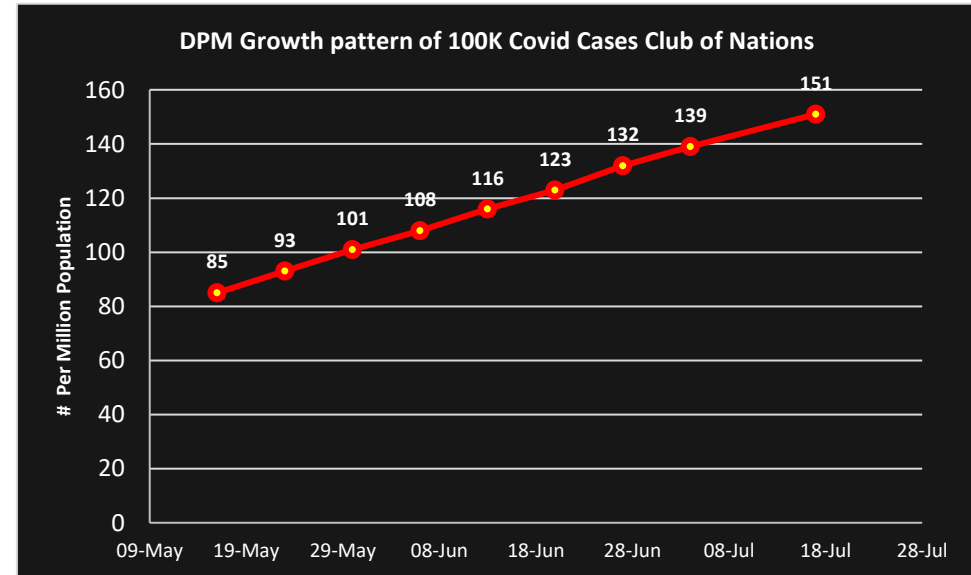
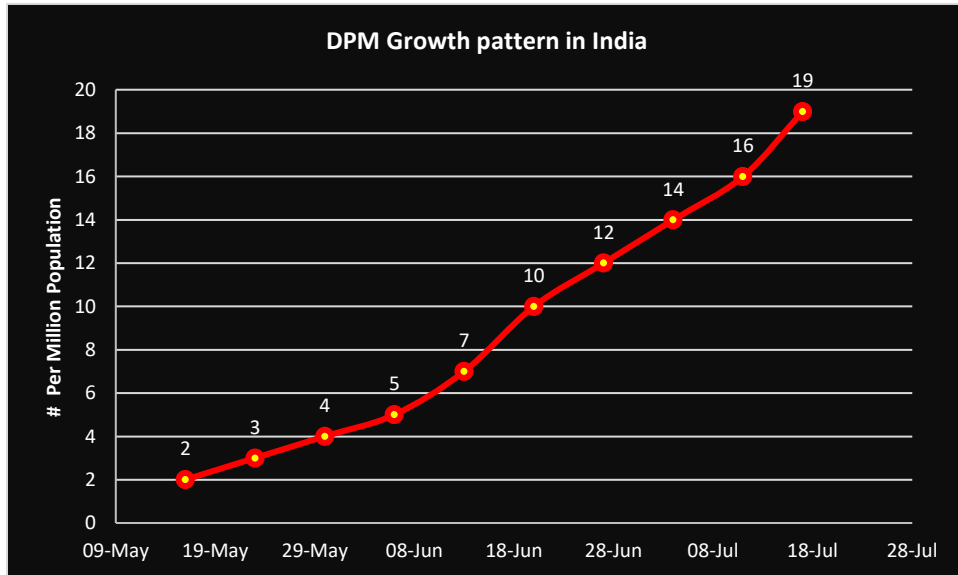
- Week-on-Week COVID numbers in India is growing over 25%. Ceteris paribus, India's COVID cases is likely to cross over **2.5 Million** before 15<sup>th</sup> August 2020
- After 120 days into managing the Pandemic, multiple state / district level “lockdowns” and “unlocks” had limited impact towards decrease in absolute value of COVID cases in the respective regions



# India's continued increase in number of deaths and its growth rate – A serious concern



India's current and future DPM scenario									
Factors directly influencing India's future DPM			India's Current DPM Status			Pattern among nations having more than 100K COVID cases			
a. India's positivity is directly proportionate to testing			<b>Dates</b>	<b>Deaths</b>	<b>DPM</b>	a. Average DPM is 151. India's current DPM is 19.5			
b. Recently launched medication and plasma therapy			30-Jun	17008	12.0	b. Highest DPM of a nation is 665 and least is 15			
c. Jammed health infrastructure in mega states/cities, low ratio of medical professionals to population			07-Jul	20178	15.0	c. Tests / Mn Population is 45760. India is 9480			
			18-Jul	26828	19.5	d. Cases / Mn Population is 3478. India is 740			
Various scenario indicated in June 2020									
Population 1379418901	Optimistic		Pragmatic			Pessimistic		Catastrophic	
	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8	Scenario 9
<b>DPM</b>	10	20	30	50	75	100	150	250	400
<b>Deaths</b>	13800	27700	41500	69200	104000	138500	207600	345000	550000
<b>Reached Date</b>	22nd June	19th July							



# Rapid Ag Test and RT - PCR Test

According to various public reports, more than 60% of the COVID tests in India are through Rapid Ag Test. This is cheaper, faster, and can be conducted outside of laboratories.

One of the main advantages of an Rapid Ag Test is the speed. It can provide results within minutes. However, Rapid Ag Test may not detect all active infections, as they do not work the same way as RT-PCR test. Rapid Ag Test are very specific for the virus but are not as sensitive as molecular PCR tests. This means that positive results from Rapid Ag Test are highly accurate, but there is a higher chance of false negatives, so negative results do not rule out infection.

ICMR in its testing protocol, has mandated that negative results from an antigen test may need to be confirmed with a PCR test prior to making treatment decisions or to prevent the possible spread of the virus due to a false negative.

# Short cuts has a price to pay, sooner or later

The research team of **Project: Jeevan Raksha** analysed the testing data of one of the state and found the following results:

- **41%** of the samples which had negative results post Rapid Ag Test, turned out to be **COVID POSITIVE** case after carrying out the follow-up test using RT - PCR.
- In one of the Districts having over 50 deaths, **84%** of the samples which was declared as negative by using Rapid Ag Test, turned out to be **COVID Positive** after carrying out the follow-up test using RT - PCR.
- In one of the mega city, **27.5%** of the samples which was declared as negative by using Rapid Ag Test, turned out to be **COVID Positive** after carrying out the follow-up test using RT - PCR.

**Must RT-PCR Test for '-Ve' rapid antigen test samples 'being skipped' - Times of India**

“...In Many cases, confirmation through an RT-PCR Test is being allegedly skipped. Leading to concerns that false negatives may be spreading infection in the community....”

## Current Status of 100K COVID Cases Club of Nations

				COVID Impact Status as on 17 July 2020 (2000 hrs)						
Ranking	Country	Physicians / 10000 Pn	Hospital Beds / 10000 Pn	Population	Tests	Cases	Deceased	Tests / Mn Pop	Cases / Mn Pop	Death / Mn Pop
4	Germany	42	83	83763806	68,84,614	2,01,931	9,157	82,191	2,411	109
15	USA	26	29	330854064	457,18,025	36,99,395	1,41,168	1,38,182	11,181	427
15	UK	28	28	67858826	126,69,634	2,92,552	45,119	1,86,706	4,311	665
25	Spain	41	30	46753443	60,26,446	3,05,935	28,416	1,28,898	6,544	608
26	France	32	65	65262729	26,02,581	1,73,838	30,138	39,879	2,664	462
29	Italy	41	34	60468295	61,03,492	2,43,736	35,017	1,00,937	4,031	579
42	Chile	11	22	19103405	13,51,904	3,23,698	7,290	70,768	16,945	382
49	Russia	40	82	145929848	243,64,568	7,59,203	12,123	1,66,961	5,203	83
59	Turkey	18	27	84267248	41,49,909	2,16,873	5,440	49,247	2,574	65
65	Iran	11	15	83906701	20,73,791	2,69,440	13,791	24,715	3,211	164
79	Brazil	21	22	212442762	49,11,063	20,15,382	76,846	23,117	9,487	362
82	Peru	13	16	32934728	20,03,963	3,41,586	12,615	60,847	10,372	383
152	Pakistan	10	6	220673722	16,76,090	2,59,999	5,475	7,595	1,178	25
36	Saudi Arabia	24	27	34787354	24,94,873	2,45,851	2,407	71,718	7,067	69
135	Bangladesh	14	5	164645344	10,06,751	1,99,357	2,547	6,115	1,211	15
13	Canada	26	27	37733476	33,87,755	1,09,264	8,827	89,781	2,896	234
41	Qatar	NA	12	2807805	4,35,584	1,05,898	153	1,55,133	37,716	54
<b>129</b>	<b>India</b>	<b>8</b>	<b>7</b>	<b>1378937377</b>	<b>130,72,718</b>	<b>10,20,644</b>	<b>25,777</b>	<b>9480</b>	<b>740</b>	<b>19</b>
<b>Total</b>				<b>3070323128</b>	<b>140498177</b>	<b>10678684</b>	<b>462153</b>	<b>45760</b>	<b>3478</b>	<b>151</b>
<b>India's share (%)</b>				<b>45</b>	<b>9</b>	<b>10</b>	<b>6</b>	<b>Average of nations with 100K cases</b>		

Recovery Rate: Global 61%, India 63.5%

Globally, on 23<sup>rd</sup> July 2.75 lacs new cases were added, India's contribution was 48K, 17.5%

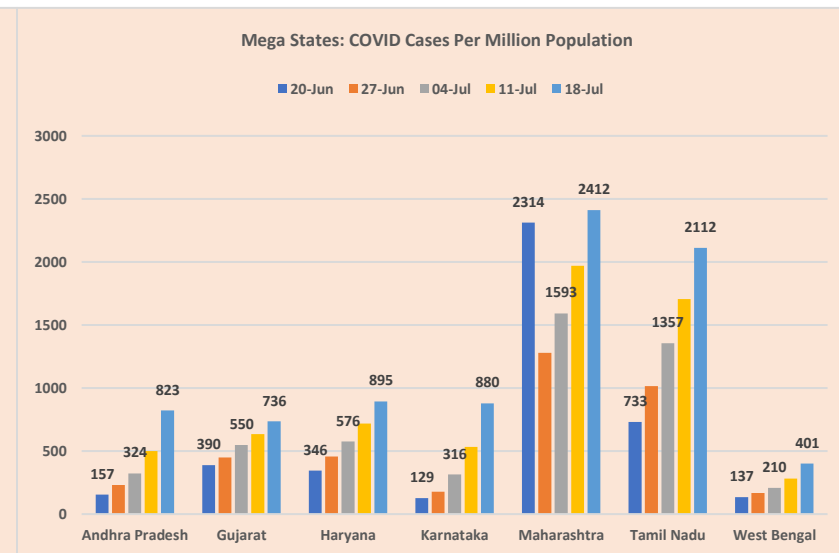
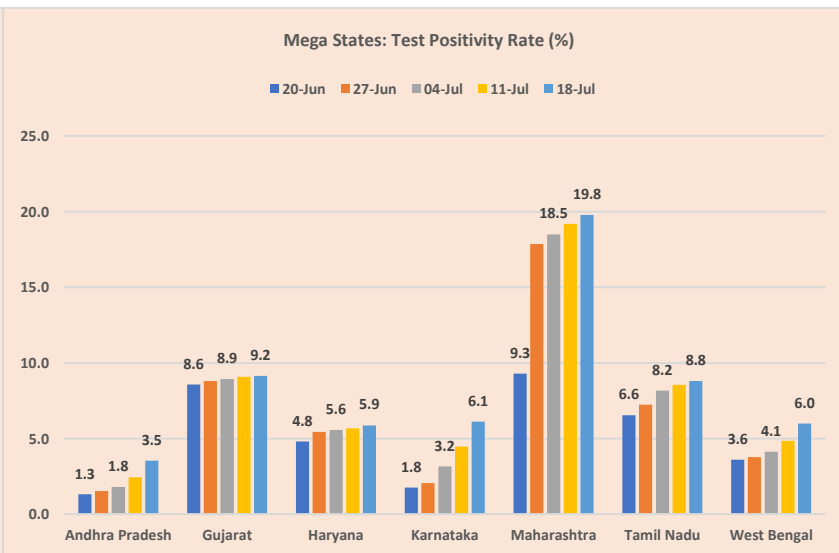
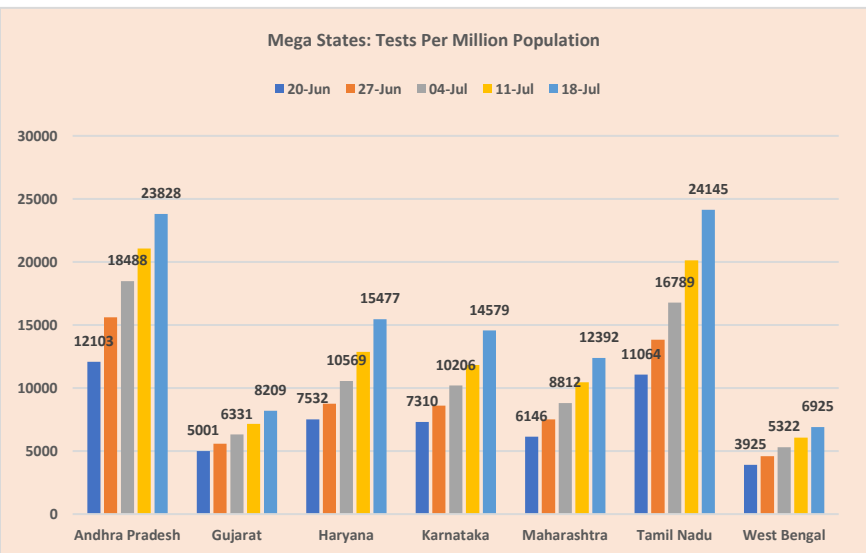


## 150 Days of COVID Management: 12 States: Analysis

- 12 States contributing 86% of COVID cases and 93% of COVID deaths in India:
  - **Mega States** : Andhra Pradesh, Gujarat, Haryana, Karnataka, Maharashtra, Tamil Nadu, West Bengal
  - **EAG States**: Assam, Bihar, Rajasthan, and Uttar Pradesh
  - **National Capital / Union Territory / State**: Delhi

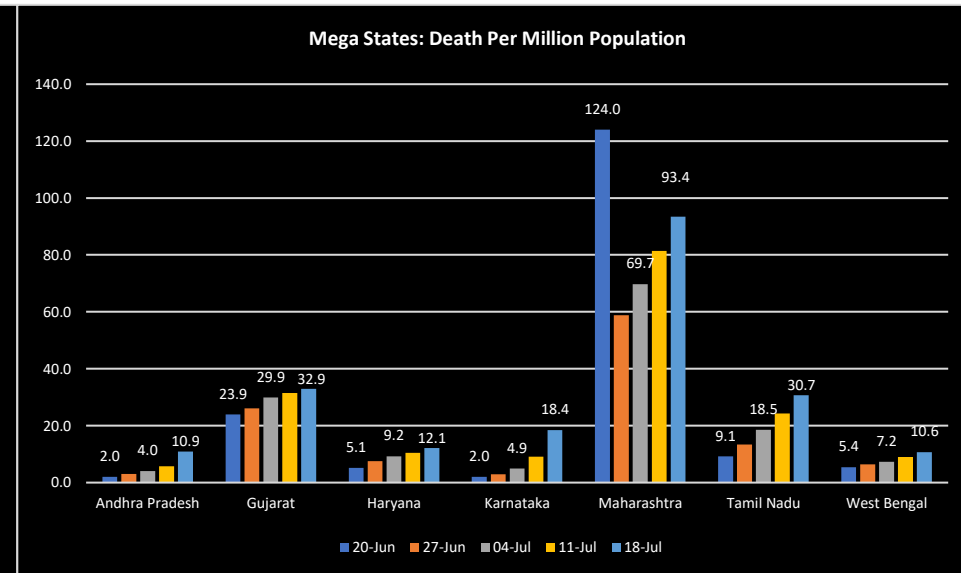
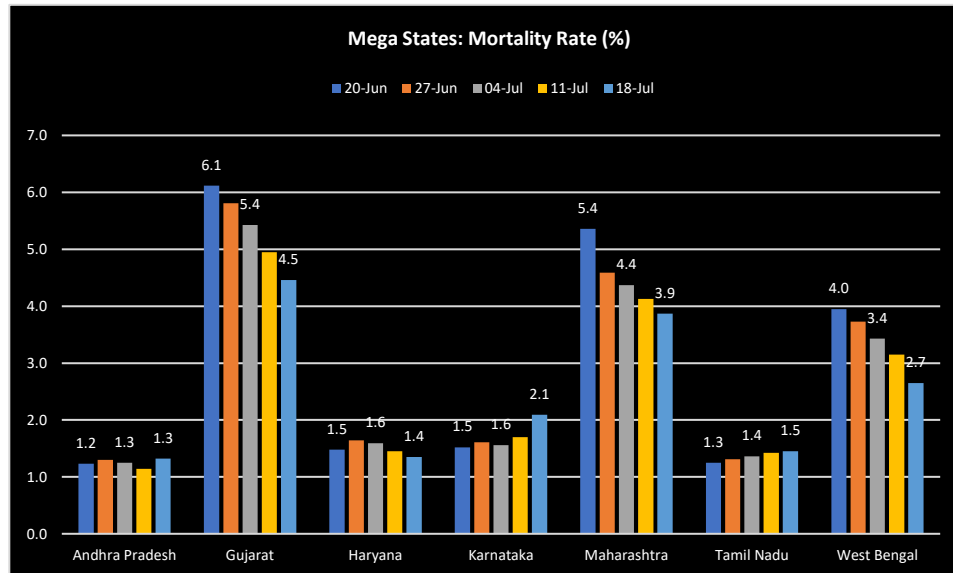
## COVID Testing Trends in Mega States

- Till date India has tested 9480 / Million population, whereas the 18 nations (including India) having over 100K COVID cases have tested 45760 per million population. India's current Test Positivity Rate is 6.9%.
- As on date, **Tamil Nadu** has tested highest number of people in India. It has tested 1.88 Mn people, which indicates 24145 tests per million population.
- **Andhra Pradesh** has the least ratio of Tests / Million Population to Test Positivity. For every 23828 people / Mn tested, 823 people were COVID positive, which works out to 3.5% Positivity rate, below the National rate of 6.9%. Andhra Pradesh is the only state in India to have more than 2,000 Positive COVID cases in all districts of the state.
- **Maharashtra** is the most infected state in India with 19.8% positivity rate.
- **West Bengal** has tested 6925 people per million population, least among mega states and also lower than the national average of 9480 . It has mortality rate of 6%.



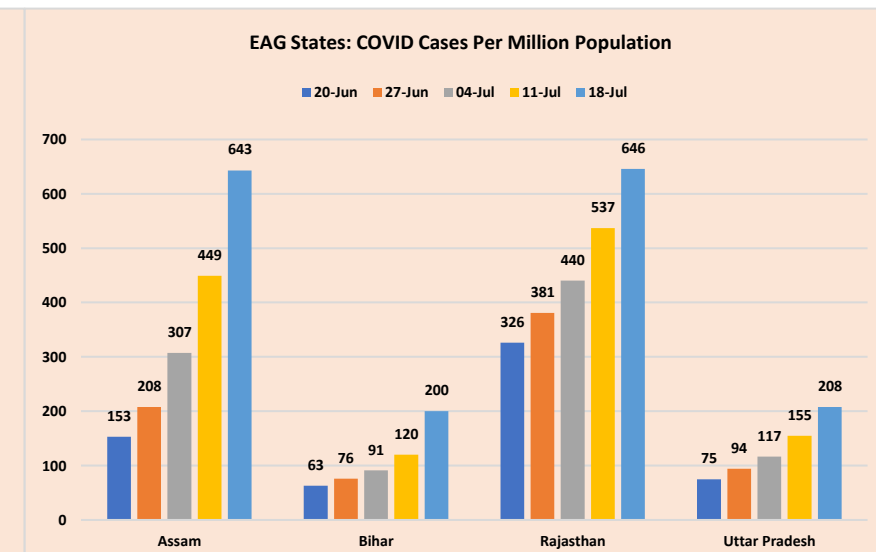
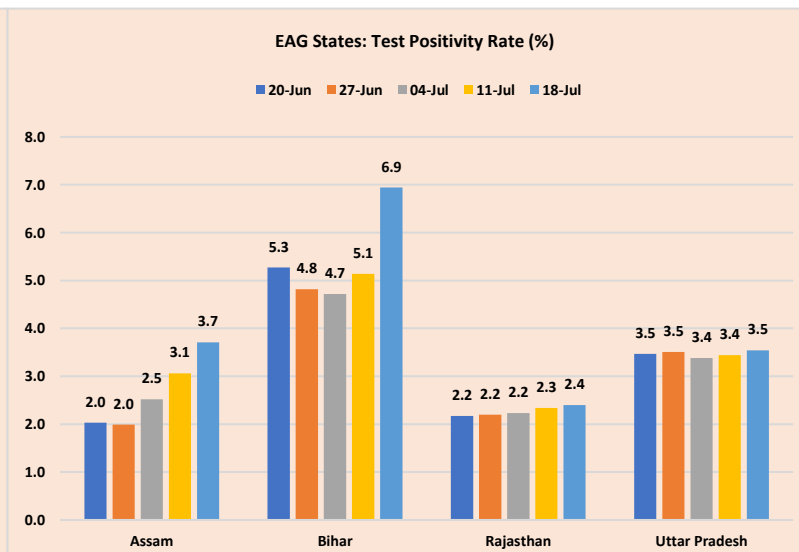
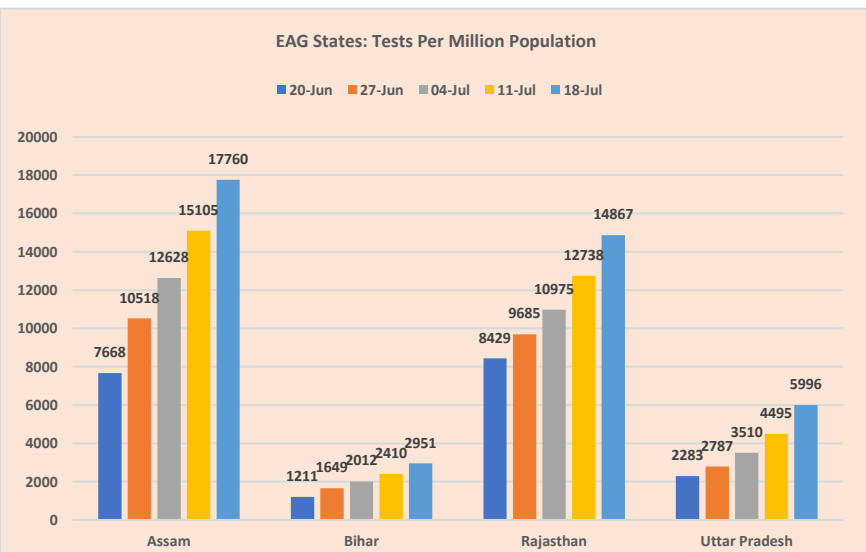
## Mortality Trends in Mega States

- India's current mortality rate is 2.5%. Over the last few weeks there is a drop in mortality rate, this is primarily due to sharp increase in the denominator (number of positive cases). On the other hand, the Death per million population is steadily increasing, which is currently at 20.
- During the last 2 weeks the number of deaths in mega cities have come down, however there is a sharp increase in number of deaths in smaller cities and villages.
- All mega states have witnessed increase in number of deaths per million population criteria. This indicates that the various actions initiated by the administration has limited impact on the reduction of mortality



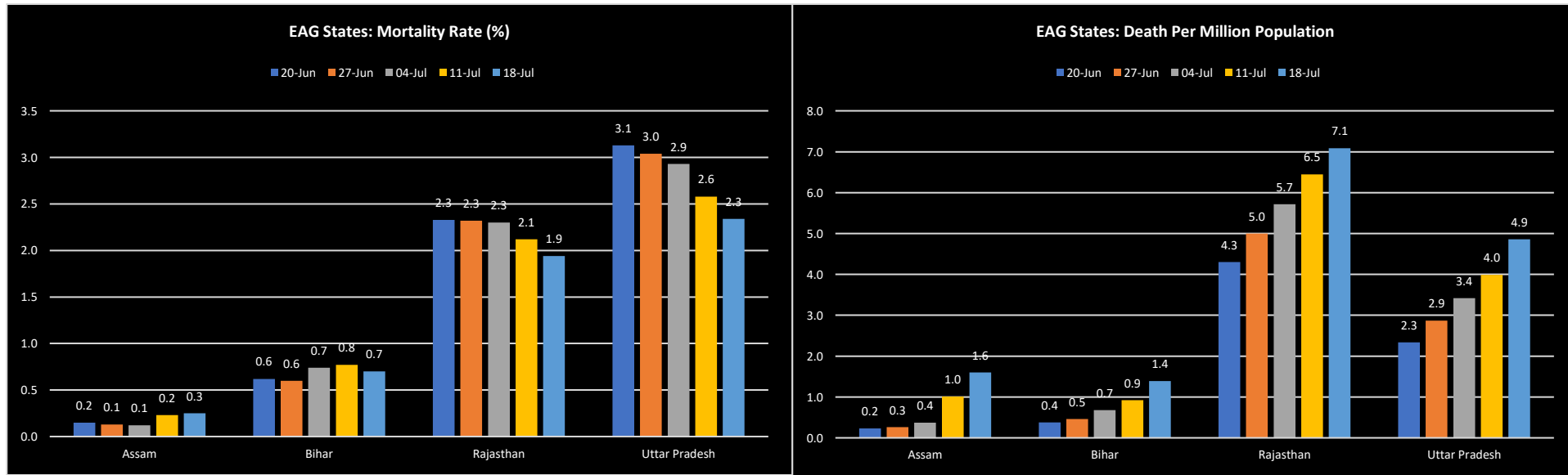
## COVID Testing Trends in EAG States

- **Bihar** has tested 2951 people per million, least among all the states and Union Territories in India. Further, it has Test Positivity rate of 6.9%, highest among all the EAG states.
- In **Uttar Pradesh**, COVID Cases per million population has increased from 75 to 208 in a span of 4 weeks inspite of having least tests per million population of around 6,000. Further delay in increasing the tests could lead to increase in mortality rate due to fast and wide spread of the virus
- **Rajasthan** COVID cases per million has increased 4 times from 153 to 643 inspite of increase in testing from 8400 / Mn population to 14,800. This indicates the wide spread of the virus and also low testing yield



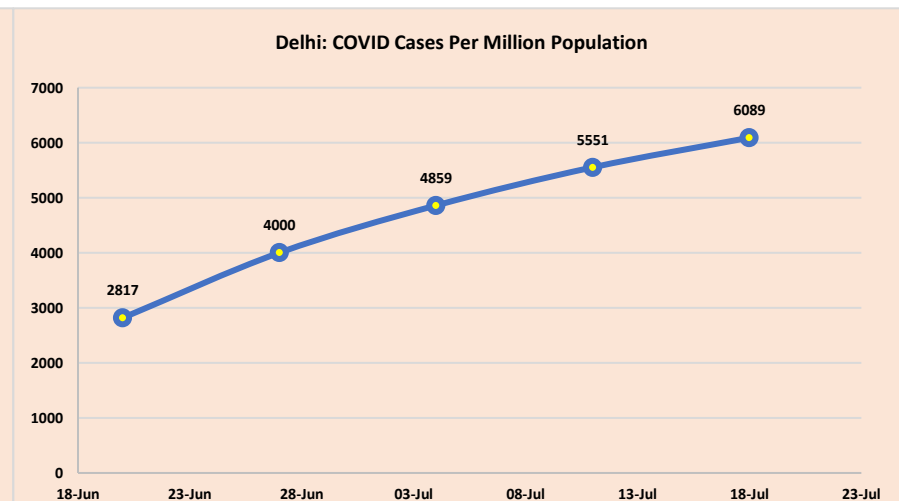
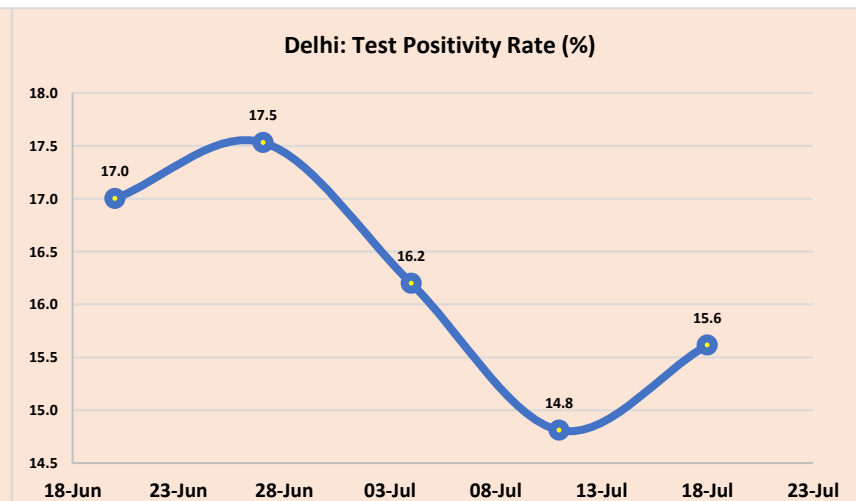
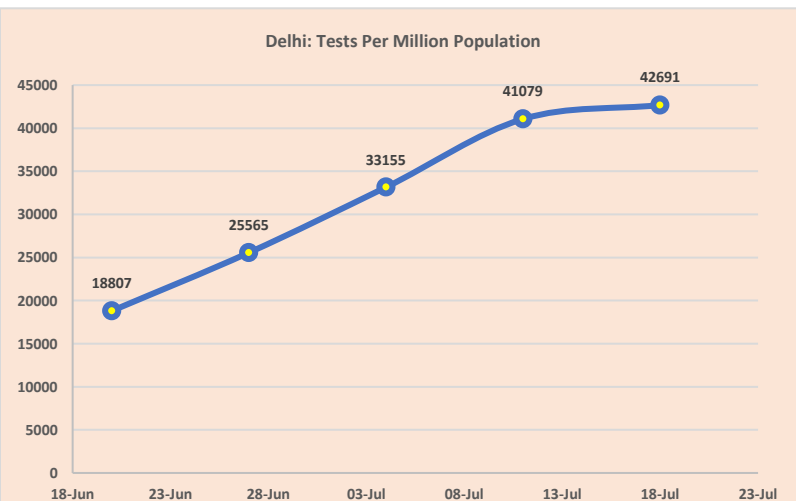
## Mortality Trends in EAG States

- EAG States has the low mortality rate (1.6%) and Deaths per million population (2) when compared to the national average of MR of 2.5% and DPM of 19.
- The Empowered Action Group (EAG) States - Assam, Bihar, Chattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, Uttarakhand, and Uttar Pradesh has highest infant mortality rates in the country. Therefore, efforts need to be taken to ensure the mortality rate continues to reduce further.



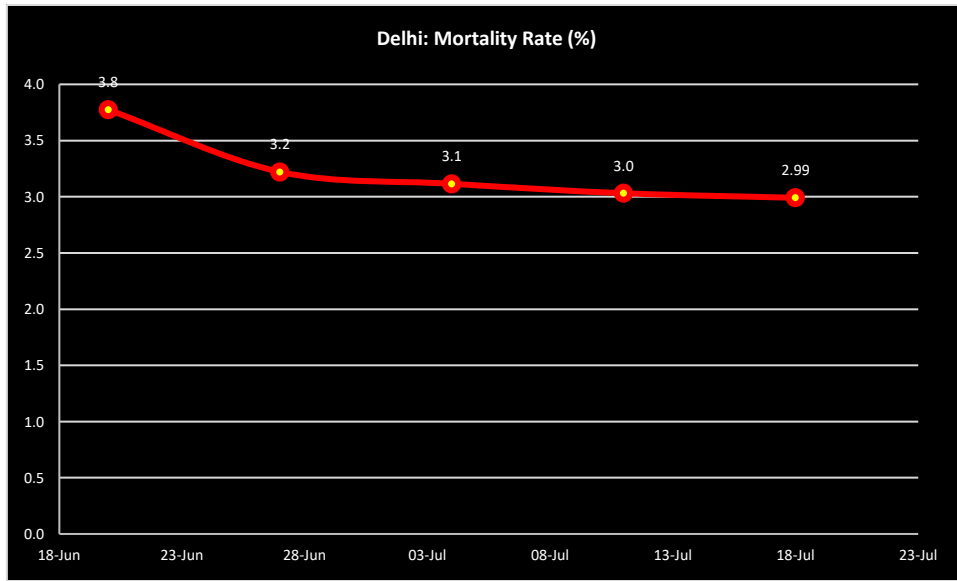
## COVID Testing and Positivity Trends in Delhi

- As Delhi continues to ramp up its testing, the COVID cases per million also continue to increase along with the test positivity rate.
- Delhi is also having highest recovery rate of over 86%, which indicates that the number of COVID cases in mild / very mild category is more.
- 30-day moving average growth rate of active cases is (-)6%. This is also highest among the states / Union Territories.



## COVID Mortality Trends in Delhi

- Death Per Million population has increased from 106 to 182, highest among all the states and union territories in India
- The mortality rate of 3% is higher than the national mortality rate of 2.5%



## Managing COVID in Mega Cities and Rural – Needs different strategy and approach

- Around 80 – 90% of India’s population lives in semi-urban and rural areas which has relatively weaker health infrastructure and system. Over the last 2 weeks number of deaths in mega states indicates that, there are more number of deaths in semi-urban and rural areas than in mega cities such as Mumbai, Chennai, Ahmedabad, Bengaluru, and Kolkata.
- Testing per million population in large number of districts is substantially lower than the national average. This indicates ill-preparedness of large number of district administration to manage the surges of COVID cases.
- Maharashtra has the Test Positivity Rate (TPR) of 19.7%, of which standalone TPR of Mumbai is 23.8% and rest of Maharashtra TPR is 18.2%.

Performance Indicator	Gujarat			Karnataka			Maharashtra			Tamil Nadu			Pan India
	Total	Ahmedabad	Rest of the State	Total	Bengaluru	Rest of the State	Total	Mumbai	Rest of the State	Total	Chennai	Rest of the State	
Test Per Million Population	8209	23163	6288	14579	20103	13346	12392	20641	10753	24145	45981	20563	9480
Test Positive Rate (%)	9.1	14.3	6.6	6.1	12.0	4.1	19.7	23.8	18.2	8.8	16.8	5.9	6.9
COVID Cases Per Million Population	743	3324	412	883	2403	544	2444	4916	1953	2129	7711	1213	778
Mortality Rate (%)	4.5	6.4	2.5	2.1	2.1	2.0	3.9	5.6	3.0	1.5	1.7	1.2	2.5
Death Per Million Population	33	212	10	18	51	11	94	277	58	31	128	15	19
Population Share		11	89		18	82		17	83		14	86	
Population Density (Sq Km)		15669	289		17386	289		33850	335		25754	516	



# EAG STATES ZONE REVIEW

## States:

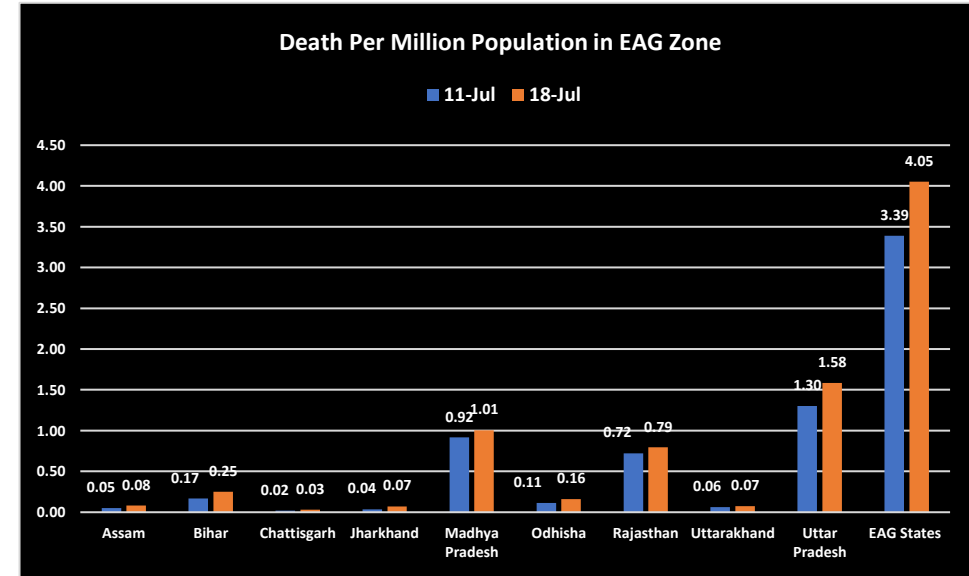
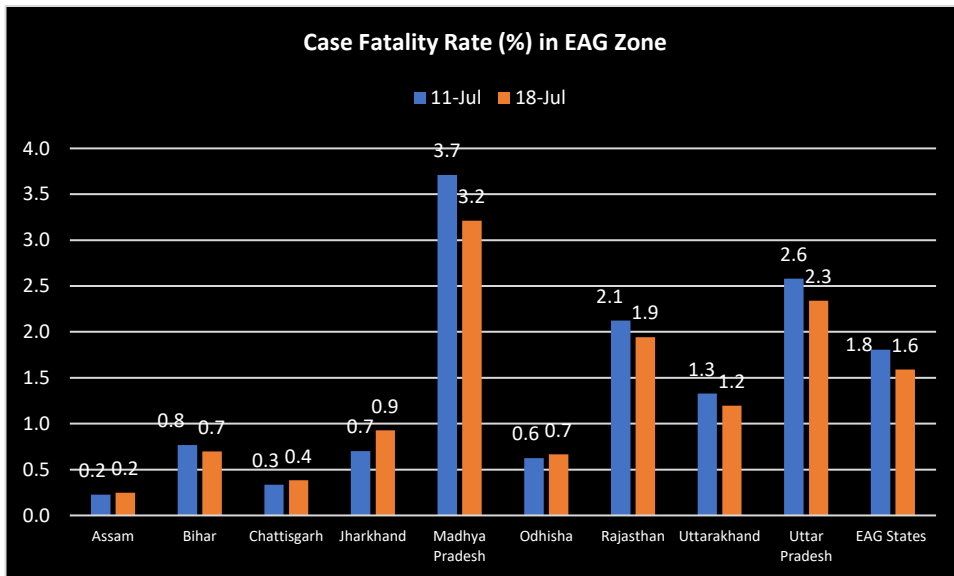
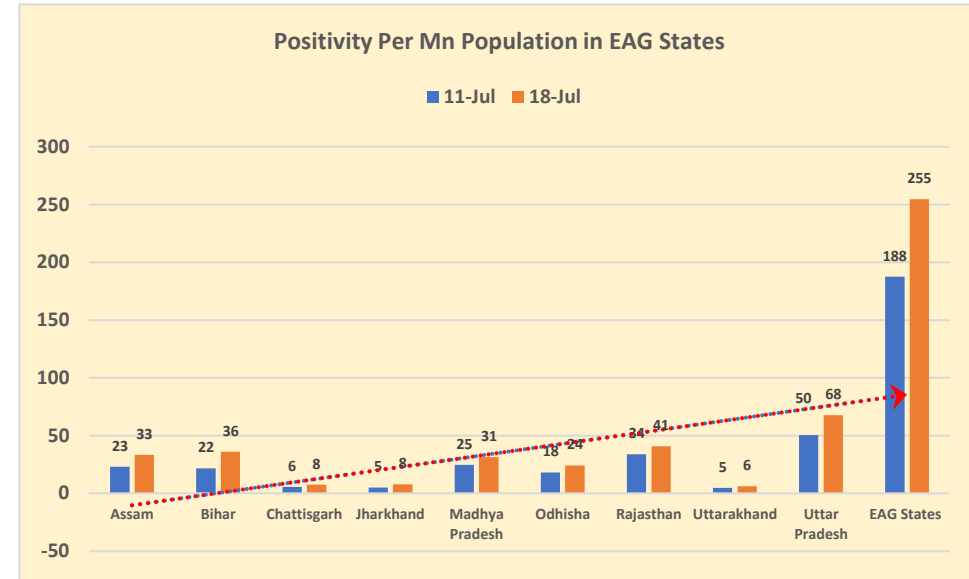
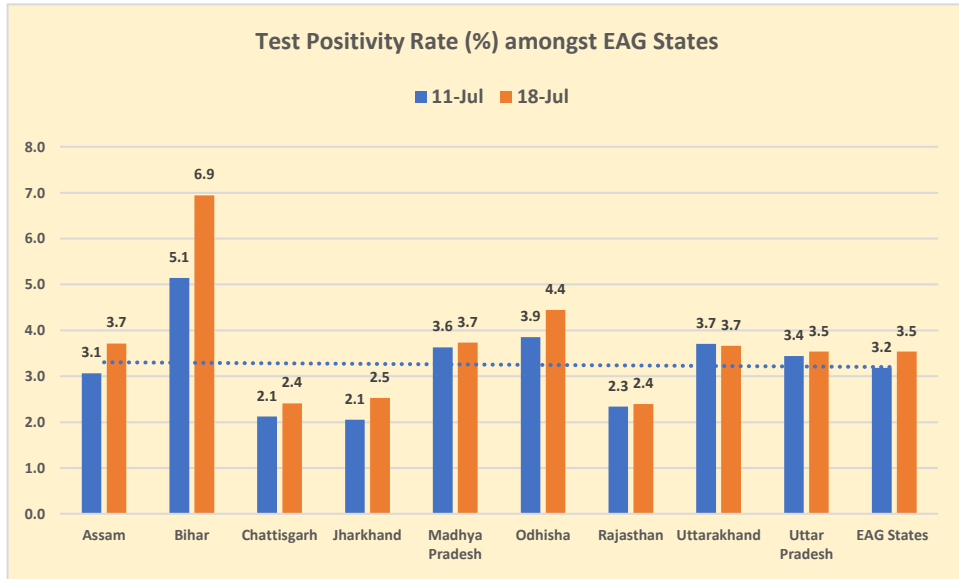
Assam, Bihar, Chattisgarh, Jharkhand, Madhya Pradesh, Odhisha, Rajasthan, Uttarakhand, Uttar Pradesh

## Key Performance indicators:

- 30 day and 90 day moving average growth rate (Positivity and Mortality)
- Testing Efficiency - Test Positivity Rate (TPR)
- Spread of Virus - Test Positivity Per Million (TPM)\*
- Treatment Efficiency - Mortality Rate (MR)
- Impact of Measures: Death Per Million (DPM)\*

\* The sum population total of all mega states is taken in the denominator to calculate the spread in the Zone.

# EAG States: Overview: Positivity and Fatality



# MEGA STATES ZONE REVIEW

## States

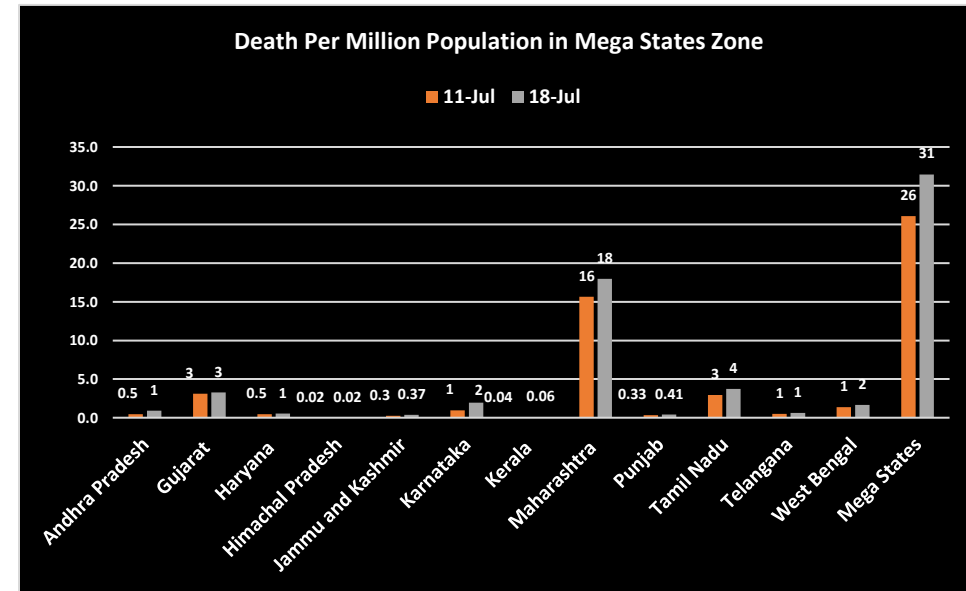
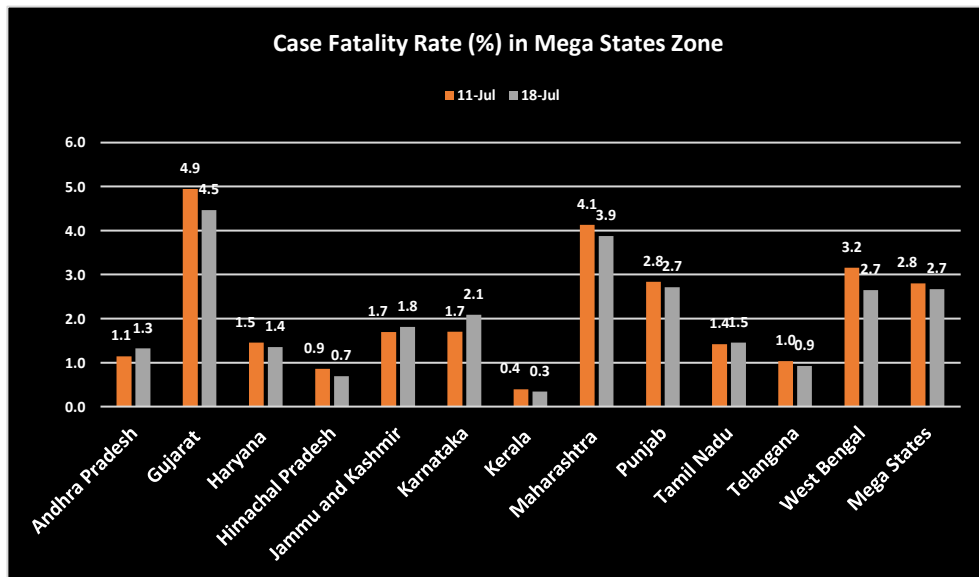
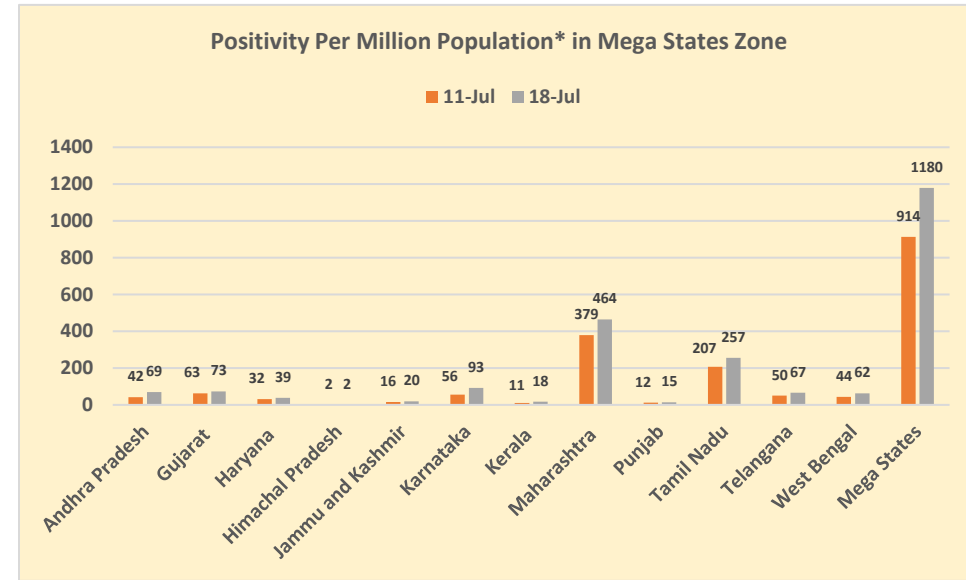
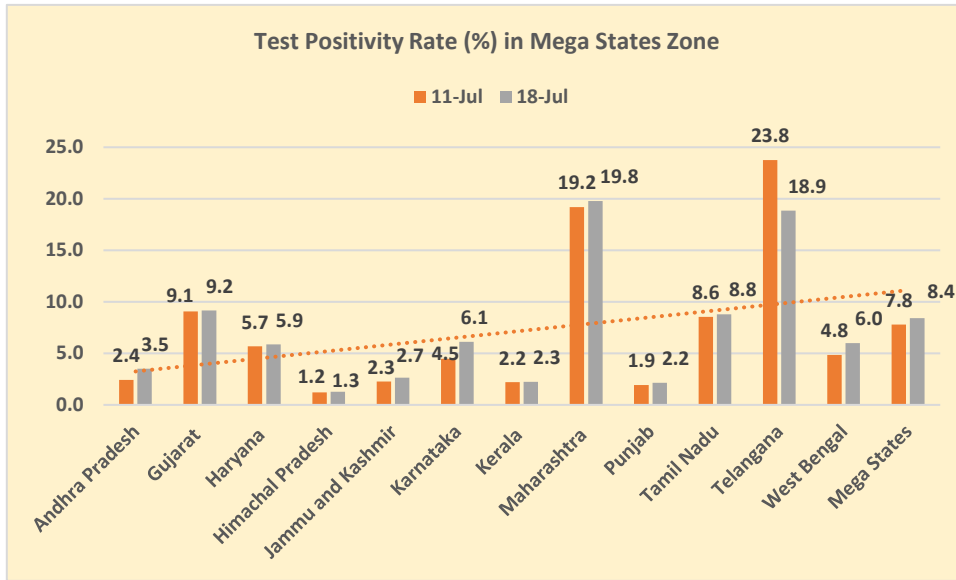
Andhra Pradesh, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Punjab, Tamil Nadu, Telangana, West Bengal

## Key Performance indicators:

- 30 day and 90 day moving average growth rate (Positivity and Mortality)
- Testing Efficiency - Test Positivity Rate (TPR)
- Spread of Virus - Test Positivity Per Million (TPM)\*
- Treatment Efficiency - Mortality Rate (MR)
- Impact of Measures: Death Per Million (DPM)\*

\* The sum population total of all mega states is taken in the denominator to calculate the spread in the Zone.

# Mega States: Overview: Positivity and Fatality



# MICRO STATES ZONE REVIEW

## States

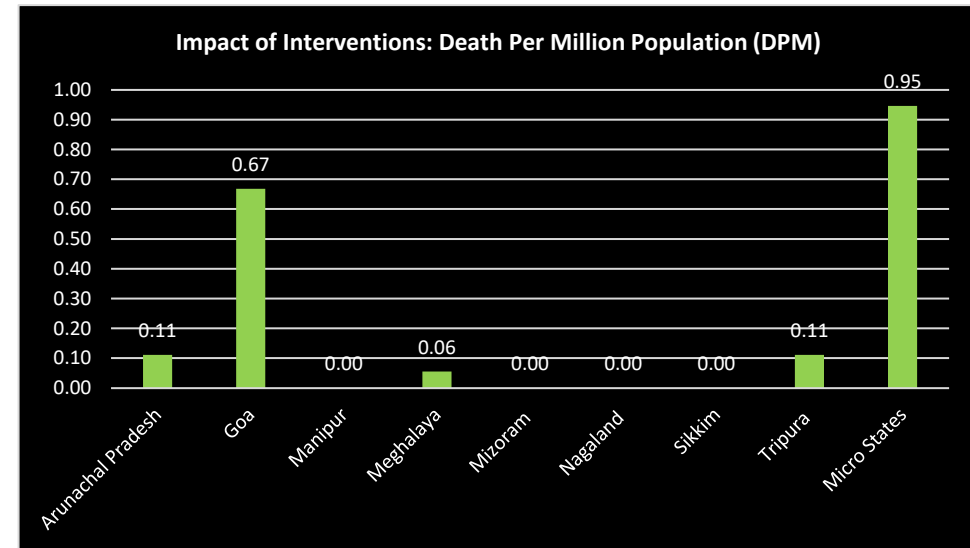
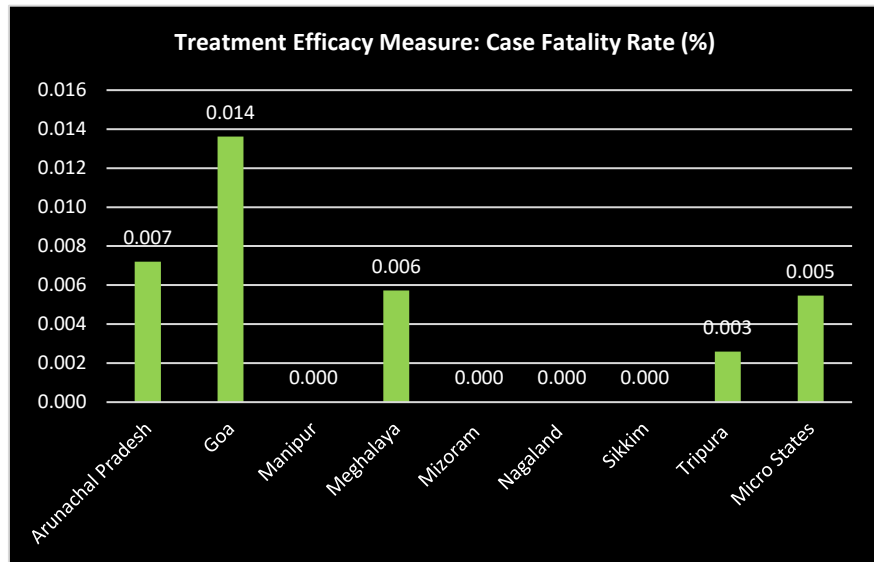
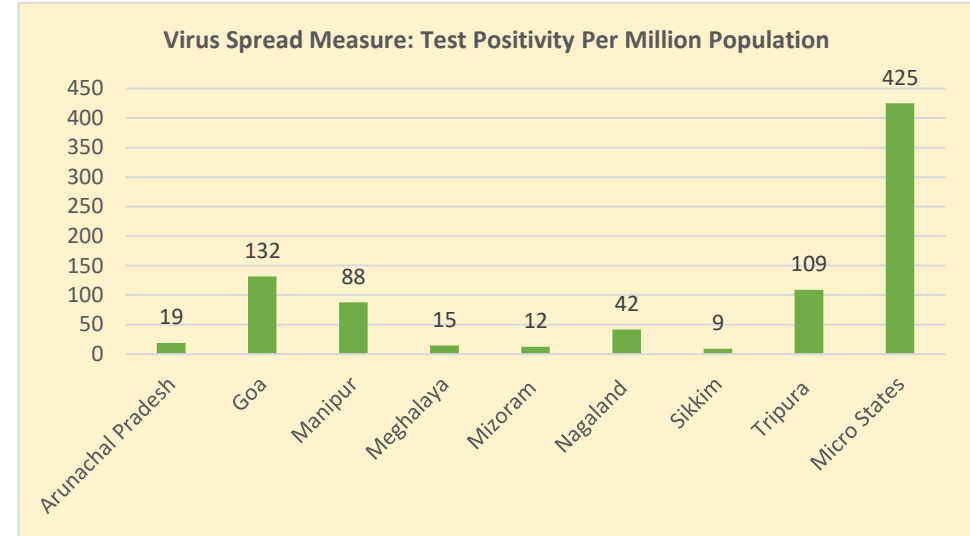
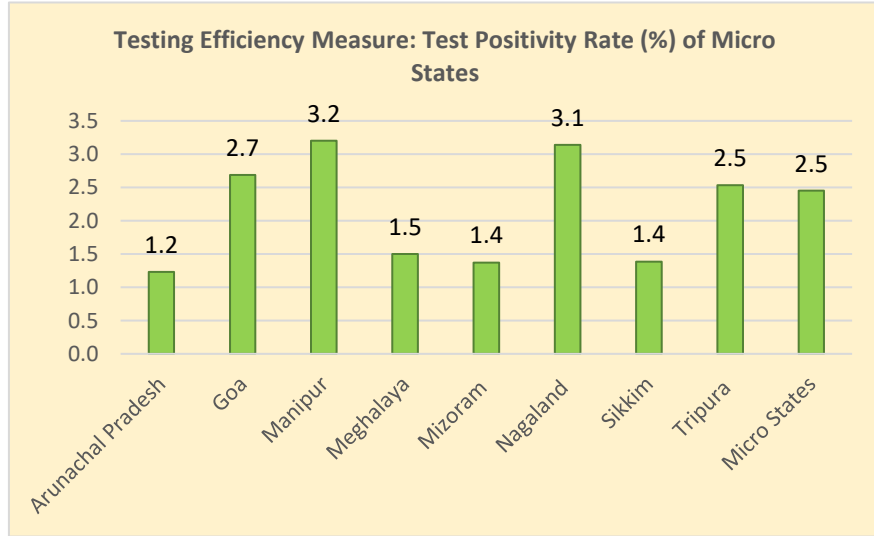
Arunachal Pradesh, Goa, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura

## Key Performance indicators

- 30 day and 90 day moving average growth rate (Positivity and Mortality)
- Testing Efficiency - Test Positivity Rate (TPR)
- Spread of Virus - Test Positivity Per Million (TPM)\*
- Treatment Efficiency - Mortality Rate (MR)
- Impact of Measures: Death Per Million (DPM)\*

\* The sum population total of all mega states is taken in the denominator to calculate the spread in the Zone.

# Micro States: Overview: Positivity and Fatality



# UNION TERRITORIES REVIEW

## Union Territories

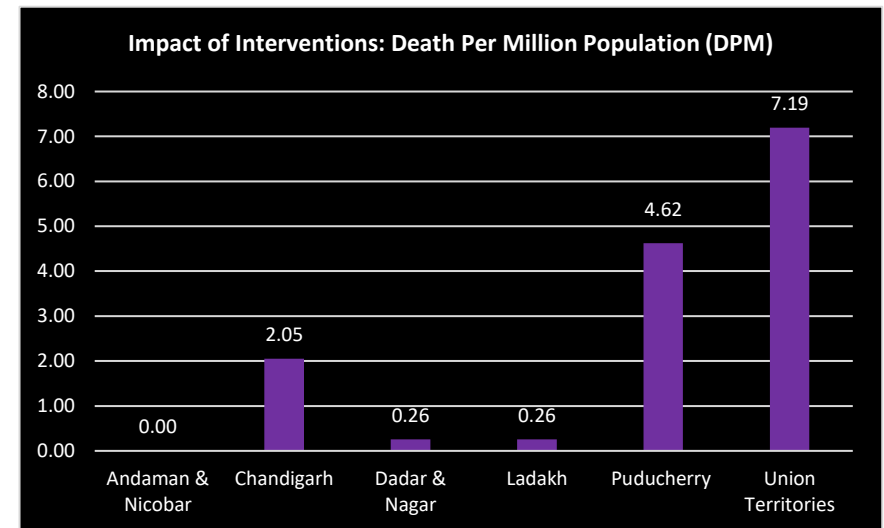
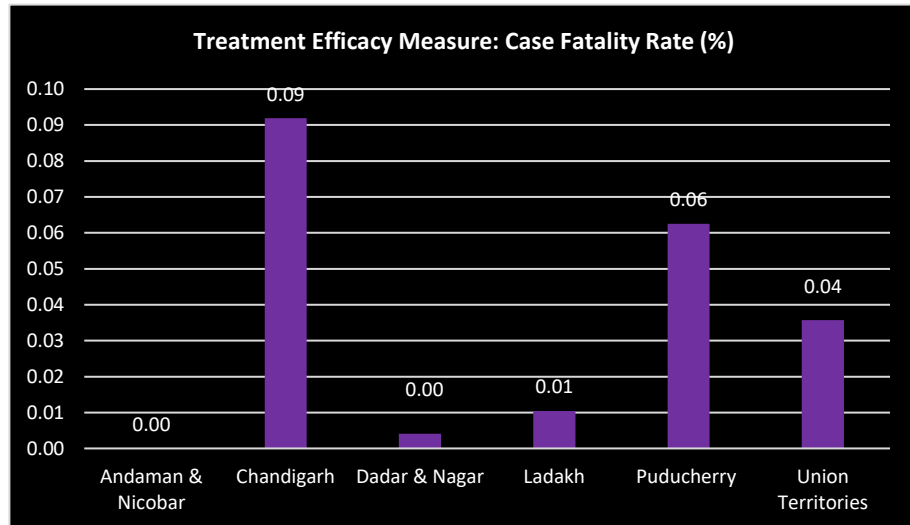
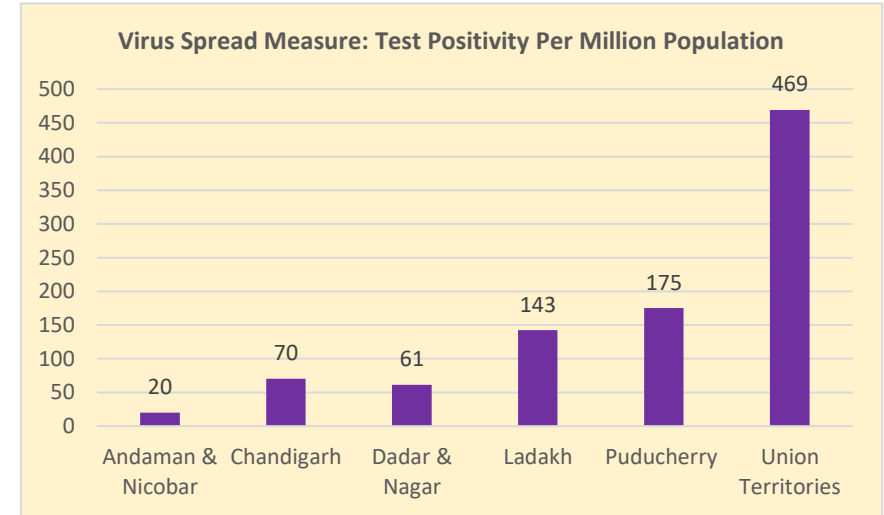
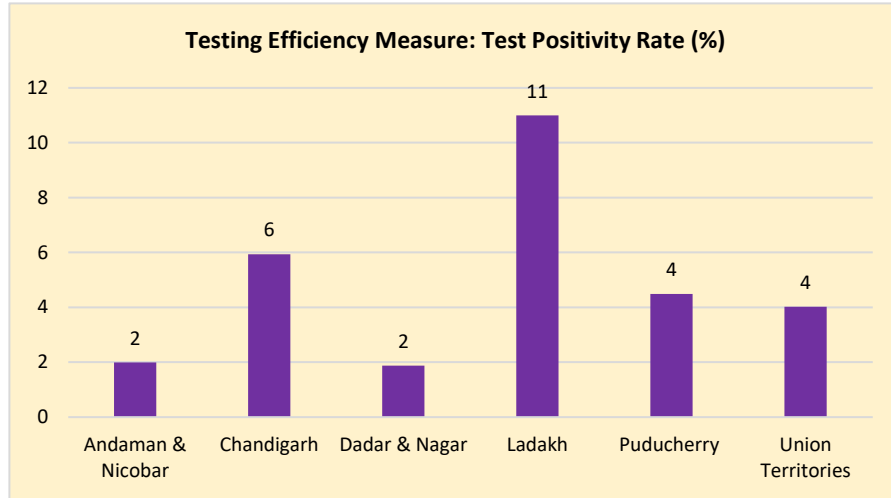
Andaman & Nicobar, Chandigarh, Dadar & Nagar, Ladakh, and Puducherry.  
(Delhi has been presented separately)

## Key Performance indicators

- 30 day and 90 day moving average growth rate (Positivity and Mortality)
- Testing Efficiency - Test Positivity Rate (TPR)
- Spread of Virus - Test Positivity Per Million (TPM)\*
- Treatment Efficiency - Mortality Rate (MR)
- Impact of Measures: Death Per Million (DPM) \*

\* The sum population total of all mega states is taken in the denominator to calculate the spread in the Zone.

# Union Territory: Overview: Positivity and Fatality





# High Positivity Districts

Selection Criteria: District with 10+ COVID Deaths with any one of the following:

1. 300+ Positive cases per million population
2. 7-day moving average growth rate of Positive cases above 30%
3. 30-Day moving average growth rate of positive case above 160%

State	District	Category	4th July	11-Jul	18-Jul
Andhra Pradesh	Anantapur	7-Day-Positivity-Above-30%		51	42
Andhra Pradesh	Anantapur	30-Day-Positivity-Above-160%		301	241
Andhra Pradesh	Anantapur	Positivity / Mn above 300		775	1104
Andhra Pradesh	Chittoor	7-Day-Positivity-Above-30%	55	101	68
Andhra Pradesh	Chittoor	30-Day-Positivity-Above-160%	257	387	420
Andhra Pradesh	Chittoor	Positivity / Mn above 300		601	551
Andhra Pradesh	Chittoor	Positivity / Mn above 300			1008
Andhra Pradesh	East Godavari	Positivity / Mn above 300			1067
Andhra Pradesh	East Godavari	7-Day-Positivity-Above-30%			132
Andhra Pradesh	East Godavari	30-Day-Positivity-Above-160%			482
Andhra Pradesh	Guntur	7-Day-Positivity-Above-30%	51	72	58
Andhra Pradesh	Guntur	30-Day-Positivity-Above-160%	173	286	312
Andhra Pradesh	Guntur	Positivity / Mn above 300			930
Andhra Pradesh	Krishna	Positivity / Mn above 300	372	509	698
Andhra Pradesh	Krishna	7-Day-Positivity-Above-30%			37
Andhra Pradesh	Kurnool	Positivity / Mn above 300	581	782	1402
Andhra Pradesh	Kurnool	7-Day-Positivity-Above-30%			79
Andhra Pradesh	Kurnool	30-Day-Positivity-Above-160%			237
Andhra Pradesh	Prakasam	Positivity / Mn above 300			504
Andhra Pradesh	Prakasam	7-Day-Positivity-Above-30%			65
Andhra Pradesh	Prakasam	30-Day-Positivity-Above-160%			530
Andhra Pradesh	S.P.S. Nellore	Positivity / Mn above 300			673
Andhra Pradesh	S.P.S. Nellore	7-Day-Positivity-Above-30%			94
Andhra Pradesh	S.P.S. Nellore	30-Day-Positivity-Above-160%			256
Andhra Pradesh	Srikakulam	Positivity / Mn above 300			752
Andhra Pradesh	Srikakulam	7-Day-Positivity-Above-30%			139
<b>Andhra Pradesh</b>	<b>Srikakulam</b>	30-Day-Positivity-Above-160%			3181
Andhra Pradesh	Visakhapatnam	Positivity / Mn above 300			427
Andhra Pradesh	Visakhapatnam	7-Day-Positivity-Above-30%			38
Andhra Pradesh	Visakhapatnam	30-Day-Positivity-Above-160%			297
Andhra Pradesh	Vizianagaram	Positivity / Mn above 300			507
<b>Andhra Pradesh</b>	<b>Vizianagaram</b>	7-Day-Positivity-Above-30%			140
Andhra Pradesh	Vizianagaram	30-Day-Positivity-Above-160%			768
Andhra Pradesh	West Godavari	Positivity / Mn above 300			748
Andhra Pradesh	West Godavari	7-Day-Positivity-Above-30%			83
Andhra Pradesh	West Godavari	30-Day-Positivity-Above-160%			266
Andhra Pradesh	Y.S.R. Kadapa	Positivity / Mn above 300			840
Andhra Pradesh	Y.S.R. Kadapa	7-Day-Positivity-Above-30%			43
Andhra Pradesh	Y.S.R. Kadapa	30-Day-Positivity-Above-160%			254

State	District	Category	4th July	11-Jul	18-Jul
Assam	Kamrup Metropolitan	7-Day-Positivity-Above-30%		175	58
Assam	Kamrup Metropolitan	30-Day-Positivity-Above-160%		977	1047
Assam	Kamrup Metropolitan	Positivity / Mn above 300		5298	8386

State	District	Category	4th July	11-Jul	18-Jul
Bihar	Bhagalpur	7-Day-Positivity-Above-30%		61	67
Bihar	Bhagalpur	30-Day-Positivity-Above-160%		161	248
Bihar	Bhagalpur	Positivity / Mn above 300		301	504
Bihar	Patna	Positivity / Mn above 300			613
<b>Bihar</b>	<b>Patna</b>	7-Day-Positivity-Above-30%			112
Bihar	Patna	30-Day-Positivity-Above-160%			535

State	District	Category	4th July	11-Jul	18-Jul
Gujarat	Banaskantha	7-Day-Positivity-Above-30%		47	32
Gujarat	Bharuch	7-Day-Positivity-Above-30%	37	43	40
Gujarat	Bharuch	30-Day-Positivity-Above-160%	260	195	174
Gujarat	Bharuch	Positivity / Mn above 300			362
Gujarat	Bhavnagar	Positivity / Mn above 300			305
Gujarat	Bhavnagar	7-Day-Positivity-Above-30%			58
Gujarat	Bhavnagar	30-Day-Positivity-Above-160%			266
Gujarat	Gandhinagar	Positivity / Mn above 300	509	621	762
Gujarat	Kheda	7-Day-Positivity-Above-30%	41	45	46
Gujarat	Kheda	30-Day-Positivity-Above-160%			199
Gujarat	Rajkot	7-Day-Positivity-Above-30%	53	66	53
Gujarat	Rajkot	30-Day-Positivity-Above-160%		236	289
Gujarat	Rajkot	Positivity / Mn above 300		473	725
Gujarat	Surat	Test Positivity Rate above 10%		13	14
Gujarat	Surat	Positivity / Mn above 300	940	1246	1547
Gujarat	Surendranagar	7-Day-Positivity-Above-30%	56	45	59
Gujarat	Surendranagar	30-Day-Positivity-Above-160%	182	214	260
Gujarat	Vadodara	Test Positivity Rate above 10%		11	11
Gujarat	Vadodara	Positivity / Mn above 300	1374	1634	1925

State	District	Category	4th July	11-Jul	18-Jul
Haryana	Faridabad	Test Positivity Rate above 10%		16	16
Haryana	Faridabad	Positivity / Mn above 300	2411	2872	3509
Haryana	Gurgaon	Test Positivity Rate above 10%		12	10
Haryana	Gurgaon	Positivity / Mn above 300	3849	4456	5014
Haryana	Panipat	Positivity / Mn above 300			422
Haryana	Panipat	7-Day-Positivity-Above-30%			38
Haryana	Panipat	30-Day-Positivity-Above-160%			207
Haryana	Rohtak	Positivity / Mn above 300		847	1069
Haryana	Sonipat	Positivity / Mn above 300	1011	1302	1617

State	District	Category	4th July	11-Jul	18-Jul
Jammu & Kashmir	Anantnag	Positivity / Mn above 300	665	724	957
Jammu & Kashmir	Anantnag	7-Day-Positivity-Above-30%			32
Jammu & Kashmir	Baramulla	Positivity / Mn above 300	998	1278	1515
Jammu & Kashmir	Budgam	Positivity / Mn above 300		706	994
Jammu & Kashmir	Budgam	7-Day-Positivity-Above-30%			41
Jammu & Kashmir	Kulgam	Positivity / Mn above 300	2012	2323	2686
Jammu & Kashmir	Kupwara	Positivity / Mn above 300			957
Jammu & Kashmir	Pulwama	Positivity / Mn above 300			1084
Jammu & Kashmir	Pulwama	7-Day-Positivity-Above-30%			31
Jammu & Kashmir	Shopiyan	Positivity / Mn above 300	3185	3336	4064
Jammu & Kashmir	Srinagar	7-Day-Positivity-Above-30%		48	62
Jammu & Kashmir	Srinagar	Positivity / Mn above 300	859	1270	2056
Jammu & Kashmir	Srinagar	30-Day-Positivity-Above-160%			209

State	District	Category	4th July	11-Jul	18-Jul
Karnataka	Bagalkote	Positivity / Mn above 300			333
Karnataka	Bagalkote	7-Day-Positivity-Above-30%			60
Karnataka	Bagalkote	30-Day-Positivity-Above-160%			286
Karnataka	Ballari	7-Day-Positivity-Above-30%	84	40	45
Karnataka	Ballari	30-Day-Positivity-Above-160%	545	303	276
Karnataka	Ballari	Positivity / Mn above 300	471	660	960
Karnataka	Ballari	Test Positivity Rate above 10%			12
Karnataka	Belagavi	7-Day-Positivity-Above-30%			98
Karnataka	Belagavi	30-Day-Positivity-Above-160%			191
Karnataka	Bidar	Positivity / Mn above 300	426	573	782
Karnataka	Bidar	7-Day-Positivity-Above-30%			36
Karnataka	Chikkaballapura	7-Day-Positivity-Above-30%		49	94
Karnataka	Chikkaballapura	Positivity / Mn above 300			562
Karnataka	Chikkaballapura	30-Day-Positivity-Above-160%			285
Karnataka	Dakshina Kannada	7-Day-Positivity-Above-30%	91	86	63
Karnataka	Dakshina Kannada	30-Day-Positivity-Above-160%	313	385	480
Karnataka	Dakshina Kannada	Positivity / Mn above 300	520	970	1576
Karnataka	Dakshina Kannada	Test Positivity Rate above 10%			12
Karnataka	Davanagere	7-Day-Positivity-Above-30%		50	44
Karnataka	Davanagere	Positivity / Mn above 300			383
Karnataka	Dharwad	Positivity / Mn above 300			1039
Karnataka	Dharwad	7-Day-Positivity-Above-30%			100
Karnataka	Dharwad	30-Day-Positivity-Above-160%			555
Karnataka	Gadag	Positivity / Mn above 300			521
Karnataka	Gadag	7-Day-Positivity-Above-30%			84
Karnataka	Gadag	30-Day-Positivity-Above-160%			296
Karnataka	Hassan	Positivity / Mn above 300			474
Karnataka	Kalaburagi	Positivity / Mn above 300	622	789	1042
Karnataka	Kalaburagi	7-Day-Positivity-Above-30%			32
Karnataka	Mysuru	7-Day-Positivity-Above-30%		255	96
Karnataka	Mysuru	30-Day-Positivity-Above-160%		419	544
Karnataka	Mysuru	Positivity / Mn above 300			504
Karnataka	Raichur	Positivity / Mn above 300			500
Karnataka	Raichur	7-Day-Positivity-Above-30%			44
Karnataka	Shivamogga	Positivity / Mn above 300			416
Karnataka	Shivamogga	7-Day-Positivity-Above-30%			80
Karnataka	Shivamogga	30-Day-Positivity-Above-160%			413
Karnataka	Tumakuru	7-Day-Positivity-Above-30%			53
Karnataka	Tumakuru	30-Day-Positivity-Above-160%			755
Karnataka	Uttara Kannada	Positivity / Mn above 300			707
Karnataka	Uttara Kannada	7-Day-Positivity-Above-30%			74
Karnataka	Uttara Kannada	30-Day-Positivity-Above-160%			481
Karnataka	Vijayapura	7-Day-Positivity-Above-30%		50	87
Karnataka	Vijayapura	30-Day-Positivity-Above-160%		207	325
Karnataka	Vijayapura	Positivity / Mn above 300		348	649

State	District	Category	4th July	11-Jul	18-Jul
Madhya Pradesh	Bhopal	Positivity / Mn above 300	1259	1437	1723
Madhya Pradesh	Burhanpur	Positivity / Mn above 300	534	556	577
Madhya Pradesh	Indore	Positivity / Mn above 300	1468	1580	1802
<b>Madhya Pradesh</b>	Jabalpur	Positivity / Mn above 300			305
Madhya Pradesh	Jabalpur	7-Day-Positivity-Above-30%			45
Madhya Pradesh	Khandwa	Positivity / Mn above 300			385
<b>Madhya Pradesh</b>	<b>Khargone</b>	7-Day-Positivity-Above-30%			33
Madhya Pradesh	Ujjain	Positivity / Mn above 300	435	443	480

State	District	Category	4th July	11-Jul	18-Jul
Maharashtra	Ahmednagar	Test Positivity Rate above 10%		12	13
Maharashtra	Ahmednagar	30-Day-Positivity-Above-160%		169	301
Maharashtra	Ahmednagar	7-Day-Positivity-Above-30%			74
Maharashtra	Akola	Positivity / Mn above 300	887	990	1113
Maharashtra	Amravati	Positivity / Mn above 300			390
Maharashtra	Amravati	7-Day-Positivity-Above-30%			42
Maharashtra	Aurangabad	Test Positivity Rate above 10%		65	80
Maharashtra	Aurangabad	Positivity / Mn above 300	1694	2078	2555
Maharashtra	Dhule	Test Positivity Rate above 10%		14	17
Maharashtra	Dhule	30-Day-Positivity-Above-160%	249	197	174
Maharashtra	Jalgaon	Test Positivity Rate above 10%		19	27
Maharashtra	Jalgaon	Positivity / Mn above 300	952	1244	1694
Maharashtra	Jalgaon	7-Day-Positivity-Above-30%			36
Maharashtra	Jalna	Test Positivity Rate above 10%		14	16
Maharashtra	Jalna	30-Day-Positivity-Above-160%	165	169	211
Maharashtra	Jalna	Positivity / Mn above 300	349	449	663
Maharashtra	Jalna	7-Day-Positivity-Above-30%			48
Maharashtra	Kolhapur	Positivity / Mn above 300			481
Maharashtra	Kolhapur	7-Day-Positivity-Above-30%			76
Maharashtra	Latur	Positivity / Mn above 300			414
Maharashtra	Latur	7-Day-Positivity-Above-30%			67
Maharashtra	Latur	30-Day-Positivity-Above-160%			296
Maharashtra	Nagpur	Positivity / Mn above 300	359	410	534
Maharashtra	Nanded	7-Day-Positivity-Above-30%			47
Maharashtra	Nandurbar	Test Positivity Rate above 10%			13
Maharashtra	Nandurbar	7-Day-Positivity-Above-30%			50
Maharashtra	Nashik	Test Positivity Rate above 10%		24	27
Maharashtra	Nashik	Positivity / Mn above 300	808	1078	1468
Maharashtra	Nashik	7-Day-Positivity-Above-30%			36
Maharashtra	Nashik	30-Day-Positivity-Above-160%			161

State	District	Category	4th July	11-Jul	18-Jul
Maharashtra	Osmanabad	7-Day-Positivity-Above-30%			45
Maharashtra	Other States	7-Day-Positivity-Above-30%		58	42
Maharashtra	Palghar	Test Positivity Rate above 10%		18	19
Maharashtra	Palghar	Positivity / Mn above 300			3868
Maharashtra	Pune	Test Positivity Rate above 10%		19	25
Maharashtra	Pune	Positivity / Mn above 300	2859	3736	5470
Maharashtra	Pune	7-Day-Positivity-Above-30%			46
Maharashtra	Pune	30-Day-Positivity-Above-160%			2571
Maharashtra	Raigad	Test Positivity Rate above 10%		114	278
Maharashtra	Raigad	Positivity / Mn above 300			4115
Maharashtra	Raigad	7-Day-Positivity-Above-30%			42
Maharashtra	Raigad	30-Day-Positivity-Above-160%			234
Maharashtra	Ratnagiri	Positivity / Mn above 300	433	515	697
Maharashtra	Ratnagiri	7-Day-Positivity-Above-30%			35
Maharashtra	Sangli	Positivity / Mn above 300			308
Maharashtra	Sangli	7-Day-Positivity-Above-30%			58
Maharashtra	Sangli	30-Day-Positivity-Above-160%			169
Maharashtra	Satara	Test Positivity Rate above 10%		11	16
Maharashtra	Satara	Positivity / Mn above 300	424	528	750
Maharashtra	Satara	7-Day-Positivity-Above-30%			42
Maharashtra	Solapur	Test Positivity Rate above 10%		18	20
Maharashtra	Solapur	Positivity / Mn above 300	719	833	1232
Maharashtra	Solapur	7-Day-Positivity-Above-30%			48
Maharashtra	Thane	Test Positivity Rate above 10%		39	42
Maharashtra	Thane	Positivity / Mn above 300	4144	5166	6626



State	District	Category	4th July	11-Jul	18-Jul
Odisha	Ganjam	7-Day-Positivity-Above-30%	73	76	45
Odisha	Ganjam	30-Day-Positivity-Above-160%	205	326	342
Odisha	Ganjam	Positivity / Mn above 300	585	1030	1496
Odisha	Khordha	7-Day-Positivity-Above-30%		30	52
Odisha	Khordha	Positivity / Mn above 300		547	828

State	District	Category	4th July	11-Jul	18-Jul
Punjab	Amritsar	Positivity / Mn above 300	380	418	492
Punjab	Jalandhar	7-Day-Positivity-Above-30%		42	36
Punjab	Jalandhar	Positivity / Mn above 300	380	541	737
Punjab	Ludhiana	Positivity / Mn above 300			505
Punjab	Ludhiana	7-Day-Positivity-Above-30%			34
Punjab	Patiala	7-Day-Positivity-Above-30%		59	56
Punjab	Patiala	30-Day-Positivity-Above-160%		173	220
Punjab	Patiala	Positivity / Mn above 300			464
Punjab	S.A.S. Nagar	Positivity / Mn above 300			523
Punjab	S.A.S. Nagar	7-Day-Positivity-Above-30%			41
Punjab	Sangrur	Positivity / Mn above 300	318	380	436

State	District	Category	4th July	11-Jul	18-Jul
Rajasthan	Ajmer	Positivity / Mn above 300			394
Rajasthan	Ajmer	7-Day-Positivity-Above-30%			40
Rajasthan	Bharatpur	Positivity / Mn above 300	681	767	830
Rajasthan	Bikaner	7-Day-Positivity-Above-30%	78	98	57
Rajasthan	Bikaner	30-Day-Positivity-Above-160%	260	356	453
Rajasthan	Bikaner	Positivity / Mn above 300		365	573
Rajasthan	Dholpur	Positivity / Mn above 300	613	679	752
Rajasthan	Jaipur	Positivity / Mn above 300	525	582	646
Rajasthan	Jodhpur	Positivity / Mn above 300	800	993	1228
Rajasthan	Kota	Positivity / Mn above 300	373	398	505
Rajasthan	Nagaur	Positivity / Mn above 300			322
Rajasthan	Pali	Positivity / Mn above 300		705	905

Zone	State	District	Category	4th July	11-Jul	18-Jul
Mega State	Tamil Nadu	Chengalpattu	Positivity / Mn above 300	2486	3079	3661
Mega State	Tamil Nadu	Chengalpattu	Test Positivity Rate above 10%			47
Mega State	Tamil Nadu	Coimbatore	7-Day-Positivity-Above-30%			67
Mega State	Tamil Nadu	Coimbatore	30-Day-Positivity-Above-160%			345
Mega State	Tamil Nadu	Dindigul	Test Positivity Rate above 10%			15
Mega State	Tamil Nadu	Dindigul	Positivity / Mn above 300			677
Mega State	Tamil Nadu	Dindigul	7-Day-Positivity-Above-30%			94
Mega State	Tamil Nadu	Dindigul	30-Day-Positivity-Above-160%			296
Mega State	Tamil Nadu	Kallakurichi	Test Positivity Rate above 10%			19
Mega State	Tamil Nadu	Kallakurichi	Positivity / Mn above 300			1298
Mega State	Tamil Nadu	Kallakurichi	30-Day-Positivity-Above-160%			296
Mega State	Tamil Nadu	Kancheepuram	30-Day-Positivity-Above-160%	258	194	169
Mega State	Tamil Nadu	Kancheepuram	Positivity / Mn above 300	601	805	1130
Mega State	Tamil Nadu	Kancheepuram	Test Positivity Rate above 10%			35
Mega State	Tamil Nadu	Kancheepuram	7-Day-Positivity-Above-30%			40
Mega State	Tamil Nadu	Kanyakumari	Positivity / Mn above 300			1169
Mega State	Tamil Nadu	Kanyakumari	7-Day-Positivity-Above-30%			82
Mega State	Tamil Nadu	Kanyakumari	30-Day-Positivity-Above-160%			619
Mega State	Tamil Nadu	Madurai	7-Day-Positivity-Above-30%	122	52	40
Mega State	Tamil Nadu	Madurai	30-Day-Positivity-Above-160%	823	805	372
Mega State	Tamil Nadu	Madurai	Positivity / Mn above 300	3026	4613	6446
Mega State	Tamil Nadu	Madurai	Test Positivity Rate above 10%			35
Mega State	Tamil Nadu	Pudukkottai	Positivity / Mn above 300			581
Mega State	Tamil Nadu	Pudukkottai	7-Day-Positivity-Above-30%			65
Mega State	Tamil Nadu	Pudukkottai	30-Day-Positivity-Above-160%			618

Zone	State	District	Category	4th July	11-Jul	18-Jul
Mega State	Tamil Nadu	Ramanathapuram	30-Day-Positivity-Above-160%	857	559	257
Mega State	Tamil Nadu	Ramanathapuram	Positivity / Mn above 300	955	1311	1711
Mega State	Tamil Nadu	Ramanathapuram	7-Day-Positivity-Above-30%			31
Mega State	Tamil Nadu	Ranipet	30-Day-Positivity-Above-160%		213	181
Mega State	Tamil Nadu	Ranipet	Positivity / Mn above 300		1209	1671
Mega State	Tamil Nadu	Ranipet	7-Day-Positivity-Above-30%			38
Mega State	Tamil Nadu	Salem	Positivity / Mn above 300			642
Mega State	Tamil Nadu	Salem	30-Day-Positivity-Above-160%			270
Mega State	Tamil Nadu	Sivaganga	7-Day-Positivity-Above-30%		85	83
Mega State	Tamil Nadu	Sivaganga	Positivity / Mn above 300		587	1074
Mega State	Tamil Nadu	Sivaganga	30-Day-Positivity-Above-160%		727	816
Mega State	Tamil Nadu	Thanjavur	Positivity / Mn above 300			470
Mega State	Tamil Nadu	Thanjavur	7-Day-Positivity-Above-30%			73
Mega State	Tamil Nadu	Thanjavur	30-Day-Positivity-Above-160%			186
Mega State	Tamil Nadu	Theni	7-Day-Positivity-Above-30%		64	47
Mega State	Tamil Nadu	Theni	30-Day-Positivity-Above-160%		736	363
Mega State	Tamil Nadu	Theni	Positivity / Mn above 300		1295	1905
Mega State	Tamil Nadu	Thiruvallur	Positivity / Mn above 300	1233	1722	2334
Mega State	Tamil Nadu	Thiruvallur	7-Day-Positivity-Above-30%			36
Mega State	Tamil Nadu	Thiruvallur	30-Day-Positivity-Above-160%			2452
Mega State	Tamil Nadu	Thoothukkudi	7-Day-Positivity-Above-30%		90	55
Mega State	Tamil Nadu	Thoothukkudi	30-Day-Positivity-Above-160%		269	295
Mega State	Tamil Nadu	Thoothukkudi	Positivity / Mn above 300		1214	1880
Mega State	Tamil Nadu	Tiruchirappalli	7-Day-Positivity-Above-30%		58	52
Mega State	Tamil Nadu	Tiruchirappalli	30-Day-Positivity-Above-160%		509	323
Mega State	Tamil Nadu	Tiruchirappalli	Positivity / Mn above 300		515	781
Mega State	Tamil Nadu	Tirunelveli	7-Day-Positivity-Above-30%		66	54
Mega State	Tamil Nadu	Tirunelveli	30-Day-Positivity-Above-160%		166	246
Mega State	Tamil Nadu	Tirunelveli	Positivity / Mn above 300		529	814
Mega State	Tamil Nadu	Tiruvannamalai	Positivity / Mn above 300			1534
Mega State	Tamil Nadu	Vellore	Positivity / Mn above 300			969
Mega State	Tamil Nadu	Vellore	7-Day-Positivity-Above-30%			45
Mega State	Tamil Nadu	Vellore	30-Day-Positivity-Above-160%			277
Mega State	Tamil Nadu	Viluppuram	30-Day-Positivity-Above-160%		164	179
Mega State	Tamil Nadu	Viluppuram	Positivity / Mn above 300	311	421	618
Mega State	Tamil Nadu	Viluppuram	7-Day-Positivity-Above-30%			47
Mega State	Tamil Nadu	Virudhunagar	7-Day-Positivity-Above-30%		134	71
Mega State	Tamil Nadu	Virudhunagar	30-Day-Positivity-Above-160%		865	899
Mega State	Tamil Nadu	Virudhunagar	Positivity / Mn above 300		944	1610

State	District	Category	4th July	11-Jul	18-Jul
Uttar Pradesh	Agra	Positivity / Mn above 300		312	334
Uttar Pradesh	Bareilly	7-Day-Positivity-Above-30%	47	70	51
Uttar Pradesh	Bareilly	30-Day-Positivity-Above-160%	177	250	277
Uttar Pradesh	Etawah	30-Day-Positivity-Above-160%			237
Uttar Pradesh	Gautam Buddha Nagar	Positivity / Mn above 300	1605	2031	2442
Uttar Pradesh	Ghaziabad	30-Day-Positivity-Above-160%		269	193
Uttar Pradesh	Ghaziabad	Positivity / Mn above 300		644	833
Uttar Pradesh	Gorakhpur	7-Day-Positivity-Above-30%	38	45	62
Uttar Pradesh	Gorakhpur	30-Day-Positivity-Above-160%	169	168	223
Uttar Pradesh	Hapur	Positivity / Mn above 300	595	778	855
Uttar Pradesh	Jhansi	7-Day-Positivity-Above-30%	61	126	100
Uttar Pradesh	Jhansi	30-Day-Positivity-Above-160%	211	438	626
Uttar Pradesh	Jhansi	Positivity / Mn above 300			526
Uttar Pradesh	Kanpur Nagar	Positivity / Mn above 300		365	496
Uttar Pradesh	Kanpur Nagar	7-Day-Positivity-Above-30%			36
Uttar Pradesh	Lucknow	7-Day-Positivity-Above-30%		65	63
Uttar Pradesh	Lucknow	30-Day-Positivity-Above-160%		180	246
Uttar Pradesh	Lucknow	Positivity / Mn above 300		482	787
Uttar Pradesh	Mainpuri	7-Day-Positivity-Above-30%			65
Uttar Pradesh	Meerut	Positivity / Mn above 300	332	423	525
Uttar Pradesh	Moradabad	7-Day-Positivity-Above-30%		34	37
Uttar Pradesh	Prayagraj	7-Day-Positivity-Above-30%	36	58	55
Uttar Pradesh	Prayagraj	30-Day-Positivity-Above-160%		204	232
Uttar Pradesh	Varanasi	7-Day-Positivity-Above-30%	42	34	54
Uttar Pradesh	Varanasi	Positivity / Mn above 300			343
Uttar Pradesh	Varanasi	30-Day-Positivity-Above-160%			194

State	District	Category	4th July	11-Jul	18-Jul
Uttarakhand	Dehradun	Positivity / Mn above 300	437	493	618

State	District	Category	4th July	11-Jul	18-Jul
West Bengal	Darjeeling	7-Day-Positicity-Above-30%	37	45	48
West Bengal	Darjeeling	30-Day-Positivity-Above-160%	207	212	194
West Bengal	Darjeeling	Positivity / Mn above 300	4371	6333	9370
West Bengal	Hooghly	Positivity / Mn above 300			355
West Bengal	Hooghly	7-Day-Positivity-Above-30%			33
West Bengal	Howrah	Positivity / Mn above 300	621	789	1013
West Bengal	North 24 Parganas	7-Day-Positicity-Above-30%	39	49	52
West Bengal	North 24 Parganas	30-Day-Positivity-Above-160%		177	216
West Bengal	North 24 Parganas	Positivity / Mn above 300	354	527	802
West Bengal	Paschim Medinipur	7-Day-Positivity-Above-30%			47
West Bengal	South 24 Parganas	7-Day-Positicity-Above-30%	47	53	49
West Bengal	South 24 Parganas	30-Day-Positivity-Above-160%	229	237	235
West Bengal	South 24 Parganas	Positivity / Mn above 300			378

# Districts with high mortality

Selection Criteria: District with 10+ COVID Deaths with any one of the following:

1. 10 and above deaths per million population (DPM)
2. 7-day moving average fatality growth rate above 40%
3. 30-Day moving average fatality growth rate above 150%

State	District	Category	4th July	11-Jul	18-Jul
Andhra Pradesh	Anantapur	7-Day-Moving-Fatality-Above-40%	67	156	183
Andhra Pradesh	Anantapur	30-Day-Moving-Fatality-Above-150%		283	829
Andhra Pradesh	Anantapur	DPM above 10			16
Andhra Pradesh	Chittoor	7-Day-Moving-Fatality-Above-40%	67	90	132
Andhra Pradesh	Chittoor	30-Day-Moving-Fatality-Above-150%		280	633
Andhra Pradesh	East Godavari	7-Day-Moving-Fatality-Above-40%			475
Andhra Pradesh	East Godavari	30-Day-Moving-Fatality-Above-150%			557
Andhra Pradesh	Guntur	7-Day-Moving-Fatality-Above-40%		53	62
Andhra Pradesh	Guntur	30-Day-Moving-Fatality-Above-150%		164	176
Andhra Pradesh	Krishna	DPM above 10		17	21
Andhra Pradesh	Kurnool	DPM above 10		24	29
Andhra Pradesh	Prakasam	7-Day-Moving-Fatality-Above-40%			500
Andhra Pradesh	Prakasam	30-Day-Moving-Fatality-Above-150%			1400
Andhra Pradesh	S.P.S. Nellore	7-Day-Moving-Fatality-Above-40%			133
Andhra Pradesh	S.P.S. Nellore	30-Day-Moving-Fatality-Above-150%			425
Andhra Pradesh	Srikakulam	7-Day-Moving-Fatality-Above-40%			78
Andhra Pradesh	Srikakulam	30-Day-Moving-Fatality-Above-150%			700
Andhra Pradesh	Visakhapatnam	7-Day-Moving-Fatality-Above-40%		140	150
Andhra Pradesh	Visakhapatnam	30-Day-Moving-Fatality-Above-150%		1100	900
Andhra Pradesh	Vizianagaram	7-Day-Moving-Fatality-Above-40%			100
Andhra Pradesh	Vizianagaram	30-Day-Moving-Fatality-Above-150%			1300
Andhra Pradesh	West Godavari	7-Day-Moving-Fatality-Above-40%			356
Andhra Pradesh	West Godavari	30-Day-Moving-Fatality-Above-150%			1950
Andhra Pradesh	Y.S.R. Kadapa	7-Day-Moving-Fatality-Above-40%			340
Andhra Pradesh	Y.S.R. Kadapa	30-Day-Moving-Fatality-Above-150%			2100



State	District	Category	4th July	11-Jul	18-Jul
Assam	Kamrup Metropolitan	7-Day-Moving-Fatality-Above-40%		67	180
Assam	Kamrup Metropolitan	DPM above 10			22
Assam	Kamrup Metropolitan	30-Day-Moving-Fatality-Above-150%			600

State	District	Category	4th July	11-Jul	18-Jul
Bihar	Bhagalpur	7-Day-Moving-Fatality-Above-40%		400	60
Bihar	Bhagalpur	30-Day-Moving-Fatality-Above-150%		900	1500
Bihar	Patna	30-Day-Moving-Fatality-Above-150%	500	600	460
Bihar	Patna	7-Day-Moving-Fatality-Above-40%			100

State	District	Category	4th July	11-Jul	18-Jul
Gujarat	Aravalli	CFR above 5%			9
Gujarat	Aravalli	DPM above 10			23
Gujarat	Gandhinagar	DPM above 10	21	23	26
Gujarat	Kheda	30-Day-Moving-Fatality-Above-150%	0	180	200
Gujarat	Panchmahal	CFR above 5%	7	6	5
Gujarat	Patan	CFR above 5%	7	7	6
Gujarat	Patan	DPM above 10	12	14	15
Gujarat	Rajkot	DPM above 10	10	13	16
Gujarat	Rajkot	30-Day-Moving-Fatality-Above-150%	160	240	250
Gujarat	Surat	DPM above 10	29	34	40
Gujarat	Vadodara	DPM above 10	27	27	29

State	District	Category	4th July	11-Jul	18-Jul
Haryana	Faridabad	DPM above 10	49	56	60
Haryana	Gurgaon	DPM above 10	65	69	75
Haryana	Panipat	7-Day-Moving-Fatality-Above-40%			43
Haryana	Rohtak	DPM above 10			17
Haryana	Rohtak	30-Day-Moving-Fatality-Above-150%			157
Haryana	Sonipat	DPM above 10	12	15	17

State	District	Category	4th July	11-Jul	18-Jul
Jammu & Kashmir	Anantnag	DPM above 10		13	17
Jammu & Kashmir	Anantnag	30-Day-Moving-Fatality-Above-150%		180	200
Jammu & Kashmir	Baramulla	DPM above 10	22	32	48
Jammu & Kashmir	Baramulla	7-Day-Moving-Fatality-Above-40%	47	45	50
Jammu & Kashmir	Baramulla	30-Day-Moving-Fatality-Above-150%			220
Jammu & Kashmir	Budgam	DPM above 10	0	16	24
Jammu & Kashmir	Budgam	7-Day-Moving-Fatality-Above-40%			50
Jammu & Kashmir	Budgam	30-Day-Moving-Fatality-Above-150%			157
Jammu & Kashmir	Kulgam	DPM above 10	38	42	57
Jammu & Kashmir	Kupwara	DPM above 10			15
Jammu & Kashmir	Kupwara	7-Day-Moving-Fatality-Above-40%			44
Jammu & Kashmir	Kupwara	30-Day-Moving-Fatality-Above-150%			160
Jammu & Kashmir	Pulwama	DPM above 10			14
Jammu & Kashmir	Pulwama	7-Day-Moving-Fatality-Above-40%			120
Jammu & Kashmir	Pulwama	30-Day-Moving-Fatality-Above-150%			175
Jammu & Kashmir	Shopiyan	DPM above 10	49	60	68
Jammu & Kashmir	Srinagar	DPM above 10	24	33	46
Jammu & Kashmir	Srinagar	7-Day-Moving-Fatality-Above-40%			40
Jammu & Kashmir	Srinagar	30-Day-Moving-Fatality-Above-150%			168

State	District	Category	4th July	11-Jul	18-Jul
Karnataka	Bagalkote	CCFR above 10%			11
Karnataka	Bagalkote	DPM above 10			15
Karnataka	Bagalkote	7-Day-Moving-Fatality-Above-40%			222
Karnataka	Bagalkote	30-Day-Moving-Fatality-Above-150%			1350
Karnataka	Ballari	DPM above 10	14	17	23
Karnataka	Ballari	30-Day-Moving-Fatality-Above-150%	3300	2000	470
Karnataka	Belagavi	7-Day-Moving-Fatality-Above-40%			167
Karnataka	Belagavi	30-Day-Moving-Fatality-Above-150%			2300
Karnataka	Bidar	7-Day-Moving-Fatality-Above-40%	47	93	33
Karnataka	Bidar	30-Day-Moving-Fatality-Above-150%	367	315	200
Karnataka	Chikkaballapura	DPM above 10			14
Karnataka	Chikkaballapura	30-Day-Moving-Fatality-Above-150%			750
Karnataka	Dakshina Kannada	7-Day-Moving-Fatality-Above-40%	150	80	67
Karnataka	Dakshina Kannada	DPM above 10		17	29
Karnataka	Dakshina Kannada	30-Day-Moving-Fatality-Above-150%			650
Karnataka	Davanagere	7-Day-Moving-Fatality-Above-40%		89	59
Karnataka	Davanagere	DPM above 10			14
Karnataka	Davanagere	30-Day-Moving-Fatality-Above-150%			286
Karnataka	Dharwad	7-Day-Moving-Fatality-Above-40%	120	191	81
Karnataka	Dharwad	30-Day-Moving-Fatality-Above-150%	450	967	1060
Karnataka	Dharwad	DPM above 10	0	17	31
Karnataka	Gadag	30-Day-Moving-Fatality-Above-150%			267
Karnataka	Hassan	7-Day-Moving-Fatality-Above-40%		143	41
Karnataka	Hassan	30-Day-Moving-Fatality-Above-150%		1600	2300
Karnataka	Hassan	DPM above 10			14
Karnataka	Kalaburagi	7-Day-Moving-Fatality-Above-40%	47	44	100
Karnataka	Kalaburagi	DPM above 10		14	17
Karnataka	Kalaburagi	30-Day-Moving-Fatality-Above-150%		227	153
Karnataka	Mysuru	7-Day-Moving-Fatality-Above-40%		367	111
Karnataka	Mysuru	DPM above 10			20
Karnataka	Mysuru	30-Day-Moving-Fatality-Above-150%			5800
Karnataka	Raichur	7-Day-Moving-Fatality-Above-40%			56
Karnataka	Raichur	30-Day-Moving-Fatality-Above-150%			600
Karnataka	Shivamogga	7-Day-Moving-Fatality-Above-40%			71
Karnataka	Shivamogga	30-Day-Moving-Fatality-Above-150%			500
Karnataka	Tumakuru	7-Day-Moving-Fatality-Above-40%		117	54
Karnataka	Tumakuru	30-Day-Moving-Fatality-Above-150%		550	567
Karnataka	Uttara Kannada	7-Day-Moving-Fatality-Above-40%			150
Karnataka	Vijayapura	30-Day-Moving-Fatality-Above-150%			186

State	District	Category	4th July	11-Jul	18-Jul
Maharashtra	Ahmednagar	7-Day-Moving-Fatality-Above-40%			65
Maharashtra	Ahmednagar	30-Day-Moving-Fatality-Above-150%			175
Maharashtra	Akola	DPM above 10	47	50	53
Maharashtra	Amravati	DPM above 10	10	12	16
Maharashtra	Aurangabad	DPM above 10	76	87	98
Maharashtra	Jalgaon	CFR above 5%	7	6	5
Maharashtra	Jalgaon	DPM above 10			90
Maharashtra	Jalna	DPM above 10	12	18	28
Maharashtra	Jalna	7-Day-Moving-Fatality-Above-40%	100	50	50
Maharashtra	Jalna	30-Day-Moving-Fatality-Above-150%	300	200	350
Maharashtra	Kolhapur	7-Day-Moving-Fatality-Above-40%	0	42	71
Maharashtra	Kolhapur	30-Day-Moving-Fatality-Above-150%			222
Maharashtra	Latur	DPM above 10		12	20
Maharashtra	Latur	7-Day-Moving-Fatality-Above-40%			66
Maharashtra	Latur	30-Day-Moving-Fatality-Above-150%			220
Maharashtra	Nanded	7-Day-Moving-Fatality-Above-40%			79
Maharashtra	Nanded	30-Day-Moving-Fatality-Above-150%			162
Maharashtra	Nandurbar	7-Day-Moving-Fatality-Above-40%			45
Maharashtra	Nashik	DPM above 10	37	44	58
Maharashtra	Osmanabad	DPM above 10			14
Maharashtra	Osmanabad	7-Day-Moving-Fatality-Above-40%			71
Maharashtra	Osmanabad	30-Day-Moving-Fatality-Above-150%			200
Maharashtra	Other States	CFR above 5%		16	13
Maharashtra	Other States	CCFR above 10%		100	100
Maharashtra	Palghar	DPM above 10	41	57	78
Maharashtra	Pune	DPM above 10	89	109	139
Maharashtra	Raigad	DPM above 10	40	57	80
Maharashtra	Ratnagiri	DPM above 10	17	18	25
Maharashtra	Sangli	7-Day-Moving-Fatality-Above-40%			50
Maharashtra	Satara	DPM above 10	16	21	25
Maharashtra	Solapur	CFR above 5%			7
Maharashtra	Solapur	CCFR above 10%			14
Maharashtra	Solapur	DPM above 10			88
Maharashtra	Thane	DPM above 10	113	139	179

State	District	Category	4th July	11-Jul	18-Jul
Madhya Pradesh	Bhopal	DPM above 10	44	50	54
Madhya Pradesh	Burhanpur	DPM above 10	30	30	30
Madhya Pradesh	Indore	DPM above 10	74	80	88
Madhya Pradesh	Khandwa	DPM above 10	13	13	14
Madhya Pradesh	Ujjain	CFR above 5%	8	8	7
Madhya Pradesh	Ujjain	DPM above 10	36	36	36

State	District	Category	4th July	11-Jul	18-Jul
Odisha	Ganjam	7-Day-Moving-Fatality-Above-40%	133	76	49
Odisha	Ganjam	30-Day-Moving-Fatality-Above-150%	320	517	511
Odisha	Ganjam	DPM above 10		10	16
Odisha	Khordha	7-Day-Moving-Fatality-Above-40%			58
Odisha	Khordha	30-Day-Moving-Fatality-Above-150%			217

State	District	Category	4th July	11-Jul	18-Jul
Punjab	Amritsar	DPM above 10	19	20	25
Punjab	Amritsar	CFR above 5%			5
Punjab	Gurdaspur	30-Day-Moving-Fatality-Above-150%			233
Punjab	Jalandhar	DPM above 10		11	15
Punjab	Ludhiana	DPM above 10			12
Punjab	Patiala	30-Day-Moving-Fatality-Above-150%		200	200
Punjab	S.A.S. Nagar	7-Day-Moving-Fatality-Above-40%			43
Punjab	S.A.S. Nagar	30-Day-Moving-Fatality-Above-150%			233
Punjab	Sangrur	DPM above 10		11	13

State	District	Category	4th July	11-Jul	18-Jul
Rajasthan	Ajmer	DPM above 10			10
Rajasthan	Bharatpur	DPM above 10	15	16	18
Rajasthan	Dholpur	DPM above 10			12
Rajasthan	Dholpur	30-Day-Moving-Fatality-Above-150%			250
Rajasthan	Jaipur	DPM above 10	25	26	27
Rajasthan	Jodhpur	DPM above 10	14	18	18
Rajasthan	Kota	DPM above 10			15
Rajasthan	Other state	CFR above 5%			20
Rajasthan	Other state	CCFR above 10%			45

State	District	Category	4th July	11-Jul	18-Jul
Uttar Pradesh	Agra	CFR above 5%	7	7	6
Uttar Pradesh	Agra	DPM above 10	21	21	22
Uttar Pradesh	Bareilly	30-Day-Moving-Fatality-Above-150%			214
Uttar Pradesh	Etawah	30-Day-Moving-Fatality-Above-150%	1300	260	171
Uttar Pradesh	Etawah	DPM above 10	0	11	12
Uttar Pradesh	Firozabad	CFR above 5%		6	6
Uttar Pradesh	Firozabad	DPM above 10		12	14
Uttar Pradesh	Gautam Buddha Nagar	DPM above 10	17	20	23
Uttar Pradesh	Ghaziabad	DPM above 10	13	13	13
Uttar Pradesh	Hapur	DPM above 10	12	15	16
Uttar Pradesh	Jhansi	DPM above 10	12	17	23
Uttar Pradesh	Jhansi	30-Day-Moving-Fatality-Above-150%	167	209	181
Uttar Pradesh	Jhansi	CCFR above 10%	0	19	12
Uttar Pradesh	Kanpur Nagar	DPM above 10	12	18	24
Uttar Pradesh	Kanpur Nagar	7-Day-Moving-Fatality-Above-40%		51	220
Uttar Pradesh	Mathura	DPM above 10			10
Uttar Pradesh	Meerut	DPM above 10	26	26	27
Uttar Pradesh	Prayagraj	30-Day-Moving-Fatality-Above-150%			267
Uttarakhand	Dehradun	DPM above 10	15	16	17

State	District	Category	4th July	11-Jul	18-Jul
Tamil Nadu	Chengalpattu	DPM above 10		10	73
Tamil Nadu	Coimbatore	7-Day-Moving-Fatality-Above-40%			125
Tamil Nadu	Coimbatore	30-Day-Moving-Fatality-Above-150%			1700
Tamil Nadu	Dindigul	7-Day-Moving-Fatality-Above-40%			138
Tamil Nadu	Dindigul	30-Day-Moving-Fatality-Above-150%			280
Tamil Nadu	Kallakurichi	30-Day-Moving-Fatality-Above-150%			900
Tamil Nadu	Kancheepuram	30-Day-Moving-Fatality-Above-150%	400	360	256
Tamil Nadu	Kancheepuram	DPM above 10	0	12	16
Tamil Nadu	Kanyakumari	30-Day-Moving-Fatality-Above-150%			1500
Tamil Nadu	Madurai	DPM above 10	46	89	118
Tamil Nadu	Madurai	30-Day-Moving-Fatality-Above-150%		1288	635
Tamil Nadu	Pudukkottai	30-Day-Moving-Fatality-Above-150%			450
Tamil Nadu	Ramanathapuram	DPM above 10	14	24	35
Tamil Nadu	Ramanathapuram	7-Day-Moving-Fatality-Above-40%	375	68	47
Tamil Nadu	Ramanathapuram	30-Day-Moving-Fatality-Above-150%	1800	1500	1075
Tamil Nadu	Ranipet	DPM above 10	0	11	12
Tamil Nadu	Ranipet	30-Day-Moving-Fatality-Above-150%	0	550	600
Tamil Nadu	Salem	7-Day-Moving-Fatality-Above-40%			100
Tamil Nadu	Salem	30-Day-Moving-Fatality-Above-150%			600
Tamil Nadu	Sivaganga	7-Day-Moving-Fatality-Above-40%		175	118
Tamil Nadu	Sivaganga	30-Day-Moving-Fatality-Above-150%		1000	1100
Tamil Nadu	Sivaganga	DPM above 10			18
Tamil Nadu	Thanjavur	7-Day-Moving-Fatality-Above-40%			220
Tamil Nadu	Thanjavur	30-Day-Moving-Fatality-Above-150%			1500
Tamil Nadu	Theni	DPM above 10			24
Tamil Nadu	Theni	7-Day-Moving-Fatality-Above-40%			88
Tamil Nadu	Theni	30-Day-Moving-Fatality-Above-150%			1400
Tamil Nadu	Thiruvallur	DPM above 10	23	33	41
Tamil Nadu	Thoothukkudi	DPM above 10			13
Tamil Nadu	Thoothukkudi	7-Day-Moving-Fatality-Above-40%			109
Tamil Nadu	Thoothukkudi	30-Day-Moving-Fatality-Above-150%			475
Tamil Nadu	Tiruchirappalli	7-Day-Moving-Fatality-Above-40%	0	275	127
Tamil Nadu	Tiruchirappalli	30-Day-Moving-Fatality-Above-150%	0	1400	750
Tamil Nadu	Tiruchirappalli	DPM above 10			12
Tamil Nadu	Tiruvannamalai	DPM above 10			13
Tamil Nadu	Tiruvannamalai	30-Day-Moving-Fatality-Above-150%			256
Tamil Nadu	Vellore	7-Day-Moving-Fatality-Above-40%			317
Tamil Nadu	Vellore	30-Day-Moving-Fatality-Above-150%			733
Tamil Nadu	Viluppuram	7-Day-Moving-Fatality-Above-40%			42
Tamil Nadu	Virudhunagar	7-Day-Moving-Fatality-Above-40%		71	117
Tamil Nadu	Virudhunagar	30-Day-Moving-Fatality-Above-150%		1100	420

<b>State</b>	<b>District</b>	<b>Category</b>	<b>4th July</b>	<b>11-Jul</b>	<b>18-Jul</b>
West Bengal	Darjeeling	DPM above 10	76	91	106
West Bengal	Howrah	DPM above 10	22	26	29
West Bengal	North 24 Parganas	DPM above 10	11	16	20
West Bengal	Paschim Medinipur	7-Day-Moving-Fatality-Above-40%			57
West Bengal	Paschim Medinipur	30-Day-Moving-Fatality-Above-150%			175



# Strategic Classification of Regions

Empowered Action Group (EAG) States*	Mega States	Micro States	Mega Cities	Union Territories
Assam	Andhra Pradesh	Tripura	Ahmedabad	Dadra & Nagar Haveli
Bihar	Gujarat	Manipur	Bengaluru	Chandigarh
Chhattisgarh	Haryana	Mizoram	Chennai	Daman & Diu
Jharkhand	Himachal Pradesh	Nagaland	Hyderabad	Puducherry
Madhya Pradesh	Jammu & Kashmir	Meghalaya	Kolkata	Delhi
Orissa	Karnataka	Goa	Mumbai	Andaman & Nicobar
Rajasthan	Kerala	Sikkim	New Delhi	Lakshadweep
Uttarakhand	Maharashtra	Arunachal Pradesh		
Uttar Pradesh	Punjab			
	Tamil Nadu			
	Telangana			
	West Bengal			

# Dedication to the Nation

Proxima-PHFI Pandemic & Epidemic Management System (PPEMS) is a joint development of Proxima and Public Health Foundation of India (PHFI). PPEMS provides customised dashboard for stakeholders who are directly managing the pandemic.

Over last 15 weeks, PPEMS has been tested with the publicly available COVID 19 data. The system provides sharper insights on the emerging pattern of the Pandemic and systematically highlights regions which needs immediate and specific attention.

PPEMS is the voluntary efforts of researchers and analysts at Proxima and PHFI in dedication to the nation

## Data source and disclaimer

1. The data collated and analysed based on secondary data. The primary sources are:  
<https://www.mohfw.gov.in/> <https://www.covid19india.org/> [www.google.com](http://www.google.com); [www.wikipedia.org](http://www.wikipedia.org);  
<https://www.worldometers.info/coronavirus/#countries>
2. Updated testing data of 4 mega cities (Ahmedabad, Bengaluru, Delhi, and Mumbai) are available in the public domain. Whereas, updated testing data of Chennai, Kolkata and Hyderabad is not to be found by our researchers. The analysis of average testing data has limitation with respect to data of 4 mega cities. Therefore, readers of this report need to factor for further inferences.
3. The user of this presentation is advised to revalidate the shared data from authorised public institutions.

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**Thank you**