

# COVID 19: Karnataka Weekly Trend Analysis

**22 November 2020**

**Project: Jeevan Raksha** is a initiative of Proxima which focuses on Advocacy, Analytics, and Awareness in the area of healthcare

**Mission:** Actively contribute towards **Right to Health** as constitutional right of Indian citizen

Project: Jeevan Raksha has been in the forefront of providing sharper analytical insights on emerging pattern of COVID 19 in India to the Central / State Government administrations and general public. The contribution is appreciated by many state Governments.

Project: Jeevan Raksha acknowledges the technical support and guidance of Indian Medical Association (**IMA**) and Public Health Foundation of India (**PHFI**)



**satyam-eva jayate, Truth alone triumphs**, was adopted as the national motto of India on 26 January 1950

In COVID management, **Truthiness** in the disclosed data (data integrity) of Testing, Positivity, Recovery, and Fatality; or **truthfulness** of a individual about his/her (including family) health condition, is vital for India's efforts to save lives of the people.

# A Robust, universally applicable and Scalable Management System is vital to manage Communicable Disease

The management of communicable diseases without clear medical solutions in the vicinity, requires effective data mining, analysis, and appropriate inferences of the virus spread in order to achieve the following key objectives:

- **Assessment:** Assess and examine the velocity of the virus spread and pattern of infection in the given region.
- **Measurement:** Effectively measure the outcome of the various intervention
- **Forecast:** Based on the various critical data pattern, extrapolate the trend which would facilitate the administration to ramp-up the required resources

# Proxima Pandemic & Epidemic Management System



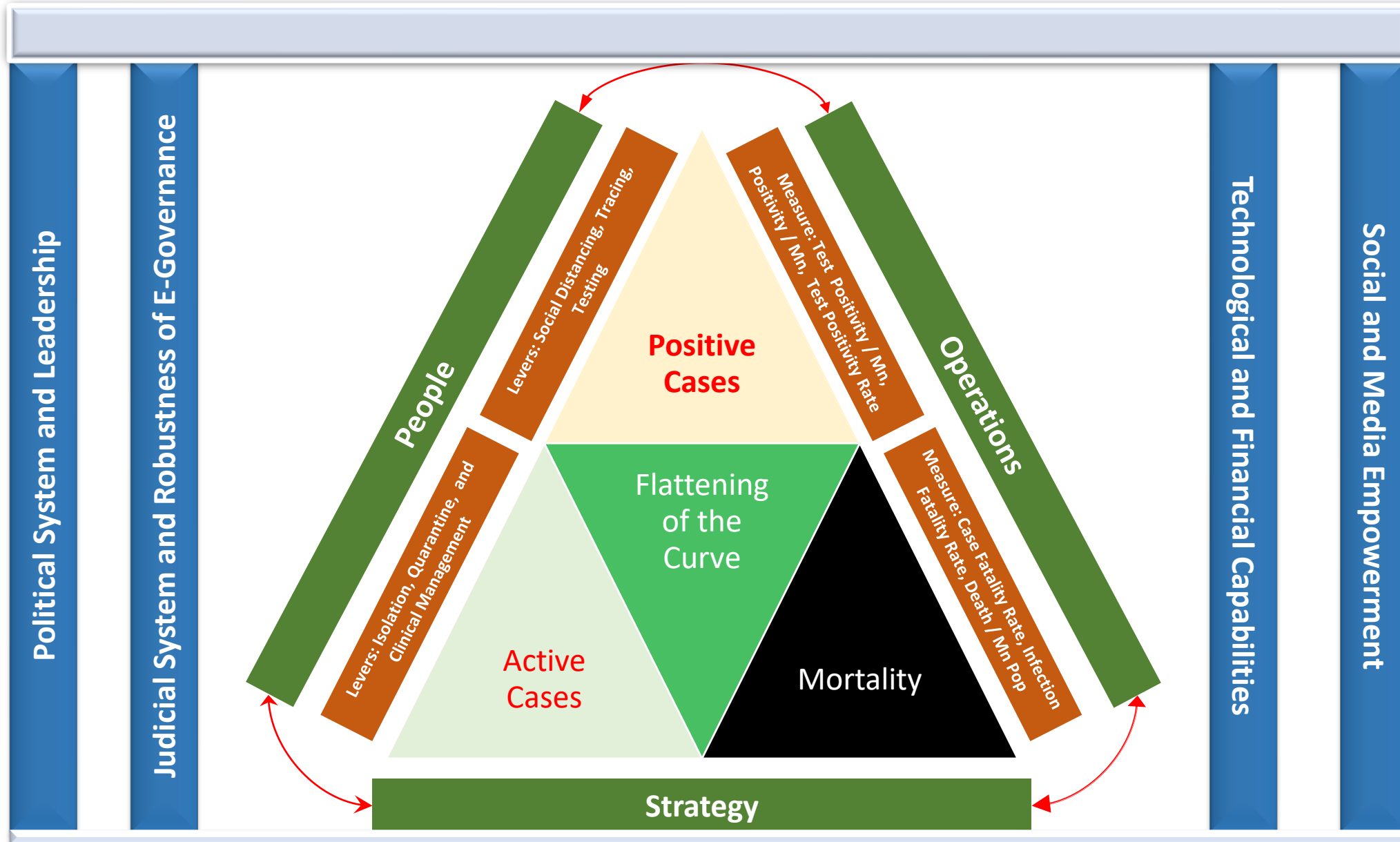
In an Pandemic / Epidemic, the virus spreads linearly and rapidly. The strategy to manage and flatten the growth of the virus depends on various systematic and unsystematic drivers.

Therefore, strategy formulation should factor the following:

- Political System and Leadership; Judicial system and robustness of e-Governance; Technological and financial capabilities; and more importantly social and media empowerment.
- There must be complete synergy between 3 critical processes – Strategy, People, and Operations. In case if any of these processes are weak, then there are chances of ending up with poor results
- The flattening of the curve of virus growth will happen only the levers are used effectively and efficiently.
- Robust review mechanism: The Control rooms must have strong process and systems which provides real-time right and appropriate data and analysis which helps the decisions makers to take appropriate and timely decisions.

# Proxima Pandemic & Epidemic Management System (PPMS)

**JEEVAN RAKSHA**  
PROTECTING LIVES



# Positive Cases 7-Day Moving Growth Rate (MGR) plummets from 17% in Aug to 1.3% in Nov!

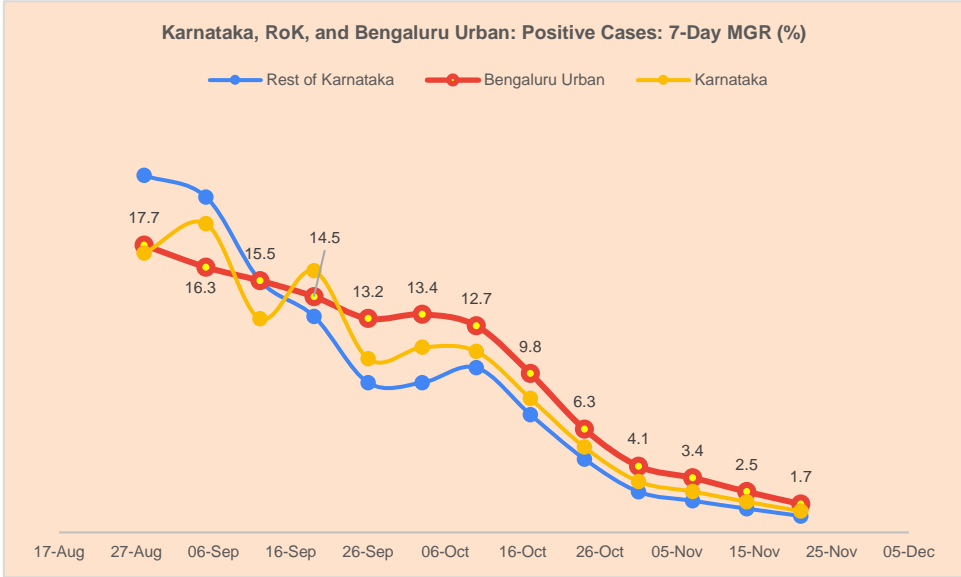


- During 14 – 21 Nov, Karnataka has added only 11260 new COVID cases in the entire week. Whereas on 9<sup>th</sup> October alone, the state had added 10913 cases
- Bengaluru Urban added 55% and remaining was contributed by Rest of Karnataka (other 29 districts of the state)
- Koppal, Haveri, and Yadgir added 40, 39, and 49 COVID cases, least number of cases among all the states in Rest of Karnataka.
- Among RoK - Tumakuru, Mandya, and Vijayapura, added highest number cases – 512, 335, and 324 respectively.

**Is Karnataka in the verge of breaking COVID chain?**

**Cautiously, yes!**

Next 4-6 weeks containment management is crucial, especially **Bengaluru**



Districts	14-Nov	21-Nov	Difference	MGR
Koppal	13575	13615	40	0.3
Haveri	10424	10463	39	0.4
Ballari	37888	38055	167	0.4
Yadgir	10266	10315	49	0.5
Dharwad	21147	21251	104	0.5
Kalaburagi	20124	20232	108	0.5
Gadag	10603	10660	57	0.5
Udupi	22340	22474	134	0.6
Bagalkote	13348	13441	93	0.7
Raichur	13520	13616	96	0.7
Davanagere	21246	21400	154	0.7
Chikkamagaluru	12913	13011	98	0.8
Shivamogga	21195	21360	165	0.8
Bidar	6956	7018	62	0.9
Belagavi	25198	25425	227	0.9
Dakshina Kannada	31225	31520	295	0.9
Mysuru	49413	49923	510	1.0
Hassan	26366	26652	286	1.1
Chamarajinagar	6194	6262	68	1.1
Kolar	8880	8993	113	1.3
Ramanagara	7065	7156	91	1.3
Bengaluru Rural	16981	17233	252	1.5
Chikkaballapura	11754	11929	175	1.5
Kodagu	5124	5204	80	1.6
Uttara Kannada	13329	13548	219	1.6
Chitradurga	13075	13296	221	1.7
Mandya	17903	18238	335	1.9
Tumakuru	22295	22807	512	2.3
Vijayapura	13259	13583	324	2.4
<b>Rest of Karnataka</b>	<b>503642</b>	<b>508716</b>	<b>5074</b>	<b>1.0</b>
<b>Bengaluru Urban</b>	<b>356440</b>	<b>362626</b>	<b>6186</b>	<b>1.7</b>
<b>Karnataka State</b>	<b>860082</b>	<b>871342</b>	<b>11260</b>	<b>1.3</b>

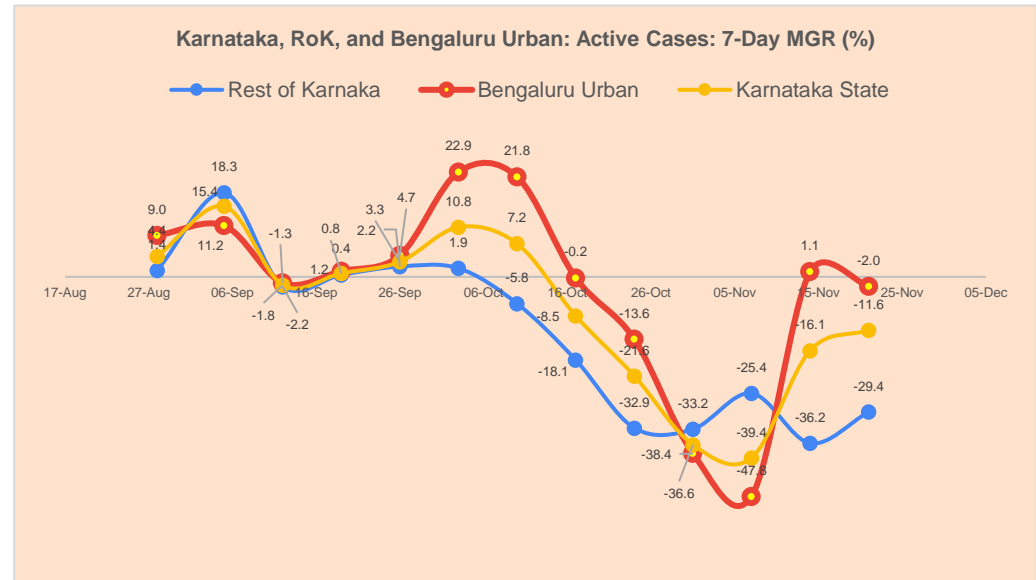
	28-Aug	05-Sep	12-Sep	19-Sep	26-Sep	03-Oct	10-Oct	17-Oct	24-Oct	31-Oct	07-Nov	14-Nov	21-Nov
Rest of Karnataka	22.0	20.6	15.5	13.3	9.2	9.2	10.1	7.2	4.5	2.5	1.9	1.5	1.0
Bengaluru Urban	17.7	16.3	15.5	14.5	13.2	13.4	12.7	9.8	6.3	4.1	3.4	2.5	1.7
Karnataka	17.2	19.0	13.1	16.1	10.7	11.4	11.1	8.2	5.2	3.1	2.5	1.9	1.3

# Active Cases 7-Day Moving Growth Rate (MGR): 27 out of 30 districts: Negative growth

- For 6 consecutive weeks, Karnataka has witnessed negative growth of active cases.
- 72% of the total active cases of the state are in Bengaluru Urban. This indicates that majority of the recovery as well as deaths in the coming weeks in the state is likely to occur in Bengaluru.
- Amongst RoK, Haveri, Chikamagaluru, and Chitradurga has witnessed sharp drop in Active cases MGR.
- Vijayapura, Bagalkote, and Bidar are the only 3 districts which have witnessed increase in active cases.

**Drop in active cases is caused by 2 factors:**

- Drop in incremental new number of cases.
- High rate of recovery due to early detection of infected people when the onset of virus spread is mild.



Districts	14-Nov	21-Nov	Difference	MGR
Haveri	115	49	-66	-57.4
Chikkamagaluru	338	149	-189	-55.9
Chitradurga	506	260	-246	-48.6
Koppal	130	67	-63	-48.5
Yadgir	130	71	-59	-45.4
Dharwad	186	103	-83	-44.6
Hassan	759	444	-315	-41.5
Kalaburagi	320	205	-115	-35.9
Chamarajnaragar	138	89	-49	-35.5
Ballari	421	272	-149	-35.4
Kolar	249	163	-86	-34.5
Bengaluru Rural	543	357	-186	-34.3
Dakshina Kannada	712	474	-238	-33.4
Udupi	266	179	-87	-32.7
Mandya	610	423	-187	-30.7
Kodagu	118	82	-36	-30.5
Ramanagara	157	110	-47	-29.9
Tumakuru	851	613	-238	-28.0
Shivamogga	401	291	-110	-27.4
Davanagere	325	239	-86	-26.5
Gadag	92	71	-21	-22.8
Uttara Kannada	307	241	-66	-21.5
Mysuru	853	691	-162	-19.0
Chikkaballapura	223	194	-29	-13.0
Belagavi	426	382	-44	-10.3
Raichur	164	152	-12	-7.3
Vijayapura	297	330	33	11.1
Bagalkote	106	132	26	24.5
Bidar	38	69	31	81.6
<b>Rest of Karnataka</b>	<b>9781</b>	<b>6902</b>	<b>-2879</b>	<b>-29.4</b>
<b>Bengaluru Urban</b>	<b>18184</b>	<b>17812</b>	<b>-372</b>	<b>-2.0</b>
<b>Karnataka State</b>	<b>27965</b>	<b>24714</b>	<b>-3251</b>	<b>-11.6</b>

	28-Aug	05-Sep	12-Sep	19-Sep	26-Sep	03-Oct	10-Oct	17-Oct	24-Oct	31-Oct	07-Nov	14-Nov	21-Nov
Rest of Karnataka	1.4	18.3	-2.2	0.4	2.2	1.9	-5.8	-18.1	-32.9	-33.2	-25.4	-36.2	-29.4
Bengaluru Urban	9.0	11.2	-1.3	1.2	4.7	22.9	21.8	-0.2	-13.6	-38.4	-47.8	1.1	-2.0
Karnataka State	4.4	15.4	-1.8	0.8	3.3	10.8	7.2	-8.5	-21.6	-36.6	-39.4	-16.1	-11.6

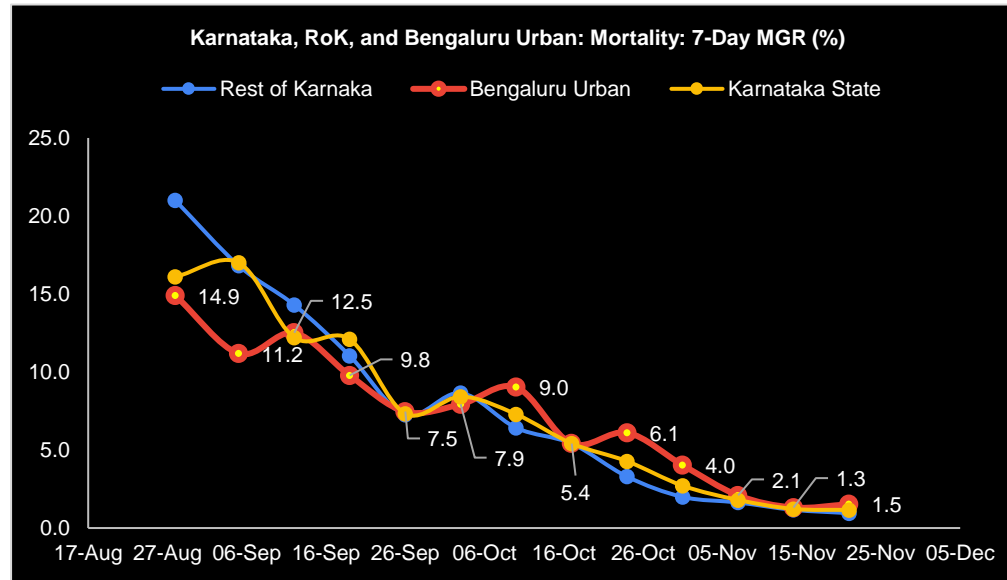


# Mortality: 13 out of 30 districts witnessed ZERO deaths during 14 – 21 November



Karnataka's mortality growth during the week is 1.2% against India's and Mega states mortality growth is 3% and 2% respectively

- 45% of the death in the state has occurred in Bengaluru
- 13 districts in the state were COVID death free during the week
- 6 Districts witnessed only 1 death during the week
- 23 districts collectively witnessed total 14 deaths.
- In RoK, Mysuru, Dharwad, Ballari witnessed 10 deaths
- Dakshina Kannada witnessed 13 deaths during the week, highest in the state after Bengaluru



Districts	14-Nov	21-Nov	Difference	MGR
Other State	3	3	0	0.0
Kalaburagi	319	319	0	0.0
Bidar	166	166	0	0.0
Gadag	141	141	0	0.0
Belagavi	340	340	0	0.0
Mandya	146	146	0	0.0
Udupi	187	187	0	0.0
Chitradurga	63	63	0	0.0
Yadgir	61	61	0	0.0
Koppal	278	278	0	0.0
Ramanagara	75	75	0	0.0
Chamarajnaragar	115	115	0	0.0
Chikkamagaluru	137	137	0	0.0
Shivamogga	347	348	1	0.3
Davanagere	262	263	1	0.4
Kolar	166	167	1	0.6
Bengaluru Rural	138	139	1	0.7
Bagalkote	131	132	1	0.8
Hassan	381	384	3	0.8
Chikkaballapura	112	113	1	0.9
Vijayapura	198	200	2	1.0
Mysuru	978	988	10	1.0
Haveri	187	189	2	1.1
Raichur	153	155	2	1.3
Dharwad	586	596	10	1.7
Ballari	567	577	10	1.8
Dakshina Kannada	693	706	13	1.9
Tumakuru	356	364	8	2.2
Uttara Kannada	161	165	4	2.5
Kodagu	64	66	2	3.1
<b>Rest of Karnataka</b>	<b>7511</b>	<b>7583</b>	<b>72</b>	<b>1.0</b>
<b>Bengaluru Urban</b>	<b>3997</b>	<b>4058</b>	<b>61</b>	<b>1.5</b>
<b>Karnataka</b>	<b>11508</b>	<b>11641</b>	<b>133</b>	<b>1.2</b>

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Rest of Karnaka	21.0	16.8	14.3	11.0	7.3	8.7	6.4	5.4	3.3	2.0	1.6	1.2	1.0
Bengaluru Urban	14.9	11.2	12.5	9.8	7.5	7.9	9.0	5.4	6.1	4.0	2.1	1.3	1.5
Karnataka State	16.1	17.0	12.2	12.1	7.3	8.4	7.3	5.4	4.3	2.7	1.8	1.2	1.2

## Testing: Changed Strategy: Changing Dynamics

- Karnataka has made a paradigm shift in testing by increasing the RT-PCR test more than 80%. This has substantially reduced the occurrence of false negative reports.
- In August, Bengaluru had 27% share in the total tests conducted by the State. Rest of Karnataka (RoK – remaining 29 districts of the state) had 73%. Currently, Bengaluru share of testing has increased to 40% and RoK share has dropped to 60%. However, in terms of number of COVID cases, is by and large equal.
- In August, the Gross Test Positivity Rate (GTPR) of Bengaluru Urban was 17%. TPR of 5% and above indicates that the testing capacity is stretched. However, in November GTPR has dropped to 9%, which confirms the increased testing capacity. The increase in testing capacity would occur in combination of Government sponsored testing and also voluntary testing by general public due to precautionary as well as transactional purposes. As more number of low risk and unwarranted people are tested, the GTPR will move downwards.
- In spite of increase in RT-PCR tests, decreased average number of daily cases could be due to the combined results of inching towards breaking the chain and also due to increase share of general public testing in the total tests.

Distribution Pattern: Tests and Cases: Bengaluru Urban & Rest of Karnataka					
	28-Aug				
	Tests	Cases	GTPR	Share of Tests (%)	Share of Positive Cases (%)
<b>Bengaluru Urban</b>	740000	124442	17	27	38
<b>Rest of Karnataka</b>	2045718	202634	10	73	62
<b>Karnataka</b>	2785718	327076	12		

Distribution Pattern: Tests and Cases: Bengaluru Urban & Rest of Karnataka					
	21-Nov				
	Tests	Cases	GTPR	Share of Tests (%)	Share of Positive Cases (%)
<b>Bengaluru Urban</b>	4000000	362626	9	40	42
<b>Rest of Karnataka</b>	6106474	508716	8	60	58
<b>Karnataka</b>	10106474	871342	9		

## 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 5 mega cities (Ahmedabad, Bengaluru, Chennai, Delhi, and Mumbai) are available in the public domain. Whereas, updated testing data of Kolkata and Hyderabad is not to be found by our researchers. The analysis of average testing data has limitation with respect to data of 5 mega cities. Therefore, readers of this report need to factor the same for further inferences.
3. Information related to current status of Telangana and its districts are not available in the public domain. Therefore, readers of this report need to factor the same for further inferences.
4. All views and recommendations in the report are solely from Proxima only
5. The user of this presentation is advised to revalidate the shared data from authorised public institutions.

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**Thank you**