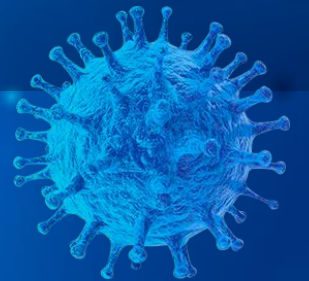
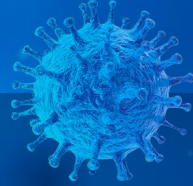


Covid19 in India: A Study on the 5 Highly Affected States





Hello!

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2019-2021

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INTRODUCTION

Corona virus is a contagious virus which started from Wuhan in December 2019 and later was declared as a 'pandemic' (on 11th March 2020) by World Health Organisation (WHO).

INDIAN SCENARIO

In India the first case was reported on 30th Jan 2020 at Thrissur,(Kerala).

Upto (30 May 2020):

Tests	Confirmed cases	Active Cases	Recovered Cases	Deceased
3737027 (2708 Per Million)	1,81,859 (1317.77 Per Million)	85,873 47.21%	86,934 47.80%	5,183 (Death rate: 2.85%)

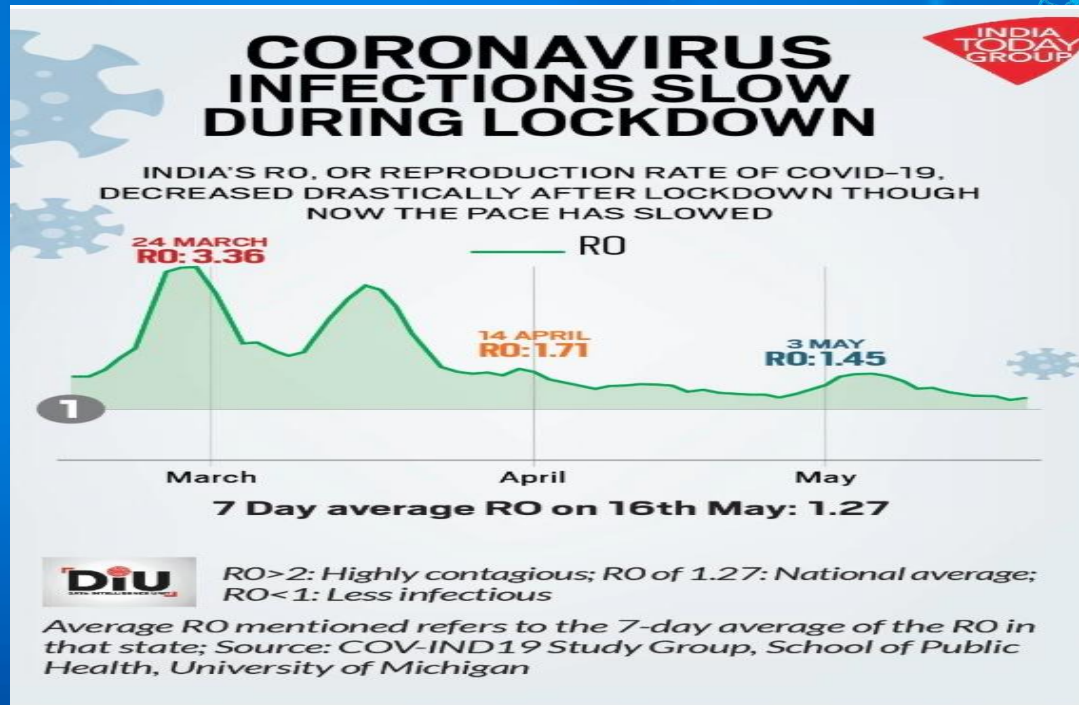
LOCKDOWN IN INDIA

- Phase 1: 25th March 2020 – 14th April 2020 (21 days)
- Phase 2: 15th April 2020 – 3rd May 2020 (19 days)
- Phase 3: 4th May 2020 – 17th May 2020 (14 days)
- Phase 4: 18th May 2020 – 31st May 2020 (14 days)

The following were the main features of the Lockdown:

- ▶ Ban on people from stepping out of their homes
- ▶ Except pharmacies, hospitals, banks, grocery shops and other essential services all services and shops were closed
- ▶ Only work-from-home was allowed in commercial and private establishments.
- ▶ Suspension of all educational, training, research institutions
- ▶ Closure of all places of worship
- ▶ All non-essential public and private transports were suspended
- ▶ Prohibition of academic, sports, social, entertainment, political, religious & cultural activities.

HOW HAS THE LOCKDOWN HELPED INDIA?



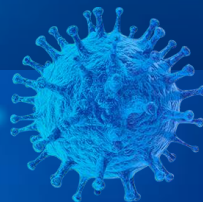
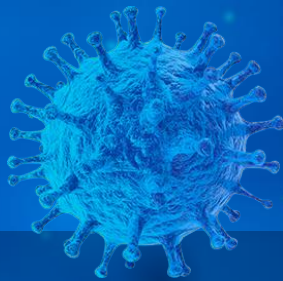
STUDY OBJECTIVES

- To understand the prevalence of covid19 infection in 5 highly affected Indian states (Maharastra, Tamil Nadu, Delhi, Gujarat and Rajasthan).
- To compare the Recovery & Death Rate in these states.
- To compare the confirmed cases per million population, number of active cases, average growth rate, tests performed per million population and efficiency of testing labs in these states.
- To suggest measures to prevent the pandemic.

METHODOLOGY

In this study we have collected secondary data for 5 highly affected Indian states i.e., Maharashtra, Tamil Nadu, Delhi, Gujarat and Rajasthan. The information is collected for the total tested individuals, confirmed, recovered, active and deceased cases due to the COVID-19 outbreak (30th Jan. 2020) till 30th May 2020 from <https://www.covid19india.org/>

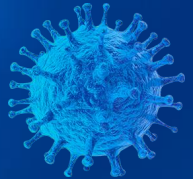
FINDINGS



THE 5 HIGHLY AFFECTED STATES

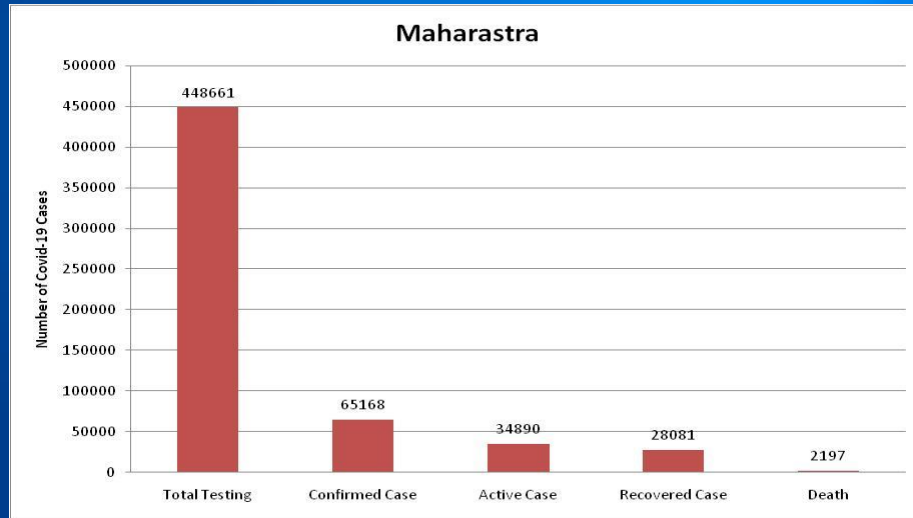


- ▶ Maharashtra
- ▶ Delhi
- ▶ Rajasthan
- ▶ Tamil Nadu
- ▶ Gujarat



MAHARASHTRA

- Maharashtra's Population: 12,21,53,000
- The first 2 confirmed cases of Covid-19 came from Pune where a couple returning from Dubai tested positive on 9th March 2020.



Confirmed cases per Million	Percentage of active cases	Recovery Rate	Mortality Rate	Tests Per Million
533.49	53.53%	43.09%	3.37%	3672.94

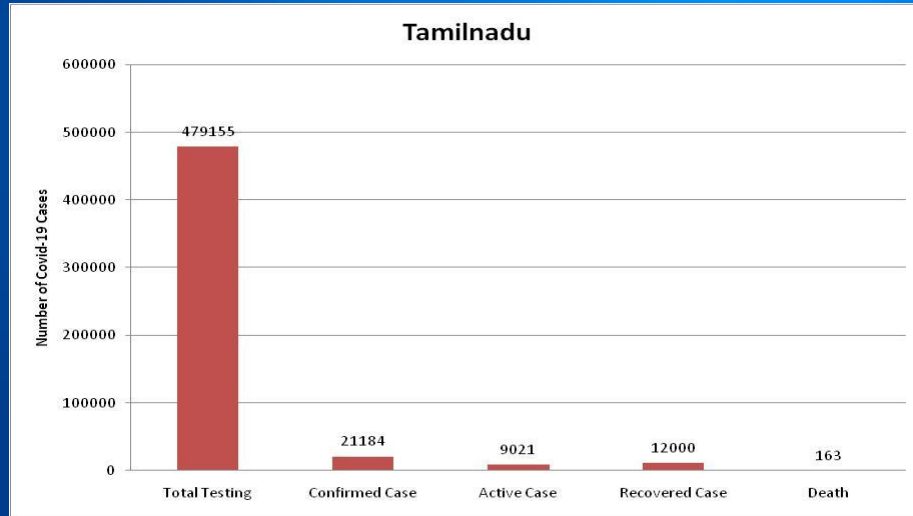
❖ *Containment measures:*

To prevent the spread of the infection many places in the state, where multiple confirmed cases were reported, were sealed off. These areas included Islampur in Sangli (on 28 March),^[32] Worli Kolivada in Mumbai (on 30 March),^[33] Peth area and parts of Kondhwa in Pune (on 6 April).^[34] By 9 April, BMC identified 381 containment zones within the city; several parts of the city including Dharavi were sealed off as the number of confirmed cases rose sharply in April.^[35]

The various districts in India were classified into different zones on the basis of the extent of the spread of virus by the Central Government of India. In Maharashtra 14 districts were identified as hotspots and labelled as red zones.^[36] The state government announced that it would relax the lockdown restrictions in districts with fewer than 15 confirmed cases.^[37]

TAMIL NADU

- Tamil Nadu's Population: 7,56,95,000
- The first case of coronavirus in Tamil Nadu was confirmed on 7 March 2020 in a resident from [Kanchipuram](#) in [Chennai](#) who had returned from [Oman](#).



Confirmed cases Per Million	Percentage of active cases	Recovery Rate	Mortality Rate	Tests Per Million
279.85	42.58%	56.64%	0.76%	6330

❖ **Management of Covid-19 cases:**

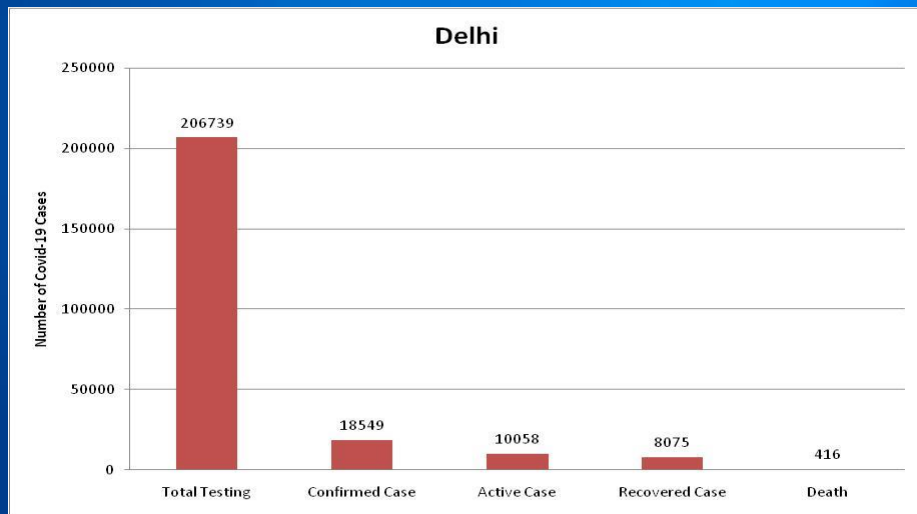
The state had 3,371 ventilators and 29,074 beds in isolation wards as of April 2.^[39] The number of hospital beds available was 1.1 per 1000 population and 7.8 per 1000 for elderly population according to a [Brookings](#) report.^[40] As of 3rd April, 21 government facilities, 25 private colleges and 110 private hospitals in the state were designated for treating COVID-19 illness.^{[41][42]} The [Chennai Trade Center](#) was converted into a 550-bed COVID-19 quarantine ward on April 14.^[42] As many as 747 marriage halls and 50 schools were identified in Chennai to be converted as COVID-19 care centres.^[43] [For asymptomatic patients](#), on 4th May 2020, there were 4,000 beds in Chennai at care centres and the Communicable Diseases Hospital in [Tondiarpet](#).^[44]

❖ **Containment measures:**

On 28 March, the 5 km² containment zones were setup around the residences of infected individuals across 16 districts. Houses inside the containment zones were surveyed and disinfected every day.^[55] Till 31st March 2020, 74,533 people who had returned from affected countries were being monitored under 28-day home quarantine.^[54]

DELHI

- Delhi Population:1,98,14000
- In Delhi, the first case was reported on 2nd March 2020. .



Confirmed cases Per Million	Percentage of active cases	Recovery Rate	Mortality Rate	Tests Per Million
936.10	54.22%	43.53%	2.24%	10434

❖ *Management/Treatment of Covid-19 cases:*

- On 13th April, [ICMR](#) requested researcher to give clinical trial on critically ill patient of COVID-19 using convalescent plasma therapy.^[56]
- On 15th April, Lieutenant Governor of Delhi declared that in Delhi the plasma technique might be used. He mentioned that it will be on trial basis with proper guideline.^[56]
- On 20th April, After receiving Plasma therapy, a 49-year-old critically ill patient of COVID-19 on ventilator support was out from ventilator. This is the first successful trial of plasma therapy in India.^[57]
- On 24th April, The CM of Delhi informed that all the 4 patients on whom the plasma therapy was tried in LNJP hospital had responded positively.

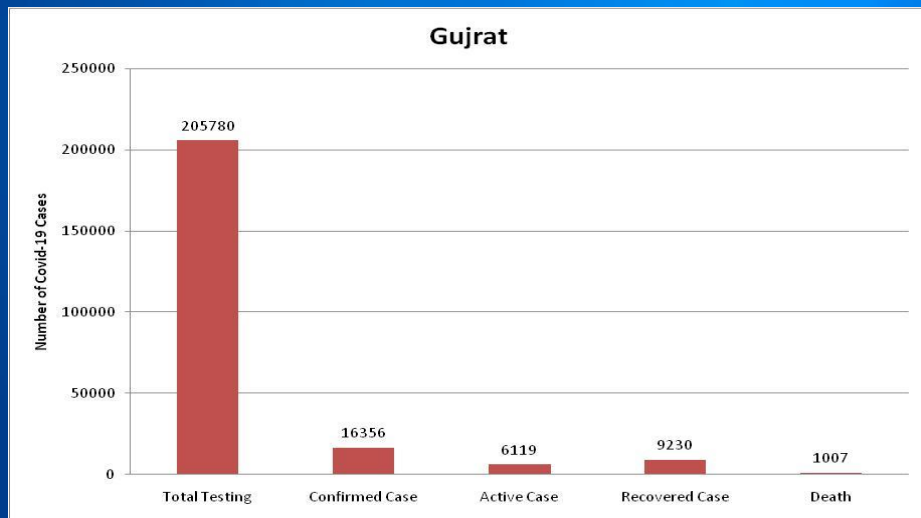
❖ *Operation S.H.I.E.L.D.:*

It was carried out to restrict the spread of the virus in the hotspots. Operation SHIELD was a six layers plan,^[59] where -

- **S** referred to Sealing the immediate area,
- **H** referred to Home quarantine to all people living in the area,
- **I** referred to Isolation and contact tracing of people,
- **E** referred to Essential supply of commodities,
- **L** referred to Local sanitization and
- **D** referred to Door to Door health check of people in the area.

GUJARAT

- Gujarat Population: 6,79,36,000
- Gujarat reported its first two cases of COVID-19 on 19th March 2020 - A man aged 32 years from [Rajkot](#) and a woman aged 21 years from [Surat](#), who had returned from [Saudi Arabia](#) and [United Kingdom](#) respectively



Confirmed cases Per Million	Percentage of active cases	Recovery Rate	Mortality Rate	Tests Per Million
240.75	37.41%	56.43%	6.15%	3029

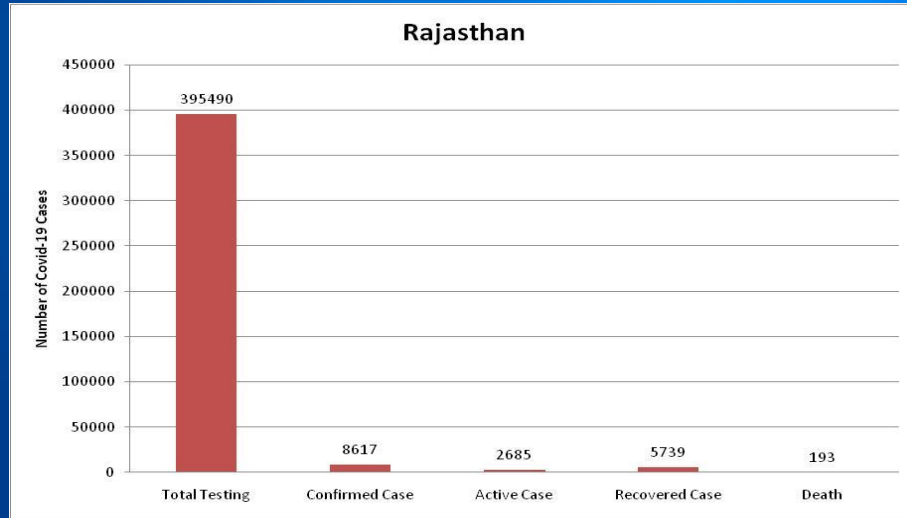
❖ *Treatment of Covid-19 cases:*

The plasma transfusion treatment on COVID-19 patients was decided to be carried out in the state by the government of Gujarat on 18th April 2020, particularly those in critical condition, to boost their immunity.

The civil hospital in Ahmedabad and the SVP Hospital prepared a proposal about the plasma transfusion treatment and submitted it to the Indian Council of Medical Research (ICMR) for approval.

RAJASTHAN

- Rajasthan Population: 7,72,64,000
- The first case of coronavirus in Rajasthan was confirmed on 2nd March 2020, one member from a group of 23 Italian tourists tested positive for COVID-19.



Confirmed cases Per Million	Percentage of active cases	Recovery Rate	Mortality Rate	Tests Per Million
111.52	31.15%	66.60%	2.23%	5119

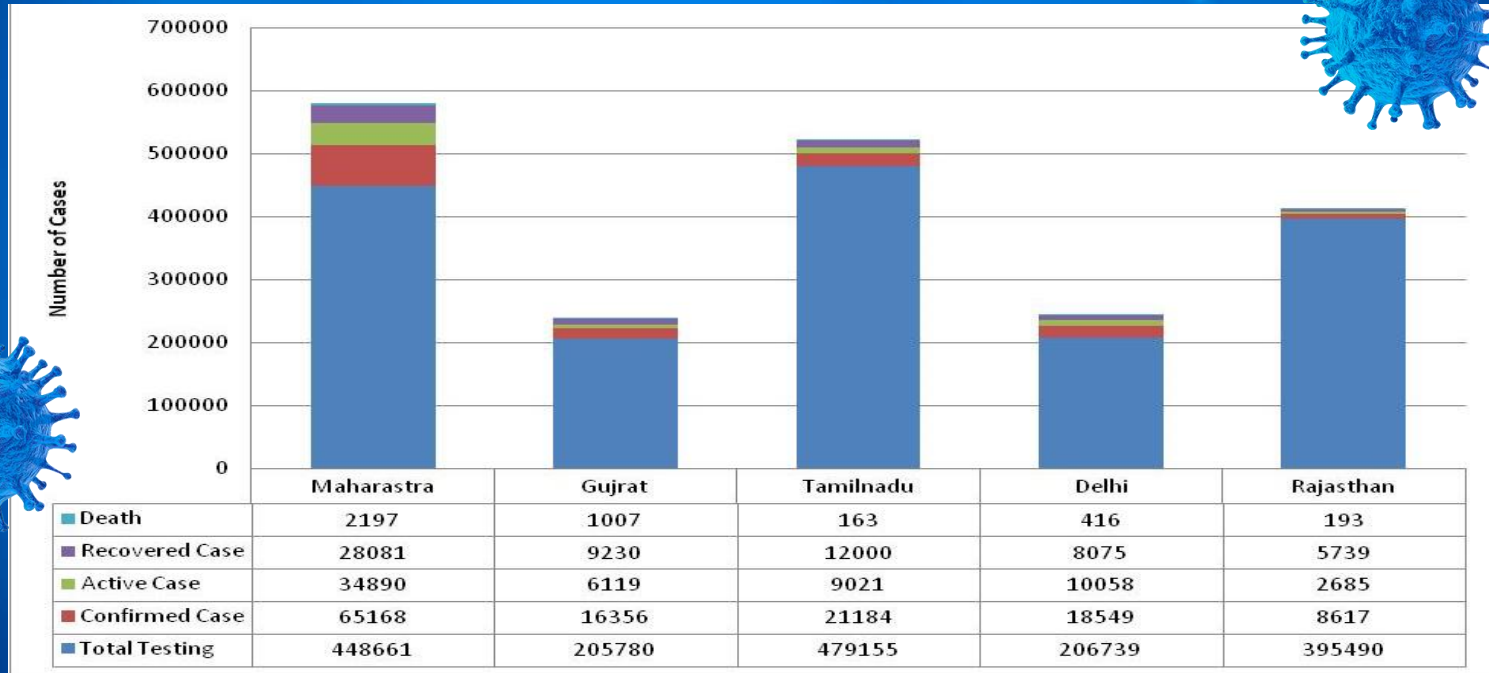
❖ **Treatment of Covid-19 cases:**

In Rajasthan, a combination of anti-malaria, anti-Swine flu and anti-HIV drugs resulted into recovery of three patients in March.^[62] Rajasthan Government had sought permission from Indian Council for Medical Research (ICMR) for the clinical trials of the convalescent plasma therapy for treatment of severely ill patients at Sawai Man Singh Hospital (SMS Hospital) in Jaipur. ICMR further listed SMS Medical college and Hospital for trial on 20 patients.^[65] Rajasthan government got approval from ICMR for the clinical trials at Government Medical College Jodhpur to treat COVID-19 patients from plasma therapy.^[66]

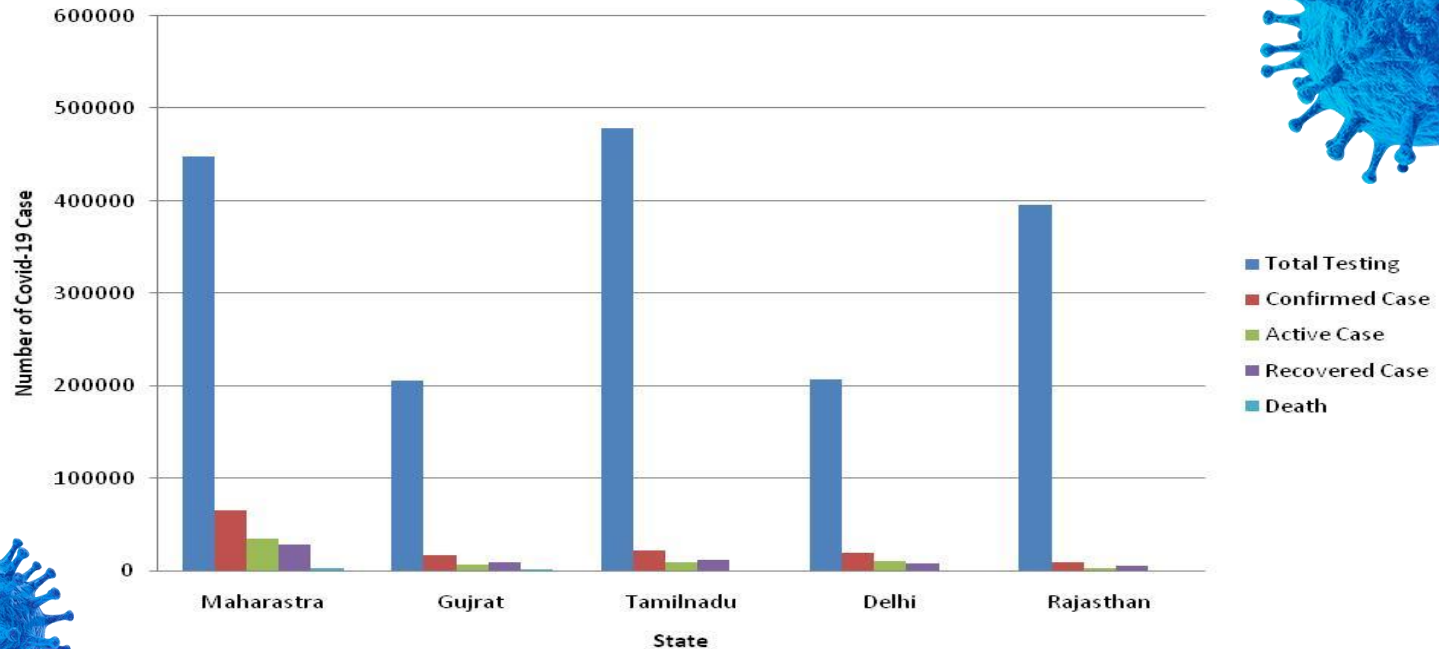
❖ **‘Bhilwara model’ of COVID-19 containment:** ^[67]

It involved uncompromising lockdown, followed by an even severe curfew aiming at cold heartedly containing the virus’ spread and preventing Bhilwara from becoming another Wuhan or Lombardy. Here more than 22 lakh people were screened. Out of these many were screened even more than once. In the state of Rajasthan, the success of Bhilwara prompted the Central Government to adopt the ‘Bhilwara model of containment’ on a nationwide scale.

STATEWISE COVID-19 DATA



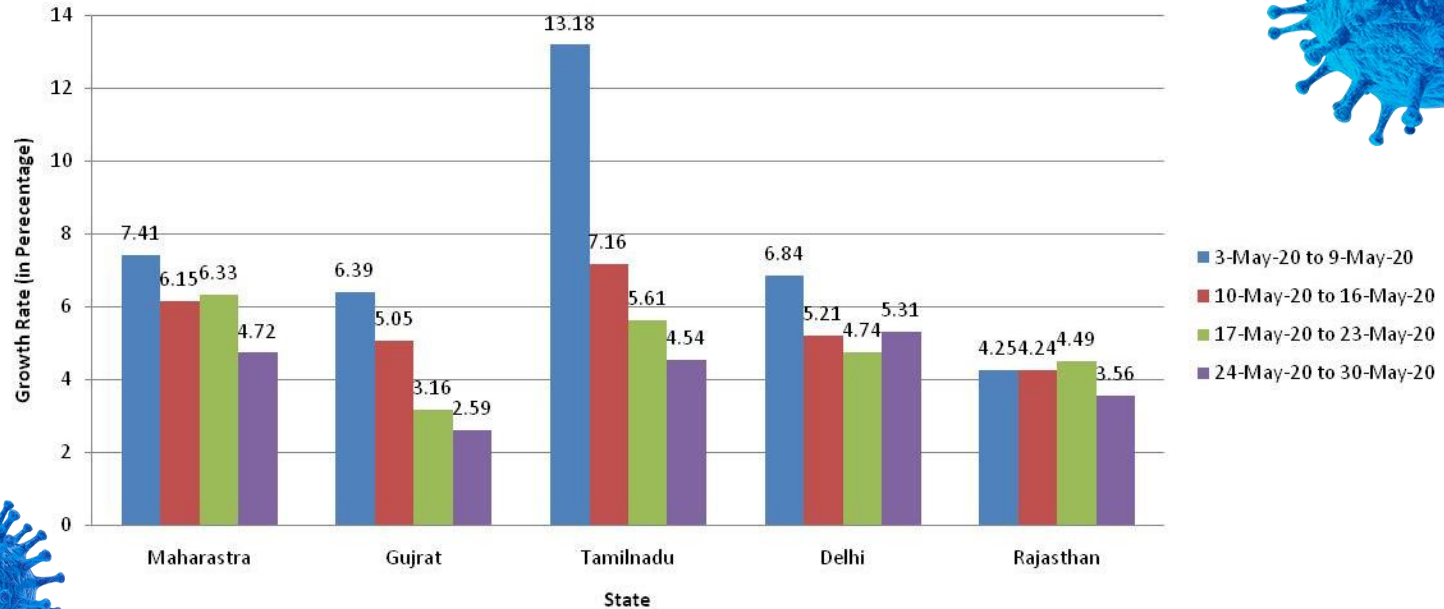
STATEWISE COVID-19 POSITIVE PATIENTS DETAILS



HOW DID THE 5 STATES FARE AGAINST COVID-19

STATE	CONFIRMED PER MILLION	ACTIVE CASES	RECOVERY RATE	MORTALITY RATE	TESTS PER MILLION
MAHARASHTRA	533.49	53.53%	43.09%	3.37%	3672.94
GUJARAT	240.75	37.41%	56.43%	6.15%	3029
TAMIL NADU	279.85	42.58%	56.64%	0.76%	6330
DELHI	936.10	54.22%	43.53%	2.24%	10433.98
RAJASTHAN	111.52	31.15%	66.60%	2.23%	5118.68

AVERAGE GROWTH RATE OF COVID-19

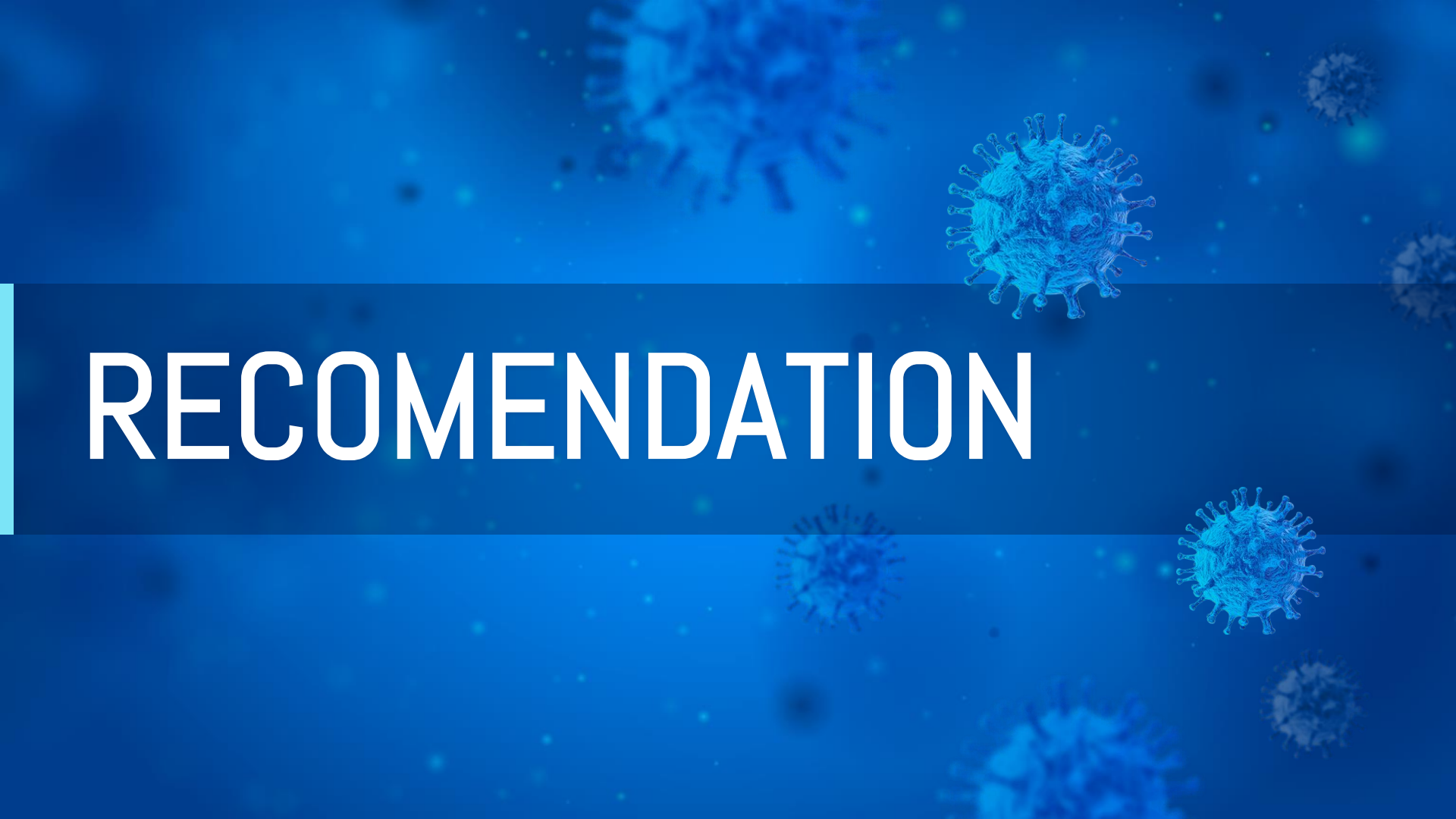


CONCLUSION

In all these states the Average Growth rate was less during the period (24th to 30th May) when compared with that during the period (3rd to 9th May).

- Plasma Transfusion Therapy has given encouraging results in the states of Delhi, Gujarat and Rajasthan. Earlier it has been used for SARS-2003, H1N1-2009 and eBola-2015.
- Maximum & minimum number of tests per million population have been conducted in Delhi & Gujarat respectively.
- Maximum & minimum number of confirmed cases per million population have been found in Maharashtra & Rajasthan respectively.
- The recovery rate has been maximum & minimum in Rajasthan & Maharashtra respectively
- The death rate has been maximum & minimum in Gujarat & Tamil Nadu respectively.
- Both the Central and State Governments have done all that was possible to contain the spread of Covid-19.

RECOMENDATION

The background of the slide is a solid blue color. It is decorated with several 3D-rendered virus particles, which are spherical with numerous spikes or protrusions on their surface. These particles are scattered across the frame, with some appearing in sharp focus and others blurred in the background, creating a sense of depth. A horizontal dark blue band runs across the middle of the slide, serving as a backdrop for the title text.

CORONAVIRUS

Symptoms, Travel Advisory and Preventive Measures

SYMPTOMS OF CORONAVIRUS



FEVER



COUGH



SHORTNESS
OF BREATH



SORE
THROAT



RUNNY
NOSE

TRAVEL ADVISORY



Avoid travel if you are unwell,
especially if you show any
symptoms of the virus



Avoid live farm
or wild animals



Register with your respective
Ministry of Foreign Affairs
before your travel

PREVENTIVE MEASURES



Wash hands with soap
and water before and
after food and toilet use



Wear a mask if you have
cough or runny nose
Masks can be worn for a
maximum of 8 hours



Avoid contact with
people who are sick,
especially those with
flu-like symptoms



Avoid touching eyes,
nose and mouth

World Health Organization
Ministry of Health Singapore
Information as of 30 January 2020

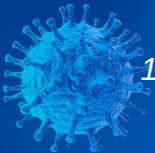
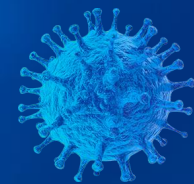


Now it depends upon the Public to take care of themselves as even though many trial studies are being carried out to make a vaccine and medicine, at present no specific treatment and vaccine is available for Covid-19 across the world. Prevention is the best way to keep oneself safe. Personal hygiene, Self-protection and Social distancing are a must and it is the only way forward in the fight against Covid-19.

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Thanks!

Do you have any questions?