

COURSE 2018-2021

# VACCINATION DRIVE OF INDIAN STATES

[West Bengal, Delhi,  
Uttar Pradesh,  
Maharashtra, Kerala]

FINAL SEMESTER PROJECT

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## **Contents:**

TOPIC	PAGE NO.
❖ <u>ACKNOWLEDGEMENTS</u>	3
❖ <u>EXECUTIVE SUMMARY</u>	4
❖ <u>INTRODUCTION</u>	5
❖ <u>METHODOLOGY</u>	6
• <u>EXPLORATORY DATA ANALYSIS</u>	7
• <u>ANALYTICAL RESULT</u>	16
• <u>TIME SERIES ANALYSIS</u>	35
• <u>ANALYTICAL RESULT</u>	42
❖ <u>CONCLUSIONS</u>	48
❖ <u>REFERENCE</u>	50
❖ <u>DATA USED IN PROJECT</u>	51

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## **Executive summary:**

The worldwide spread of Covid-19 caused a nationwide lockdown in India from 24<sup>th</sup> March 2020 and was further extended up to 31<sup>st</sup> May 2020 to break off the transmission of novel Corona virus. The COVID-19 vaccine was launched in India on 16<sup>th</sup> January, 2021. In this project I aim to forecast when the whole vaccination process might end for West Bengal, Maharashtra, Uttar Pradesh, Kerala and Delhi. The available date is from 16<sup>th</sup> January 2021 to 9<sup>th</sup> May 2021.

By Exploratory Analysis I intend to see comparative Vaccination drive for the 5 States. And I found out that the Vaccination drive is high in the state of Maharashtra followed by Uttar Pradesh, West Bengal, Kerala and Delhi. The Covishield production is higher compared to the Covaxin production. And the total male individual vaccinated is more than the female and transgender individual in every state except the Kerala.

I have used time series forecasting method to forecast the estimated date of ending of vaccination drive.

Through my findings I can say that the nationwide vaccination might end near between September and November of 2022. But that is a hypothetical fact based on these 5 States i.e. the nationwide Vaccination might end earlier or later the given period.

## **Introduction:**

In December 2019, a disease, later named COVID-19, was identified in Wuhan of China and within 3 months more than 100 countries have been affected by devastating consequences (Wang and Su 2020). The COVID-19 pandemic in India is part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first case of COVID-19 in India, which originated from China, was reported on 30 January 2020. India currently has the largest number of confirmed cases in Asia. As of 23 May 2021, India has the second-highest number of confirmed cases in the world (after the United States) with 26.7 million reported cases of COVID-19 infection and the third-highest number of COVID-19 deaths. Till 3<sup>rd</sup> May 2020, the cumulative number of total infection by COVID-19 was more than forty thousand across India. To avert the infection, countries have strictly restricted the movement of people and transportation, reducing human interactions, enforcing strict quarantine, prohibiting large-scale private and public gatherings, encouraging social-distancing, and restricting private and public transportations and economic behavior.

The COVID-19 vaccine was launched in India on 16<sup>th</sup> January, 2021. The first group includes healthcare and frontline workers. The second group to receive COVID-19 vaccine are persons over 60 years of age as of January 1<sup>st</sup>, 2022 and persons between 45 and 59 years with comorbid conditions.

The Drugs Controller General of India (DGL), the national level drug regulator, so far, has granted approval to two vaccines for 'restricted use in an emergency situation'. The two vaccines are: (1) **COVISHIELD** (developed by Oxford – AstraZeneca and manufactured by the Serum Institute of India) and (2) **COVAXIN** (developed by Bharat Biotech).

Of the two vaccines approved, *Covishield* is the better known. It's a version of the Oxford University-AstraZeneca vaccine that was found to have an average efficacy of 70.4% in a peer reviewed study. Covishield is an Indian version made by the world's largest vaccines manufacturer, the Serum Institute of India, and phase III trials on an Indian cohort have begun, with 1600 people enrolled in November.

*Covaxin* is India's first home produced vaccine against covid-19. It was developed by Bharat Biotech in collaboration with the Indian Council of Medical Research and the National Institute of Virology, and 25 800 people have been registered for trials across the country. On 21<sup>st</sup> January, *The Lancet* published Covaxin's phase I trial data, giving it a green light for safety and stating that it generates adequate immune response, but said further efficacy trials were warranted. Both vaccines require two doses to work.

India has administered over 158 million Covid-19 vaccine doses as of May 4<sup>th</sup>, in a country of 1.4 billion people. With vaccination supplies dwindling, and delivery rates dropping however, the government's goal to vaccinate 300 million Indians by August 2021 cannot possibly be realized.

## **Methodology:**

### **❖ Theoretical reference:**

[Reference](#)

### **❖ Data:**

[Data for the Project](#)

### **❖ Variables:**

The Variables in my Dataset are:

1. Total Individuals Vaccinated
2. First Dose Administered
3. Second Dose Administered
4. Male Individuals Vaccinated
5. Female Individuals Vaccinated
6. Transgender Individuals Vaccinated
7. Total Covaxin Administered
8. Total Covishield Administered
9. Total Doses Administered

The following data is from 16/01/2021 to 09/05/2021

### **❖ Software used:**

RStudio version 1.4.1106

Minitab20.3.0.0

Note: Code and package descriptions can be found on Rdocumentation. Here I have excluded that part to make the report size standard.

## ❖ Analysis:

### Part 1: Exploratory Data Analysis:

#### ❖ Theory:

In this part, I'm going to explore the data using basic statistical formulas in R programming and graphs like mean, standard deviation, line chart, bar graph, pie charts etc. And using the formula mean  $\pm$  SD , I will try to see the distribution of :- Total Individuals Vaccinated, First Dose Administered, Second Dose Administered, Male Individuals Vaccinated, Female Individuals Vaccinated, Transgender Individuals Vaccinated, Total Covaxin Administered, Total Covishield Administered, Total Doses Administered.

And I used Minitab to calculate the following Central Tendency and Dispersion of Data:-

Mean, SE Mean, Standard Deviation, Variance, Coefficient of Variation, Minimum, Quartile 1, Median, Quartile 3, Maximum, Range, Inter Quartile Range, Skewness and Kurtosis.

Then I will try to plot through R Programming:-

Intra state graph for Total Vaccination & Interstate graph for Total Vaccination.

Next I will try to plot a bar diagram of the Vaccines (Covishield & Covaxin) administered in different cities.

Next I will try to plot a Pie Chart showing Men, Women, Transgender vaccinated for different State.

The theoretical explanations of the notions are:

Central tendency is the tendency for the values of a random variable to cluster round its mean, mode, or median and Dispersion is the extent to which a distribution is stretched or squeezed. There are different measures of central tendency and dispersion. Some measures of central tendency are-

- Mean:- the sum of all measurements divided by the number of observations in the data set;
- Median:- the middle value that separates the higher half from the lower half of the data set;
- Midrange: - the arithmetic mean of the maximum and minimum values of a data set; etc. Some measures of dispersion are-

- Standard deviation:- the standard deviation is a measure of the amount of variation or dispersion of a set of values;
- Interquartile range: - the IQR is the third quartile subtracted from the first quartile, i.e.,  $IQR = Q3 - Q1$ .
- Variance:- the square of the standard deviation;
- Coefficient of variation:- the extent of variability in relation to the mean of the population, i.e., The coefficient of variation (CV) is defined as the ratio of the standard deviation  $\sigma$  to the mean  $\mu$ ; etc.,
- Skewness: - Skewness is a measure of the asymmetry of the probability distribution of a real valued random variable about its mean.
- Kurtosis: - Kurtosis is a measure of the "tailedness" of the probability distribution of a real valued random variable.

## ❖ Code:

\*[IN] means starting of a new code line here.

\*It is solely recommended to type the codes in R console/script and not copy paste from here as it might lead to some errors due to spacing and enters.

\*As I've saved my files in “C:\Users\USER\Desktop\Project” folder, I've given that file path name. It is necessary to change the path name according to needs.

```
#Taking necessary Libraries
```

```
[IN] library(dplyr)
```

```
[IN] library(ggplot2)
```

```
[IN] library(forecast)
```

```
#Reading the dataset
```

```
[IN] vaccine=read.csv("C:/Users/USER/Desktop/Project/vaccine_data.csv")
```

```
#Converting the Updated.On column into date variable for plot references
```

```
[IN] vaccine$Updated.On=as.Date(vaccine$Updated,format = "%d/%m/%Y")
```

```
#Reading the individual State date from the dataset
```

```
[IN] westbengal= vaccine[vaccine$State=="West Bengal",]
```

```
[IN] delhi=vaccine[vaccine$State=="Delhi",]
```

```
[IN] maharastra=vaccine[vaccine$State=="Maharashtra",]
```

```
[IN] uttarpradesh=vaccine[vaccine$State=="Uttar Pradesh",]
```

```
[IN] kerala=vaccine[vaccine$State=="Kerala",]
```

```
#Converting columns containing NA to zero
```

```
[IN] westbengal[is.na(westbengal)]=0
```

```
[IN] delhi[is.na(delhi)]=0
```

```
[IN] kerala[is.na(kerala)]=0
```

```
[IN] maharastra[is.na(maharastra)]=0
[IN] uttarpradesh[is.na(uttarpradesh)]=0
```

#Ommiting the last Row for plot references

```
[IN] westbengal=westbengal[-115,]
[IN] delhi=delhi[-115,]
[IN] kerala=kerala[-115,]
[IN] maharastra=maharastra[-115,]
[IN] uttarpradesh=uttarpradesh[-115,]
```

#Getting Mean

```
[IN] colMeans(westbengal[,-(1:2)])
[IN] colMeans(delhi[,-(1:2)])
[IN] colMeans(maharastra[,-(1:2)])
[IN] colMeans(uttarpradesh[,-(1:2)])
[IN] colMeans(kerala[,-(1:2)])
```

#Getting SD

```
[IN] apply(kerala[,-(1:2)],2,sd)
[IN] apply(westbengal[,-(1:2)],2,sd)
[IN] apply(delhi[,-(1:2)],2,sd)
[IN] apply(maharastra[,-(1:2)],2,sd)
[IN] apply(uttarpradesh[,-(1:2)],2,sd)
```

#Plotting Intra state graph for Individual Vaccination

```
[IN]ggplot(westbengal,aes(x=Updated.On))+geom_line(aes(y=Total.Individuals.Vaccinated,col="blue"))+scale_color_discrete(name="color",labels=c("Total individual Vaccinated"))+ggtitle("Total Vaccination of West Bengal")
```

```
[IN]ggplot(delhi,aes(x=Updated.On))+geom_line(aes(y=Total.Individuals.Vaccinated,col="red"))+scale_color_discrete(name="color",labels=c("Total individual Vaccinated"))+ggtitle("Total Vaccination of Delhi")
```

```
[IN]ggplot(uttarpradesh,aes(x=Updated.On))+geom_line(aes(y=Total.Individuals.Vaccinated,col="yellow"))+scale_color_discrete(name="color",labels=c("Total individual Vaccinated"))+ggtitle("Total Vaccination of Uttar Pradesh")
```

```
[IN]ggplot(maharastra,aes(x=Updated.On))+geom_line(aes(y=Total.Individuals.Vaccinated,col="orange"))+scale_color_discrete(name="color",labels=c("Total individual Vaccinated"))+ggtitle("Total Vaccination of Maharastra")
```

```
[IN]ggplot(kerala,aes(x=Updated.On))+geom_line(aes(y=Total.Individuals.Vaccinated,col="green"))+scale_color_discrete(name="color",labels=c("Total individual Vaccinated"))+ggtitle("Total Vaccination of Kerala")
```

#Plotting Inter state graph for Individual Vaccination

```
[IN]ggplot(NULL,aes(x=Updated.On,y=Total.Individuals.Vaccinated
))+geom_line(data=westbengal, aes(col="west
bengal"))+geom_line(data=delhi,
aes(col="delhi"))+geom_line(data=uttarpradesh
,aes(col="uttarpradesh"))+geom_line(data=maharastra,
aes(col="maharashtra"))+geom_line(data=kerala,
aes(col="kerala"))+theme_gray()+ggtitle("INTER CITY TOTAL
VACCINATION")
```

### #Barplot of Vaccine administered for Different State

```
[IN]vaccineadministered=cbind(westbengal[114,c(11,12)],delhi[11
4,c(11,12)],maharastra[114,c(11,12)],uttarpradesh[114,c(11,
12)],kerala[114,c(11,12)])
```

```
[IN]for( i in (1:10)) {
  if (i%%2==0){
    vaccineadministered[2,i-1]=vaccineadministered[1,i]
  }
  else vaccineadministered[2,i]=0
}
```

```
[IN]vaccineadministered=vaccineadministered[,-c(2,4,6,8,10)]
```

```
[IN]colnames(vaccineadministered)=c("WestBengal","Delhi","Mahar
ashtra","Uttar Pradesh","Kerala")
```

```
[IN]row.names(vaccineadministered)=c("Covaxin
Administered","Covishield Administered")
```

```

[IN]bar=barplot(as.matrix(vaccineadministered),col =
  c("#87F717", "#990012"),beside = T,ylim = c(0,20000000),xlab
  = "States",ylab = "Vaccinated",main = "Statewise Covaxin-
  Covishield comparison")

[IN]legend("topright",legend =
  row.names(vaccineadministered),fill=c("#87F717", "#990012"),
  cex = 0.5)

[IN]text(bar,as.matrix(vaccineadministered)-2,labels =
  as.matrix(vaccineadministered) ,cex = 0.8,pos = 3)

#Piechart of men women transgender vaccinated for different
State

#Pie chart for West Bengal data

[IN]a1=data.frame(c("Male Individual Vaccinated","Female
  Individual Vaccinated","Transgender
  Vaccinated"),c(4742419,4082492,1011))

[IN]colnames(a1)=c("gender","count")

[IN]ggplot(a1,aes(x="",y=count,fill=gender))+geom_bar(stat =
  "identity",width = 1)+coord_polar("y",
  start=1)+ggtitle("Pie chart for showing Male individual,
  Female individual, Transgender individual vaccinated for
  West Bengal")+theme(axis.text.x = element_blank())

#Pie chart for Delhi data

[IN]a2=data.frame(c("Male Individual Vaccinated","Female
  Individual Vaccinated","Transgender
  Vaccinated"),c(1771717,1273146,531))

```

```
[IN]colnames(a2)=c("gender", "count")
```

```
[IN]ggplot(a2,aes(x="",y=count,fill=gender))+geom_bar(stat =  
"identity",width = 1)+coord_polar("y",  
start=1)+ggtitle("Pie chart for showing Male individual,  
Female individual, Transgender individual vaccinated for  
Delhi")+theme(axis.text.x = element_blank())
```

#Pie chart of Uttar Pradesh data

```
[IN]a3=data.frame(c("Male Individual Vaccinated","Female  
Individual Vaccinated","Transgender  
Vaccinated"),c(6155890,4759115,1890))
```

```
[IN]colnames(a3)=c("gender", "count")
```

```
[IN]ggplot(a3,aes(x="",y=count,fill=gender))+geom_bar(stat =  
"identity",width = 1)+coord_polar("y",  
start=1)+ggtitle("Pie chart for showing Male individual,  
Female individual, Transgender individual vaccinated for  
Uttar Pradesh")+theme(axis.text.x = element_blank())
```

#Pie chart of Maharashtra data

```
[IN]a4=data.frame(c("Male Individual Vaccinated","Female  
Individual Vaccinated","Transgender  
Vaccinated"),c(7934067,6776255,1924))
```

```
[IN]colnames(a4)=c("gender", "count")
```

```
[IN]ggplot(a4,aes(x="",y=count,fill=gender))+geom_bar(stat =  
"identity",width = 1)+coord_polar("y",  
start=1)+ggtitle("Pie chart for showing Male individual,  
Female individual, Transgender individual vaccinated for  
Maharashtra")+theme(axis.text.x = element_blank())
```

#Pie chart of Kerala data

```
[IN]a5=data.frame(c("Male Individual Vaccinated","Female  
Individual Vaccinated","Transgender  
Vaccinated"),c(2809173,3377686,793))
```

```
[IN]colnames(a5)=c("gender", "count")
```

```
[IN]ggplot(a5,aes(x="",y=count,fill=gender))+geom_bar(stat =  
"identity",width = 1)+coord_polar("y",  
start=1)+ggtitle("Pie chart for showing Male individual,  
Female individual, Transgender individual vaccinated for  
Kerala")+theme(axis.text.x = element_blank())
```

## ❖ Analytical Results:

Let us now see the results or outputs given by the codes given above. I've arranged them in a tabulated form to make them easily understandable.

- The Mean and SD of the Variables of the following States are shown in the following table:-

## ❖ Distribution of data of West Bengal

	<u>Mean <math>\pm</math> SD</u>
• <b>Total Individuals Vaccinated</b>	$3423655.4435 \pm 3270363.6545$
• <b>First Dose Administered</b>	$3423655.4435 \pm 3270363.6545$
• <b>Second Dose Administered</b>	$660513.4783 \pm 830663.5785$
• <b>Male Individuals Vaccinated</b>	$1861839.4348 \pm 1762797.6590$
• <b>Female Individuals Vaccinated</b>	$1561404.5913 \pm 1509780.3263$
• <b>Transgender Individuals Vaccinated</b>	$411.4174 \pm 351.5941$
• <b>Total Covaxin Administered</b>	$403593.3043 \pm 435524.4662$
• <b>Total Covishield Administered</b>	$3637831.5913 \pm 3635074.1713$
• <b>Total Doses Administered</b>	$4084168.9217 \pm 4042249.6468$

## ❖ Distribution of data of Delhi

	<u>Mean <math>\pm</math> SD</u>
• <b>Total Individuals Vaccinated</b>	$960682.9217 \pm 950724.0453$
• <b>First Dose Administered</b>	$960682.9217 \pm 950724.0453$
• <b>Second Dose Administered</b>	$219863.0261 \pm 251811.2862$
• <b>Male Individuals Vaccinated</b>	$578645.1478 \pm 546418.9852$
• <b>Female Individuals Vaccinated</b>	$381860.6783 \pm 405121.5326$
• <b>Transgender Individuals Vaccinated</b>	$177.0957 \pm 161.2798$
• <b>Total Covaxin Administered</b>	$321889.3565 \pm 378188.4289$
• <b>Total Covishield Administered</b>	$845265.7391 \pm 831989.8358$
• <b>Total Doses Administered</b>	$1180545.9478 \pm 1200246.6097$

## ❖ Distribution of data of Uttar Pradesh

<i>Mean ± SD</i>	
• <b>Total Individuals Vaccinated</b>	3977121.0522 ± 3789004.5522
• <b>First Dose Administered</b>	3977121.0522 ± 3789004.5522
• <b>Second Dose Administered</b>	827483.5826 ± 830917.3872
• <b>Male Individuals Vaccinated</b>	2235740.1304 ± 2148860.2871
• <b>Female Individuals Vaccinated</b>	1740838.2957 ± 1641115.8829
• <b>Transgender Individuals Vaccinated</b>	542.6261 ± 624.6891
• <b>Total Covaxin Administered</b>	482840.2696 ± 458691.3370
• <b>Total Covishield Administered</b>	4235013.5478 ± 4202106.0324
• <b>Total Doses Administered</b>	4804604.6348 ± 4602254.9369

## ❖ Distribution of data of Maharashtra

<i>Mean ± SD</i>	
• <b>Total Individuals Vaccinated</b>	4729740.9565 ± 4981624.8113
• <b>First Dose Administered</b>	4729740.9565 ± 4981624.8113
• <b>Second Dose Administered</b>	727077.3043 ± 904726.9728
• <b>Male Individuals Vaccinated</b>	2538190.6261 ± 2691967.9999
• <b>Female Individuals Vaccinated</b>	2190941.1391 ± 2289228.3638
• <b>Transgender Individuals Vaccinated</b>	609.1913 ± 601.6488
• <b>Total Covaxin Administered</b>	551056.0870 ± 676315.0356
• <b>Total Covishield Administered</b>	4858220.5130 ± 5208076.4482
• <b>Total Doses Administered</b>	4602254.9369 ± 5849866.9019

## ❖ Distribution of data of Kerala

<i>Mean ± SD</i>	
• <b>Total Individuals Vaccinated</b>	2259317.3565 ± 2252101.8323
• <b>First Dose Administered</b>	2259317.3565 ± 2252101.8323
• <b>Second Dose Administered</b>	391698.2609 ± 465045.6831
• <b>Male Individuals Vaccinated</b>	1003644.9130 ± 1033129.8763
• <b>Female Individuals Vaccinated</b>	1255429.8174 ± 1219062.4767
• <b>Transgender Individuals Vaccinated</b>	242.6261 ± 284.1820
• <b>Total Covaxin Administered</b>	124184.5478 ± 129339.2016
• <b>Total Covishield Administered</b>	2493389.8087 ± 2586311.8233
• <b>Total Doses Administered</b>	2651015.6174 ± 2689443.9491

## ❖ Central Tendency and Dispersion of Data:

(Used Minitab to calculate the following)

### • West Bengal:

<u>Variable</u>	<u>Mean</u>	<u>SE Mean</u>	<u>Standard Deviation</u>	<u>Variance</u>	<u>Coefficient of Variation</u>	<u>Minimum</u>	<u>Q1</u>
<i>Total individuals Vaccinated</i>	3453688	306155	3268836	1.06853E+13	94.65	1917	473554
<i>First Dose Administered</i>	3453688	306155	3268836	1.06853E+13	94.65	1917	473554
<i>Second Dose Administered</i>	666307	77923	831994	6.92213E+11	124.87	0	813
<i>Male Individuals Vaccinated.</i>	1878171	165010	1761820	3.10401E+12	93.81	956	198515
<i>Female Individuals Vaccinated.</i>	1575101	141354	1509253	2.27784E+12	95.82	961	274913
<i>Transgender Individuals Vaccinated</i>	415.0	32.9	351.0	123201.4	84.57	0.0	115.0
<i>Total Covaxin Administered</i>	407134	40815	435782	1.89906E+11	107.04	0	9999
<i>Total CoviShield Administered</i>	3669742	340440	3634908	1.32126E+13	99.05	1917	463556
<i>Total Doses Administered</i>	4119995	378541	4041717	1.63355E+13	98.10	1917	474367
<u>Variable</u>	<u>Median</u>	<u>Q3</u>	<u>Maximum</u>	<u>Range</u>	<u>IQR</u>	<u>Skewness</u>	<u>Kurtosis</u>
<i>Total individuals Vaccinated</i>	1998463	7098683	8825922	8824005	6625129	0.49	-1.41
<i>First Dose Administered</i>	1998463	7098683	8825922	8824005	6625129	0.49	-1.41
<i>Second Dose Administered</i>	358721	944221	3137939	3137939	943408	1.47	1.30
<i>Male Individuals Vaccinated.</i>	1204345	3806135	4742419	4741463	3607621	0.43	-1.44
<i>Female Individuals Vaccinated.</i>	793882	3291744	4082492	4081531	3016831	0.55	-1.37
<i>Transgender Individuals Vaccinated</i>	237.0	804.3	1011.0	1011.0	689.3	0.51	-1.36
<i>Total Covaxin Administered</i>	204917	791270	1262952	1262952	781272	0.73	-0.99
<i>Total CoviShield Administered</i>	1793546	7251634	10700909	10698992	6788079	0.60	-1.18
<i>Total Doses Administered</i>	2357184	8042904	11963861	11961944	7568537	0.61	-1.14

- **Delhi:**

<u>Variable</u>	<u>Mean</u>	<u>SE Mean</u>	<u>Standard Deviation</u>	<u>Variance</u>	<u>Coefficient of Variation</u>	<u>Minimum</u>	<u>Q1</u>
<i>Total individuals Vaccinated</i>	960691	88655	950716	9.03861E+11	98.96	892	164976
<i>First Dose Administered</i>	960691	88655	950716	9.03861E+11	98.96	892	164976
<i>Second Dose Administered</i>	219863	23482	251811	6340892389	114.53	0	0
<i>Male Individuals Vaccinated.</i>	578650	50953	546414	2.98568E+11	94.43	525	106900
<i>Female Individuals Vaccinated.</i>	381864	37777	405118	1.64121E+11	106.09	367	58057
<i>Transgender Individuals Vaccinated</i>	177.1	15.0	161.3	26011.2	91.07	0.0	19.0
<i>Total Covaxin Administered</i>	321890	35266	378188	1.43026E+11	117.49	33	19955
<i>Total CoviShield Administered</i>	845273	77583	831982	6.92194E+11	98.43	859	145021
<i>Total Doses Administered</i>	118055 4	111923	1200239	1.44057E+12	101.67	892	164976
<u>Variable</u>	<u>Media n</u>	<u>Q3</u>	<u>Maximum</u>	<u>Range</u>	<u>IQR</u>	<u>Skewness</u>	<u>Kurtosis</u>
<i>Total individuals Vaccinated</i>	498281	1780609	3045394	3044502	1615633	0.80	-0.80
<i>First Dose Administered</i>	498281	1780609	3045394	3044502	1615633	0.80	-0.80
<i>Second Dose Administered</i>	120758	365110	862075	862075	365110	1.04	-0.06
<i>Male Individuals Vaccinated.</i>	344550	1037794	1771717	1771192	930894	0.74	-0.83
<i>Female Individuals Vaccinated.</i>	153615	742505	1273146	1272779	684448	0.86	-0.76
<i>Transgender Individuals Vaccinated</i>	116.0	310.0	531.0	531.0	291.0	0.61	-0.86
<i>Total Covaxin Administered</i>	107714	602240	1244756	1244723	582285	1.03	-0.35
<i>Total CoviShield Administered</i>	390567	1543479	2662713	2661854	1398458	0.76	-0.83
<i>Total Doses Administered</i>	619039	2145719	3907469	3906577	1980743	0.84	-0.67

- **Uttar Pradesh:**

<b><u>Variable</u></b>	<b><u>Mean</u></b>	<b><u>SE Mean</u></b>	<b><u>Standard Deviation</u></b>	<b><u>Variance</u></b>	<b><u>Coefficient of Variation</u></b>	<b><u>Minimum</u></b>	<b><u>Q1</u></b>
<i>Total individuals Vaccinated</i>	4012008	354698	3787136	1.43424E+13	94.40	1532	864074
<i>First Dose Administered</i>	4012008	354698	3787136	1.43424E+13	94.40	1532	864074
<i>Second Dose Administered</i>	834742	77822	830916	6.90421E+11	99.54	0	2
<i>Male Individuals Vaccinated.</i>	2255352	201177	2147985	4.61384E+12	95.24	907	428997
<i>Female Individuals Vaccinated.</i>	1756109	153613	1640135	2.69004E+12	93.40	625	435024
<i>Transgender Individuals Vaccinated</i>	547.4	58.6	625.3	391061.3	114.24	0.0	53.0
<i>Total Covaxin Administered</i>	487076	42938	458452	2.10178E+11	94.12	42	139396
<i>Total CoviShield Administered</i>	4272163	393520	4201648	1.76538E+13	98.35	1490	724678
<i>Total Doses Administered</i>	4846750	430851	4600230	2.11621E+13	94.91	1532	864075
<b><u>Variable</u></b>	<b><u>Median</u></b>	<b><u>Q3</u></b>	<b><u>Maximum</u></b>	<b><u>Range</u></b>	<b><u>IQR</u></b>	<b><u>Skewness</u></b>	<b><u>Kurtosis</u></b>
<i>Total individuals Vaccinated</i>	2038573	7672246	10916895	10915363	6808172	0.63	-1.19
<i>First Dose Administered</i>	2038573	7672246	10916895	10915363	6808172	0.63	-1.19
<i>Second Dose Administered</i>	621269	1284977	2780682	2780682	1284976	0.77	-0.48
<i>Male Individuals Vaccinated.</i>	1192950	4315706	6155890	6154983	3886709	0.60	-1.21
<i>Female Individuals Vaccinated.</i>	845447	3355547	4759115	4758490	2920523	0.67	-1.15
<i>Transgender Individuals Vaccinated</i>	177.0	992.5	1890.0	1890.0	939.5	0.94	-0.62
<i>Total Covaxin Administered</i>	242507	897547	1516757	1516715	758151	0.67	-0.84
<i>Total CoviShield Administered</i>	1796067	8059676	12180820	12179330	7334998	0.66	-1.14
<i>Total Doses Administered</i>	2659842	8957223	13697577	13696045	8093148	0.65	-1.10

- **Maharashtra:**

<u>Variable</u>	<u>Mean</u>	<u>SE Mean</u>	<u>Standard Deviation</u>	<u>Variance</u>	<u>Coefficient of Variation</u>	<u>Minimum</u>	<u>Q1</u>
<i>Total individuals Vaccinated</i>	4729791	464534	4981577	2.48161E+13	105.32	5726	620539
<i>First Dose Administered</i>	4729791	464534	4981577	2.48161E+13	105.32	5726	620539
<i>Second Dose Administered</i>	727077	84366	904727	8.18531E+11	124.43	0	0
<i>Male Individuals Vaccinated.</i>	2538223	251024	2691938	7.24653E+12	106.06	3569	281870
<i>Female Individuals Vaccinated.</i>	2190959	213470	2289211	5.24049E+12	104.48	2057	338533
<i>Transgender Individuals Vaccinated</i>	609.2	56.1	601.6	361970.6	98.76	1.0	136.0
<i>Total Covaxin Administered</i>	551057	63067	676314	4.57401E+11	122.73	85	5258
<i>Total CoviShield Administered</i>	4858270	485651	5208030	2.71236E+13	107.20	5641	615281
<i>Total Doses Administered</i>	5456868	545499	5849820	3.42204E+13	107.20	5726	620539
<u>Variable</u>	<u>Median</u>	<u>Q3</u>	<u>Maximum</u>	<u>Range</u>	<u>IQR</u>	<u>Skewness</u>	<u>Kurtosis</u>
<i>Total individuals Vaccinated</i>	2006329	9220161	14712246	14706520	8599622	0.76	-0.98
<i>First Dose Administered</i>	2006329	9220161	14712246	14706520	8599622	0.76	-0.98
<i>Second Dose Administered</i>	411776	971735	3351099	3351099	971735	1.43	1.10
<i>Male Individuals Vaccinated.</i>	1097386	4961415	7934067	7930498	4679545	0.76	-0.98
<i>Female Individuals Vaccinated.</i>	908680	4257679	6776255	6774198	3919146	0.77	-0.97
<i>Transgender Individuals Vaccinated</i>	263.0	1067.0	1924.0	1923.0	931.0	0.87	-0.68
<i>Total Covaxin Administered</i>	51243	1043756	2053522	2053437	1038498	0.85	-0.74
<i>Total CoviShield Administered</i>	1955086	9148140	16009823	16004182	8532859	0.83	-0.78
<i>Total Doses Administered</i>	2418105	10191896	18063345	18057619	9571357	0.83	-0.77

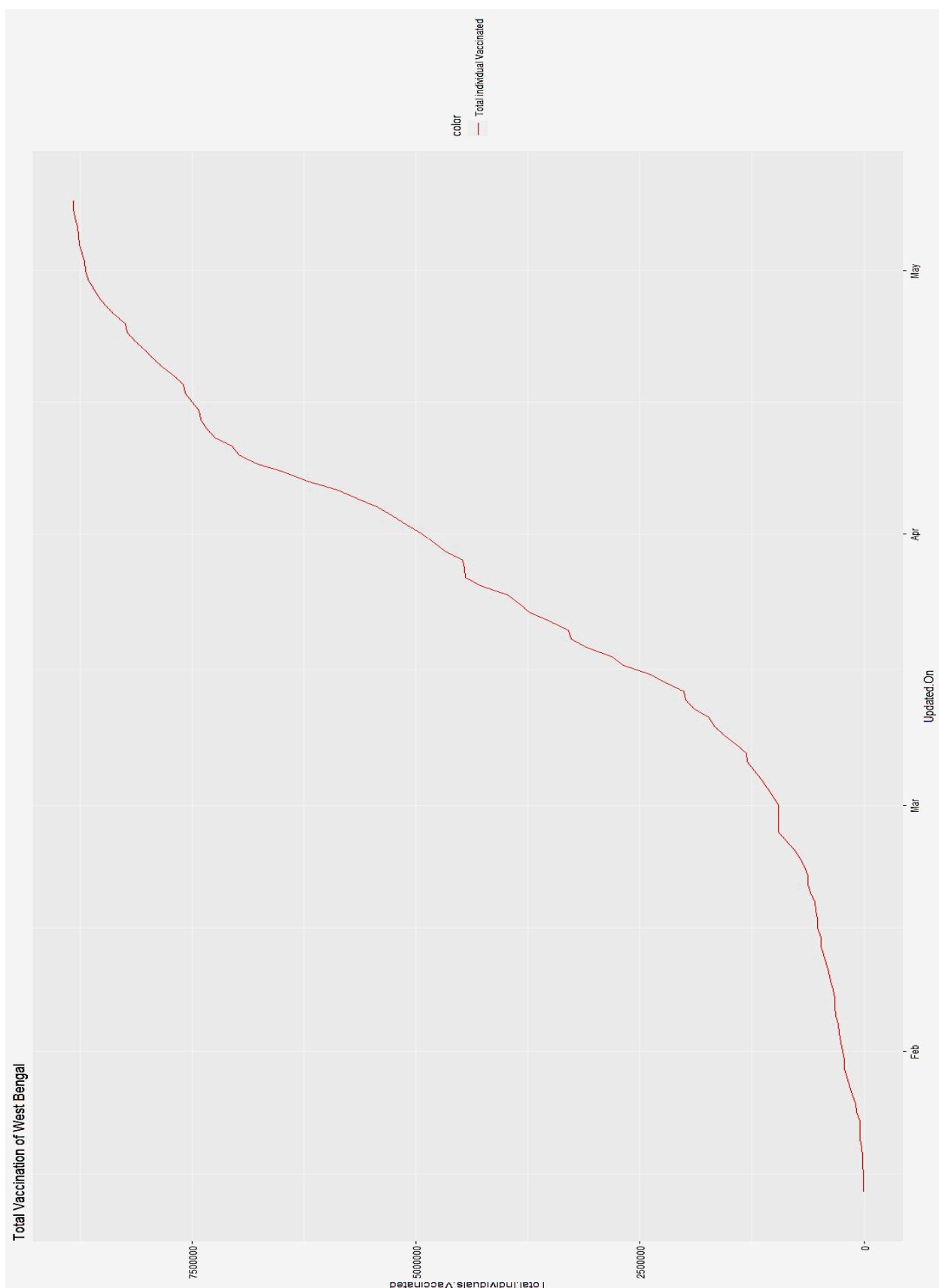
- **Kerala:**

<u>Variable</u>	<u>Mean</u>	<u>SE Mean</u>	<u>Standard Deviation</u>	<u>Variance</u>	<u>Coefficient of Variation</u>	<u>Minimum</u>	<u>Q1</u>
<i>Total individuals Vaccinated</i>	2259332	210008	2252087	5.07190E+12	99.68	1681	326974
<i>First Dose Administered</i>	2259332	210008	2252087	5.07190E+12	99.68	1681	326974
<i>Second Dose Administered</i>	391698	43366	465046	2.16267E+11	118.73	0	0
<i>Male Individuals Vaccinated.</i>	1003650	96339	1033125	1.06735E+12	102.94	593	90610
<i>Female Individuals Vaccinated.</i>	1255439	113677	1219053	1.48609E+12	97.10	1088	236353
<i>Transgender Individuals Vaccinated</i>	242.6	26.5	284.2	80759.4	117.13	0.0	11.0
<i>Total Covaxin Administered</i>	124185	12061	129339	16728629063	104.15	0	8514
<i>Total CoviShield Administered</i>	2493404	241173	2586298	6.68894E+12	103.73	1681	318460
<i>Total Doses Administered</i>	2651030	250791	2689429	7.23303E+12	101.45	1681	326974
<u>Variable</u>	<u>Median</u>	<u>Q3</u>	<u>Maximum</u>	<u>Range</u>	<u>IQR</u>	<u>Skewness</u>	<u>Kurtosis</u>
<i>Total individuals Vaccinated</i>	1042086	4333798	6187652	6185971	4006824	0.61	-1.24
<i>First Dose Administered</i>	1042086	4333798	6187652	6185971	4006824	0.61	-1.24
<i>Second Dose Administered</i>	279614	496868	1764904	1764904	496868	1.40	1.14
<i>Male Individuals Vaccinated.</i>	438226	1944347	2809173	2808580	1853737	0.60	-1.25
<i>Female Individuals Vaccinated.</i>	603811	2388985	3377686	3376598	2152632	0.62	-1.22
<i>Transgender Individuals Vaccinated</i>	49.0	466.0	793.0	793.0	455.0	0.79	-0.96
<i>Total Covaxin Administered</i>	67645	149990	416217	416217	141476	1.05	-0.12
<i>Total CoviShield Administered</i>	974441	4680676	7536339	7534658	4362216	0.68	-1.07
<i>Total Doses Administered</i>	1321700	4830666	7952556	7950875	4503692	0.70	-1.02

## ❖Intra-State Graphs of Individual Vaccinated:

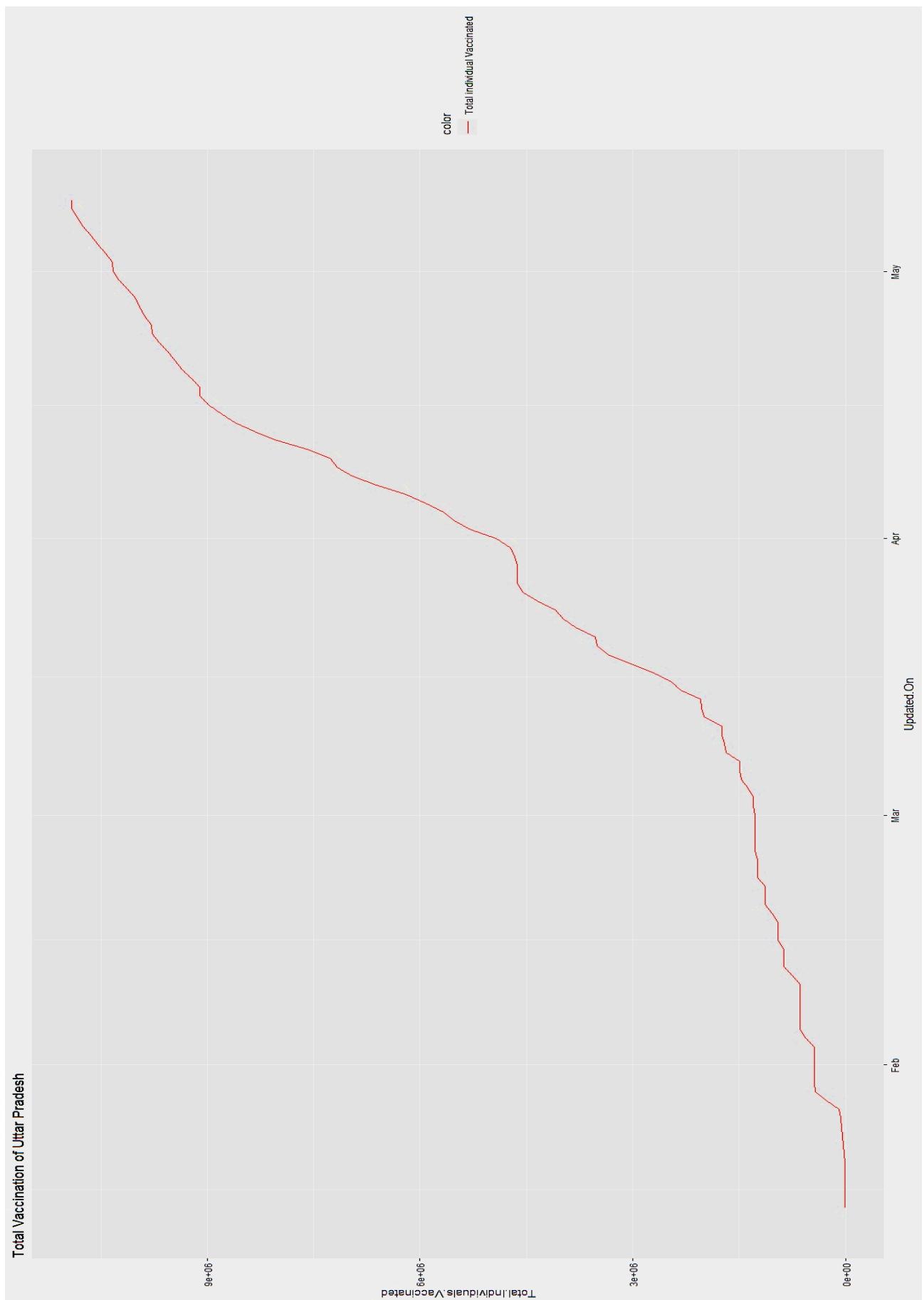
(From 16/01/2021 to 09/05/2021)

- Total Vaccination of West Bengal :

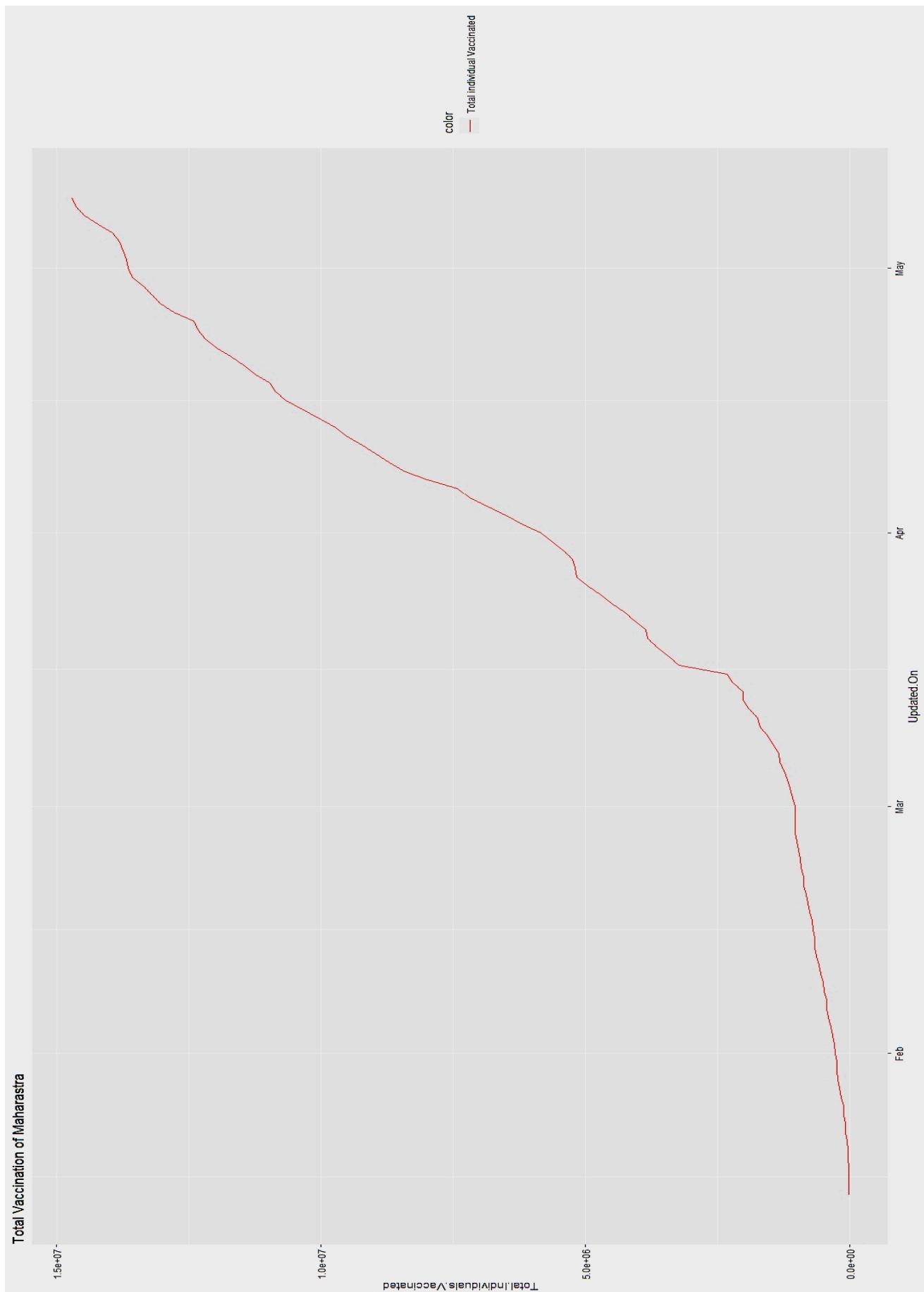


## ❖ Total Vaccination of Delhi:

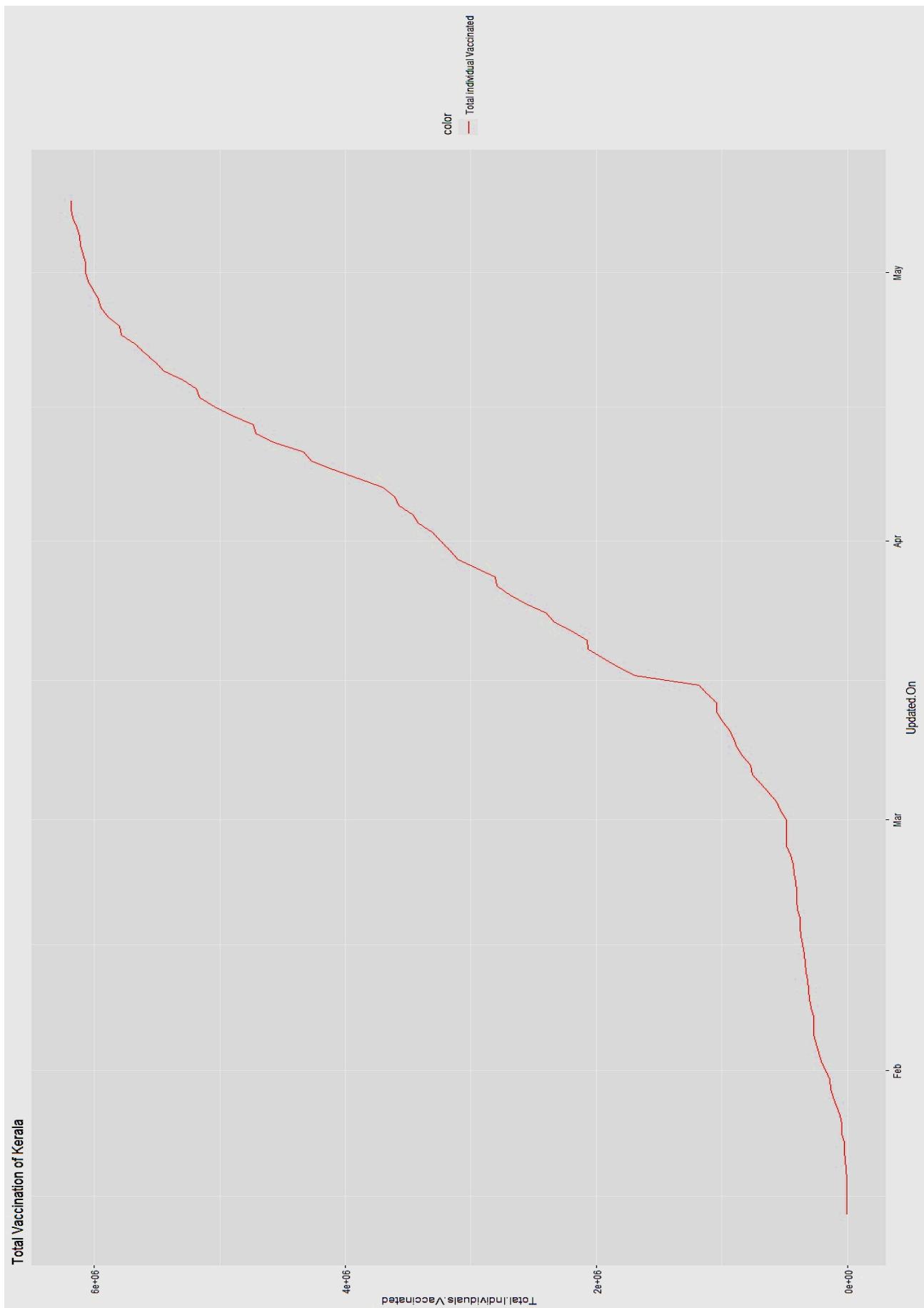
## ❖ Total Vaccination of Uttar Pradesh:



## ❖ Total Vaccination of Maharashtra:

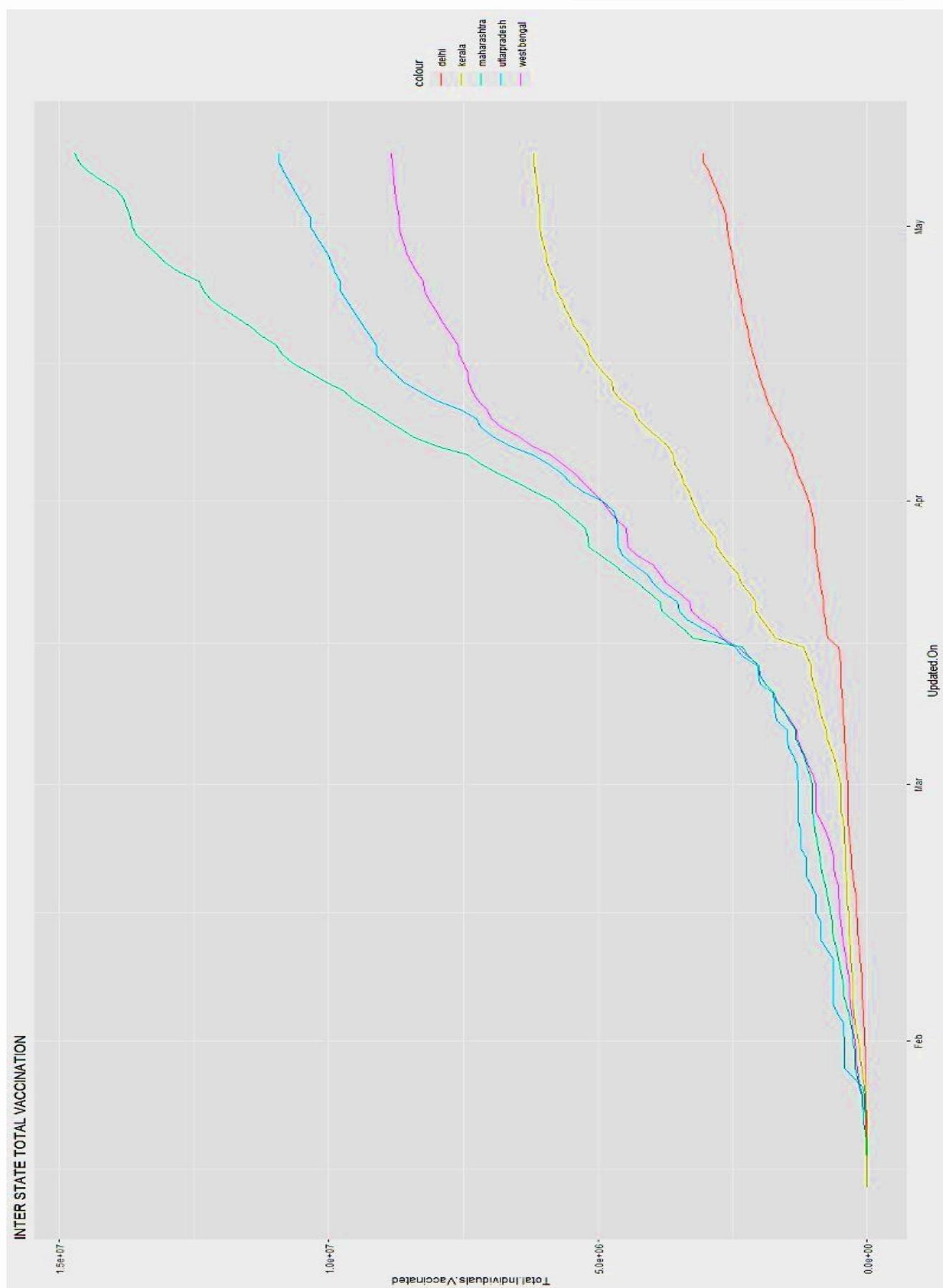


## ❖ Total Vaccination of Kerala:



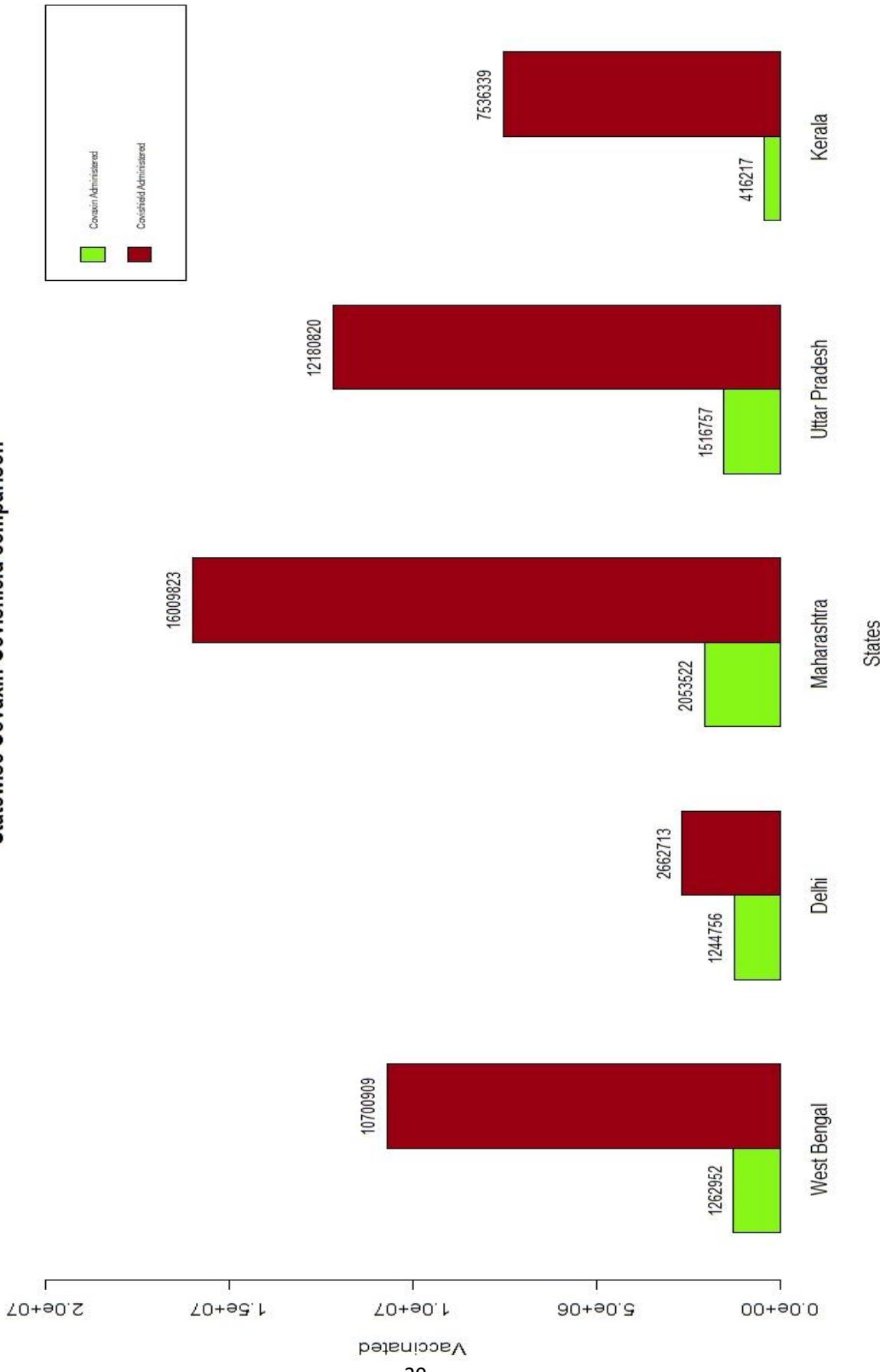
## ❖Inter-State Graph of Individual Vaccinated :-

(From 16/01/2021 to 09/05/2021)



❖ **Bar Plot showing state wise Covaxin-Covishield Administered :-** (From 16/01/2021 to 09/05/2021)

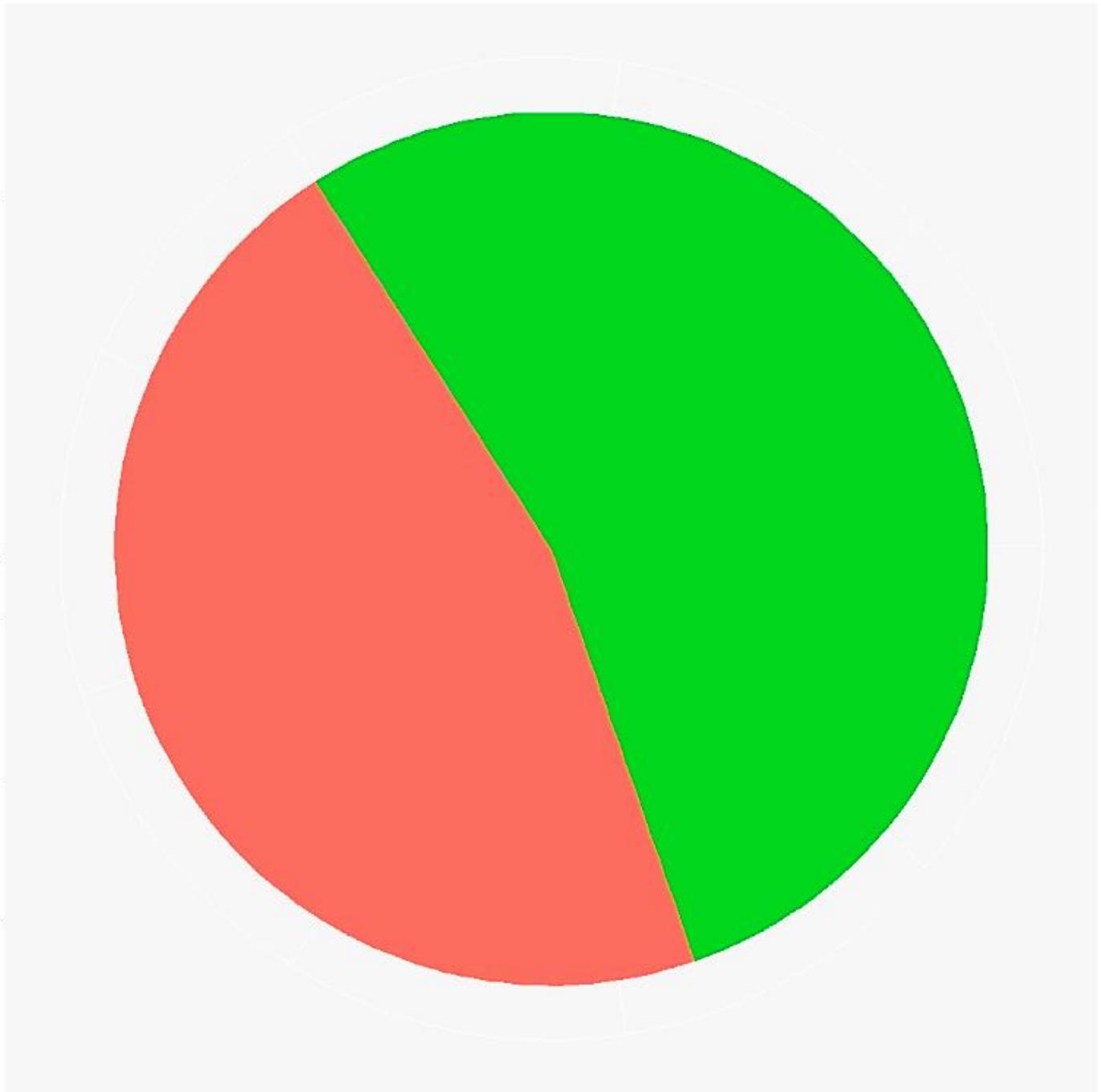
Statewise Covaxin-Covishield comparison



❖ **Pie Charts showing Men Women & Transgender Vaccinated for different states:-**

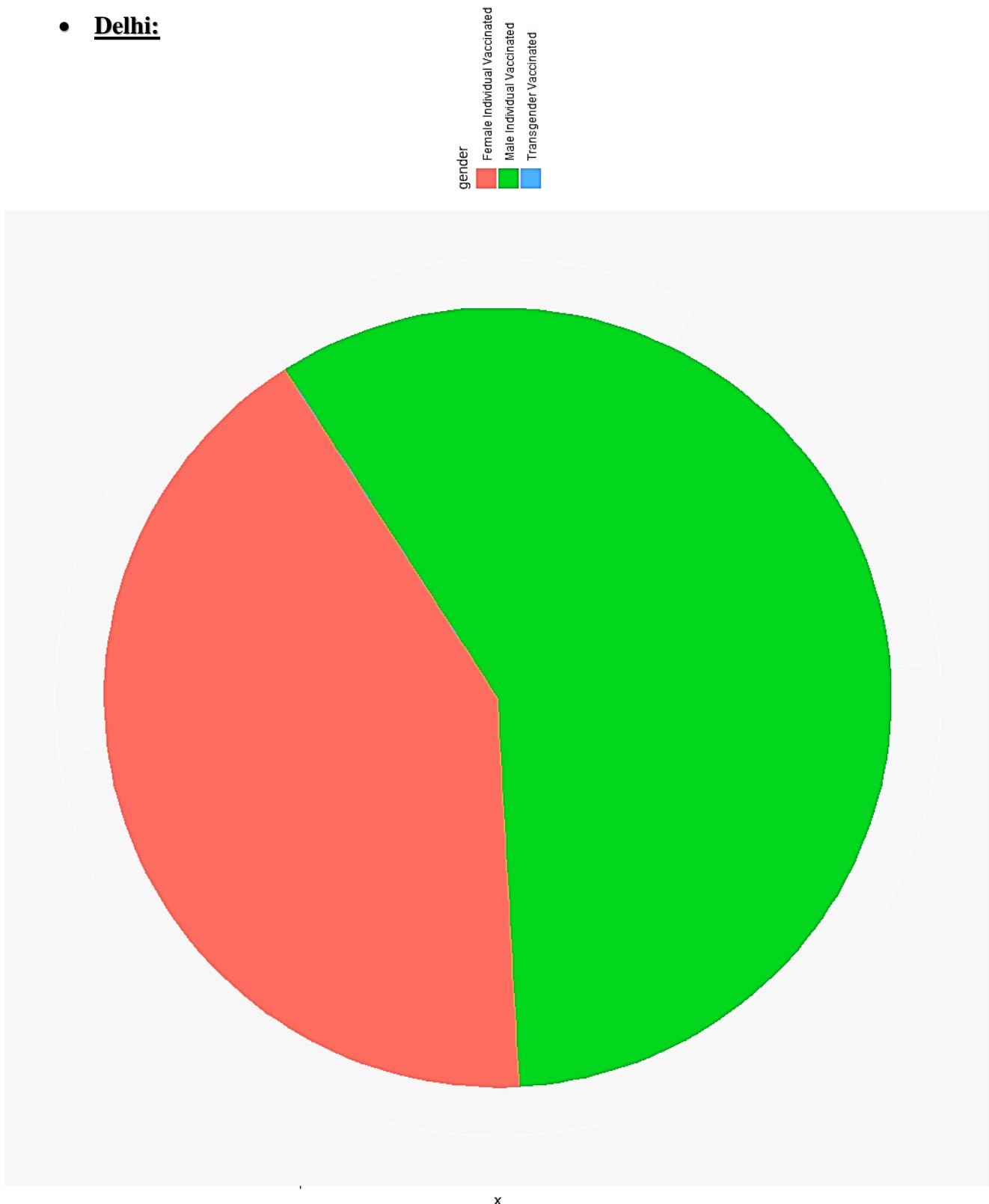
(From 16/01/2021 to 09/05/2021)

- **WestBengal:**



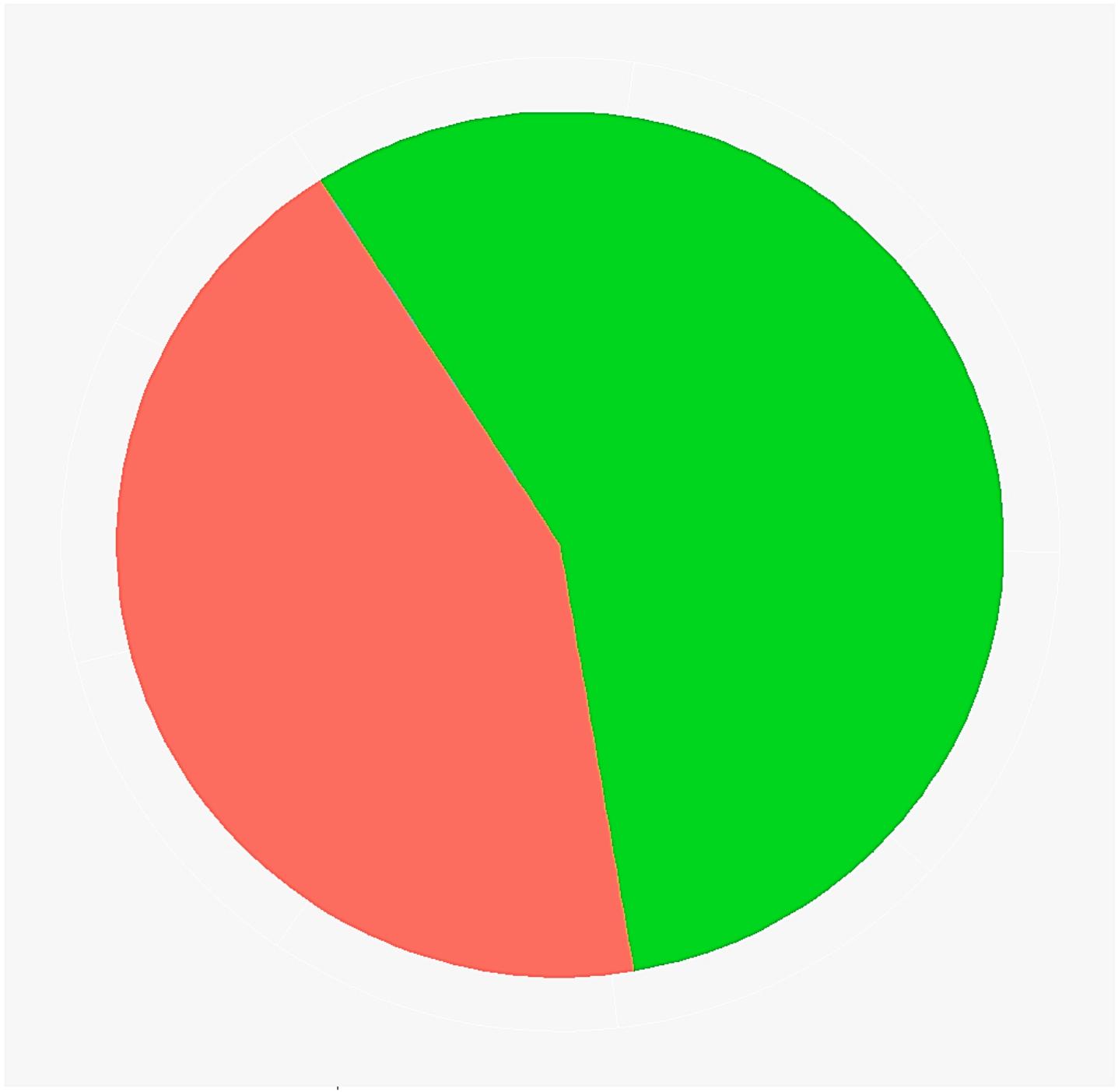
Pie chart for showing Male Individual, Female individual, Transgender individual vaccinated for Delhi

- **Delhi:**



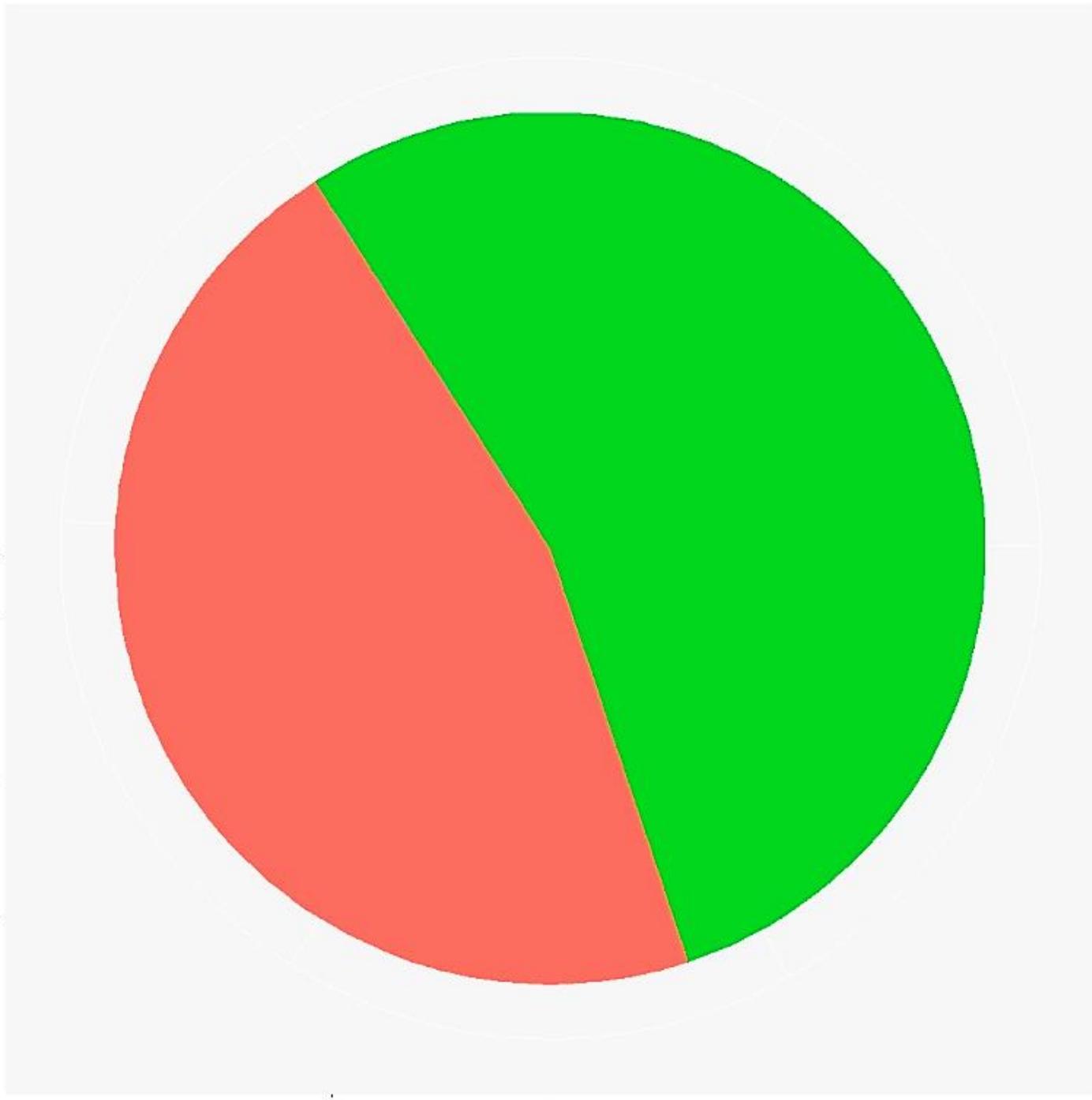
Pie chart for showing Male individual, Female individual, Transgender individual vaccinated for Uttar Pradesh

- **Uttar Pradesh:**



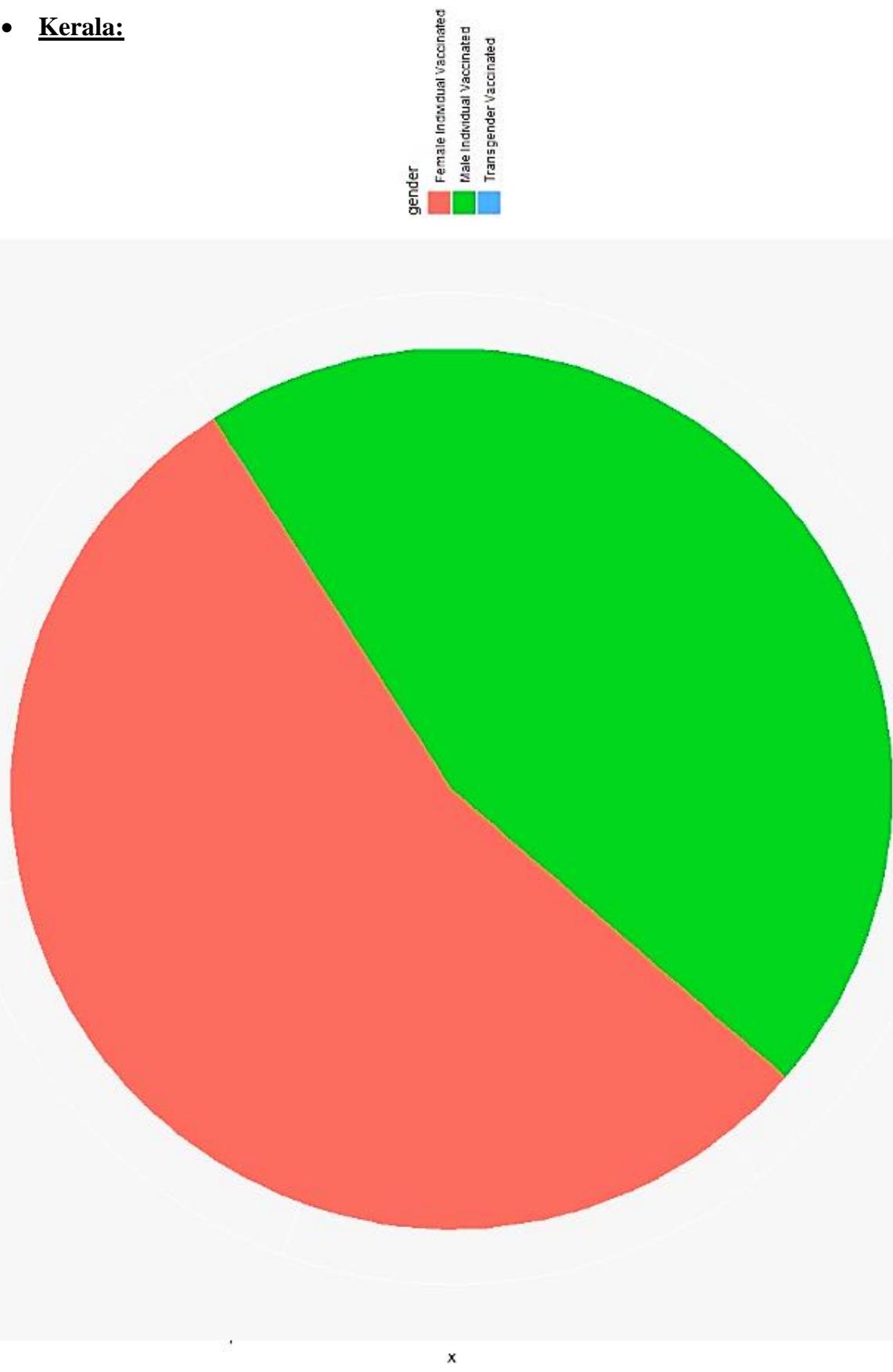
Pie chart for showing Male individual, Female individual, Transgender individual vaccinated for Maharashtra

- **Maharashtra:**



Pie chart for showing Male individual, Female individual, Transgender individual vaccinated for Kerala

- **Kerala:**



## Part 2: Time Series Analysis:

### ❖ Theory:

In this part I am going to predict the date for the complete vaccination of the States namely – West Bengal, Delhi, Uttar Pradesh, Maharashtra, Kerala.

A time series is a series of data points indexed (or listed or graphed) in time order. Most commonly, a time series is a sequence taken at successive equally spaced points in time. Time series analysis comprises methods for analyzing time series data in order to extract meaningful statistics and other characteristics of the data. Time series forecasting is the use of a model to predict future values based on previously observed values.

- The following data is from 16/01/2021 to 09/05/2021
- Fit a model as no yearly seasonality is captured in my data, the forecast () function will use Exponential Trend Smoothing (some assumptions are made due to missing data points).

#### Exponential Trend Smoothing equations:

##### Simple exponential smoothing:

$$s_0 = x_0$$
$$s_t = \alpha x_t + (1 - \alpha) s_{t-1}$$

Where  $x_t$  are observational values at time  $t$ ,  $s_t$  is the output of smoothing algorithm at time  $t$  and  $\alpha$  is the smoothing factor.

##### Double exponential smoothing:

$$s_0 = x_0$$
$$b_0 = x_1 - x_0$$
$$s_t = \alpha x_t + (1 - \alpha) (s_{t-1} + b_{t-1})$$
$$b_t = \beta (s_t - s_{t-1}) + (1 - \beta) b_{t-1}$$

Where  $x_t$  are observational values at time  $t$ ,  $s_t$  is the output of smoothing algorithm at time  $t$ ,  $b_t$  is the best estimate of the trend at time  $t$ ,  $\alpha$  is the data smoothing factor and  $\beta$  is the trend smoothing factor.

❖ **Code:**

#Time series Analysis of West bengal(Predicting the date for complete Vaccination of West Bengal of 10.19cr Population approx.)

```
[IN]westbengalforecast=forecast(westbengal$Total.Individuals.Vaccinated,600)
```

```
[IN]westbengalforecast[["upper"]][525]
```

```
[IN]westbengal$Updated.On[114]+525
```

#Time series Analysis of Delhi(Predicting the date for complete Vaccination of Delhi of 3.11cr Population approx.)

```
[IN]delhiforecast=forecast(delhi$Total.Individuals.Vaccinated,500)
```

```
[IN]delhiforecast[["upper"]][430]
```

```
[IN]delhi$Updated.On[114]+430
```

#Time series Analysis of Uttar Pradesh(Predicting the date for complete Vaccination of Uttar Pradesh of 23.5cr Population approx.)

```
[IN]uttarpradeshforecast=forecast(uttarpradesh$Total.Individuals.Vaccinated,700)
```

```
[IN]uttarpradeshforecast[["upper"]][685]
```

```
[IN]uttarpradesh$Updated.On[114]+685
```

```
#Time series Analysis of Maharashtra(Predicting the date for complete vaccination of Maharashtra of 12.62cr Population approx)
```

```
[IN]maharastraforecast=forecast(maharastra$Total.Individuals.Vaccinated,600)
```

```
[IN]maharastraforecast[["upper"]][460]
```

```
[IN]maharastra$Updated.On[114]+460
```

```
#Time series Analysis of Kerala(Predicting the date for complete vaccination of Kerala of 3.48cr Population approx)
```

```
[IN]keralaforecast=forecast(kerala$Total.Individuals.Vaccinated,500)
```

```
[IN]keralaforecast[["upper"]][345]
```

```
[IN]kerala$Updated.On[114]+345
```

```
#Forecast Graph for WestBengal Data
```

```
[IN]westbengal_forecast=as.data.frame(as.numeric(westbengalforecast[["fitted"]]))
```

```
[IN]wb=as.data.frame(westbengalforecast[["upper"]])
```

```
[IN]wb=as.data.frame(wb[1:525,2])
```

```
[IN]colnames(wb)= "x"
```

```
[IN]colnames(westbengal_forecast)="x"
```

```
[IN]wb$x=as.numeric(wb$x)
```

```
[IN]westbengal_forecast=rbind(westbengal_forecast,wb)
```

```
[IN]westbengal[115:639,-1]=0
```

```
[IN]westbengal[115:639,1]=seq(as.Date("2021-05-10"),as.Date("2022-10-16"),"days")

[IN]westbengal$predicted=westbengal_forecast$x

westbengal[115:639,3]=NA

[IN]ggplot(westbengal,aes(x=Updated.On))+geom_line(aes(y=Total.Individuals.Vaccinated,col="blue"))+geom_line(aes(y=predicted,col="red"))+scale_color_discrete(name="color",labels=c("Vaccinated Till date","Predicted Vaccination"))+ggtitle("Total Vaccination Forecast Graph for West Bengal")
```

### #Forecast Graph for Delhi Data

```
[IN]delhi_forecast=as.data.frame(as.numeric(delhiforecast[["fitted"]])) 

[IN]del=as.data.frame(delhiforecast[["upper"]])

[IN]del=as.data.frame(del[1:430,2])

[IN]colnames(del)= "x"

[IN]colnames(delhi_forecast)="x"

[IN]del$x=as.numeric(del$x)

[IN]delhi_forecast=rbind(delhi_forecast,del)

[IN]delhi[115:544,-1]=0

[IN]delhi[115:544,1]=seq(as.Date("2021-05-10"),as.Date("2022-07-13"),"days")

[IN]delhi$predicted=delhi_forecast$x
```

```
[IN]delhi[115:544,3]=NA

[IN]ggplot(delhi,aes(x=Updated.On))+geom_line(aes(y=Total.Individuals.Vaccinated,col="blue"))+geom_line(aes(y=predicted,col="red"))+scale_color_discrete(name="color",labels=c("Vaccinated Till date","Predicted Vaccination"))+ggtitle("Total Vaccination Forecast Graph for Delhi")
```

### #Forecast Graph for Uttar Pradesh Data

```
[IN]uttarpradesh_forecast=as.data.frame(as.numeric(uttarpradeshforecast[["fitted"]]))

[IN]up=as.data.frame(uttarpradeshforecast[["upper"]])

[IN]up=as.data.frame(up[1:685,2])

[IN]colnames(up)= "x"

[IN]colnames(uttarpradesh_forecast)="x"

[IN]up$x=as.numeric(up$x)

[IN]uttarpradesh_forecast=rbind(uttarpradesh_forecast,up)

[IN]uttarpradesh[115:799,-1]=0

[IN]uttarpradesh[115:799,1]=seq(as.Date("2021-05-10"),as.Date("2023-03-25"),"days")

[IN]uttarpradesh$predicted=uttarpradesh_forecast$x

[IN]uttarpradesh[115:799,3]=NA

[IN]ggplot(uttarpradesh,aes(x=Updated.On))+geom_line(aes(y=Total.Individuals.Vaccinated,col="blue"))+geom_line(aes(y=
```

```
predicted,col="red"))+scale_color_discrete(name="color",
labels=c("Vaccinated Till date","Predicted
Vaccination"))+ggtitle("Total Vaccination Forecast Graph
for Uttar Pradesh")
```

### #Forecast Graph for Maharashtra Data

```
[IN]maharastra_forecast=as.data.frame(as.numeric(maharastrafo
recast[["fitted"]]))  
  
[IN]mah=as.data.frame(maharastraforecast[["upper"]])  
  
[IN]mah=as.data.frame(mah[1:460,2])  
  
[IN]colnames(mah)= "x"  
  
[IN]colnames(maharastra_forecast)="x"  
  
[IN]mah$x=as.numeric(mah$x)  
  
[IN]maharastra_forecast=rbind(maharastra_forecast,mah)  
  
[IN]maharastra[115:574,-1]=0  
  
[IN]maharastra[115:574,1]=seq(as.Date("2021-05-
10"),as.Date("2022-08-12"),"days")  
  
[IN]maharastra$predicted=maharastra_forecast$x  
  
[IN]maharastra[115:574,3]=NA  
  
[IN]ggplot(maharastra,aes(x=Updated.On))+geom_line(aes(y=Total
Individuals.Vaccinated,col="blue"))+geom_line(aes(y=pr
edicted,col="red"))+scale_color_discrete(name="color",la
bels=c("Vaccinated Till date","Predicted
```

```
Vaccination"))+ggtitle("Total Vaccination Forecast Graph  
for Maharashtra")
```

#Forecast Graph for Kerala Data

```
[IN]kerala_forecast=as.data.frame(as.numeric(keralaforecast[[  
"fitted"]]))
```

```
[IN]ker=as.data.frame(keralaforecast[["upper"]])
```

```
[IN]ker=as.data.frame(ker[1:345,2])
```

```
[IN]colnames(ker)= "x"
```

```
[IN]colnames(kerala_forecast)="x"
```

```
[IN]ker$x=as.numeric(ker$x)
```

```
[IN]kerala_forecast=rbind(kerala_forecast,ker)
```

```
[IN]kerala[115:459,-1]=0
```

```
[IN]kerala[115:459,1]=seq(as.Date("2021-05-  
10"),as.Date("2022-04-19"),"days")
```

```
[IN]kerala$predicted=kerala_forecast$x
```

```
[IN]kerala[115:459,3]=NA
```

```
[IN]ggplot(kerala,aes(x=Updated.On))+geom_line(aes(y=Total.In  
dividuals.Vaccinated,col="blue"))+geom_line(aes(y=predic  
ted,col="red"))+scale_color_discrete(name="color",labels  
=c("Vaccinated Till date","Predicted  
Vaccination"))+ggtitle("Total Vaccination Forecast Graph  
for Kerala")
```

## ❖ Analytical Results:

The exponential trend smoothing formulas are given as follows:

West Bengal:

$$s_0 = -18015.129$$

$$b_0 = 10082.9248$$

$$s_t = 0.9999 x_t + 0.0001(s_{t-1} + b_{t-1})$$

$$b_t = 0.3675(s_t - s_{t-1}) + 0.6325 b_{t-1}$$

Delhi:

$$s_0 = -4154.1355$$

$$b_0 = 2356.4133$$

$$s_t = 0.9999 x_t + 0.0001(s_{t-1} + b_{t-1})$$

$$b_t = 0.2366(s_t - s_{t-1}) + 0.7634 b_{t-1}$$

Uttar Pradesh:

$$s_0 = -17157.6113$$

$$b_0 = 7852.3447$$

$$s_t = 0.9999 x_t + 0.0001(s_{t-1} + b_{t-1})$$

$$b_t = 0.3733(s_t - s_{t-1}) + 0.6267 b_{t-1}$$

Maharashtra:

$$s_0 = -21755.1424$$

$$b_0 = 12876.6279$$

$$s_t = 0.9999 x_t + 0.0001(s_{t-1} + b_{t-1})$$

$$b_t = 0.2221(s_t - s_{t-1}) + 0.7779 b_{t-1}$$

Kerala:

$$s_0 = -8913.9174$$

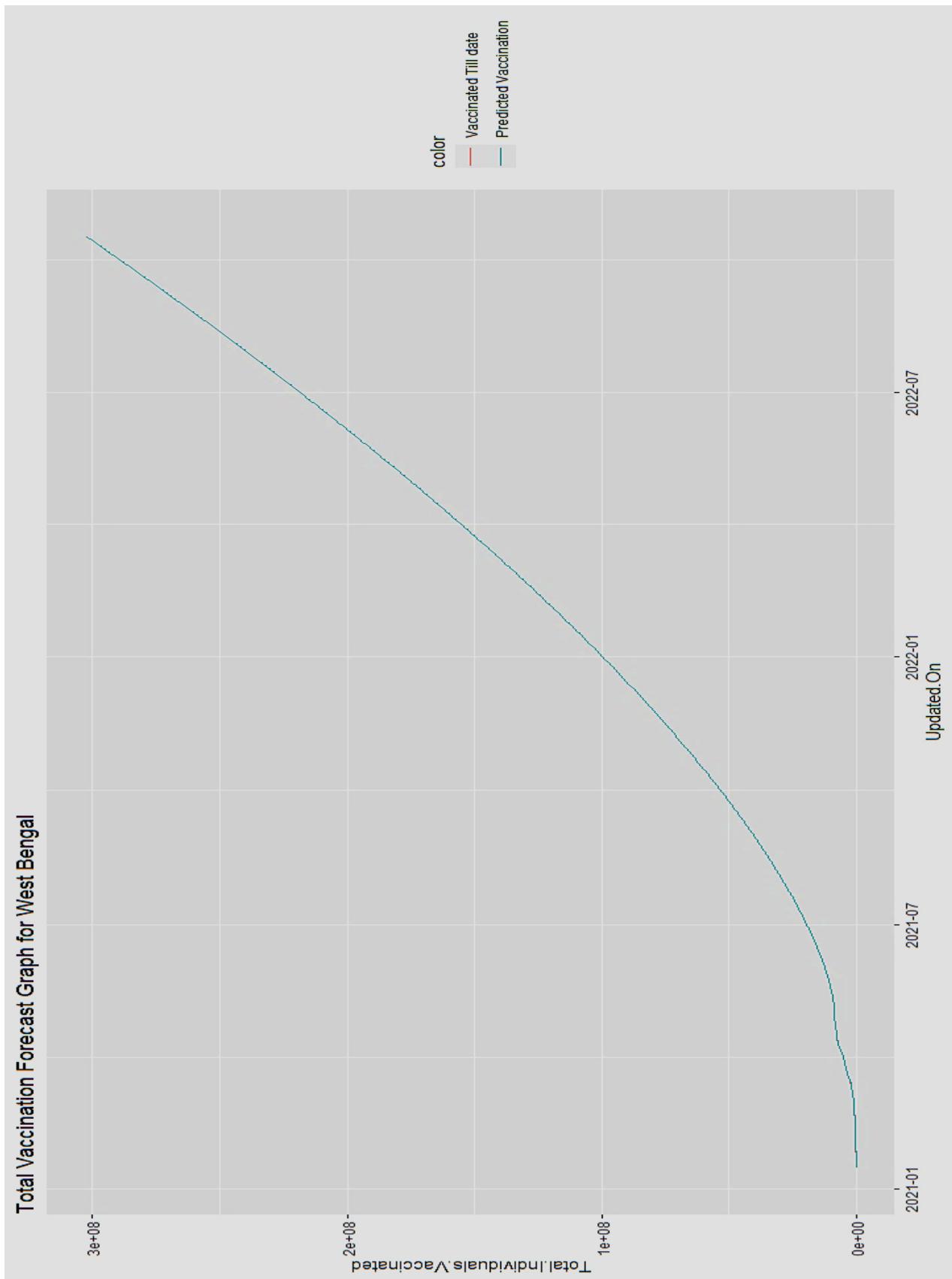
$$b_0 = 4881.8906$$

$$s_t = 0.9999 x_t + 0.0001(s_{t-1} + b_{t-1})$$

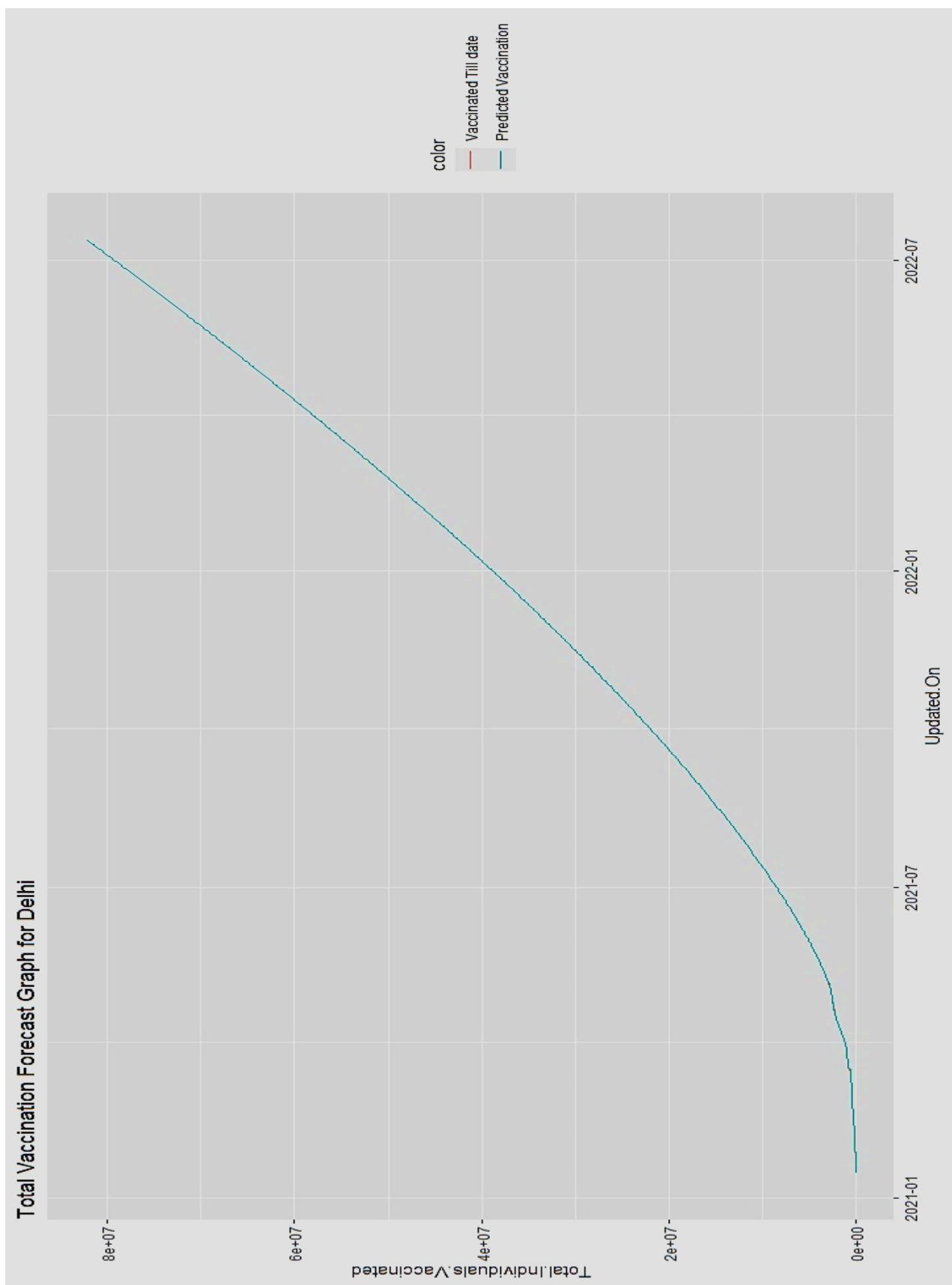
$$b_t = 0.2019(s_t - s_{t-1}) + 0.7981 b_{t-1}$$

Now, let us see how the trend equations perform for fitting and forecasting the data. The graphical representation of actual vs forecasted individual vaccinated till date are shown below:-

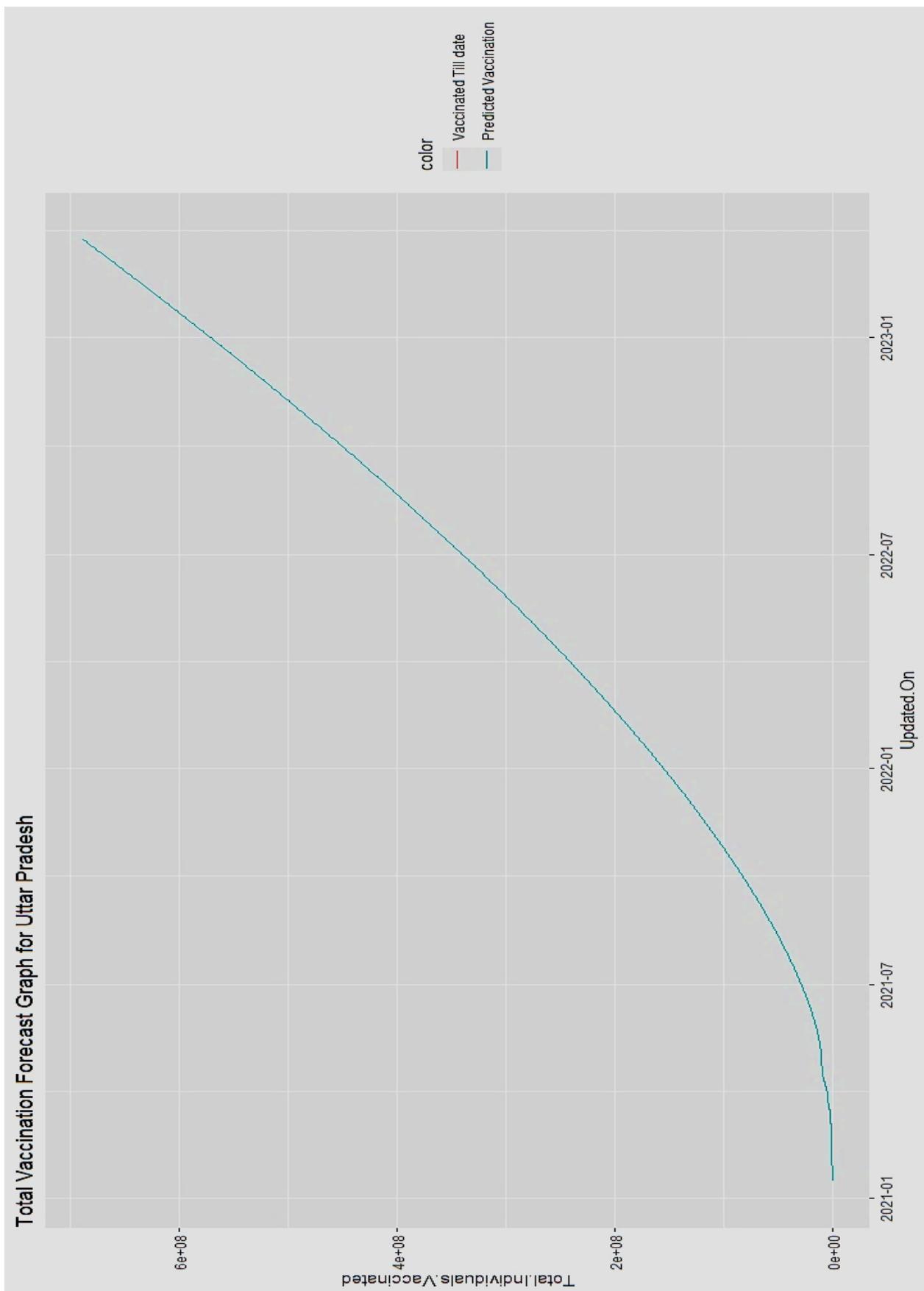
❖ **Forecast Graph for West Bengal:**



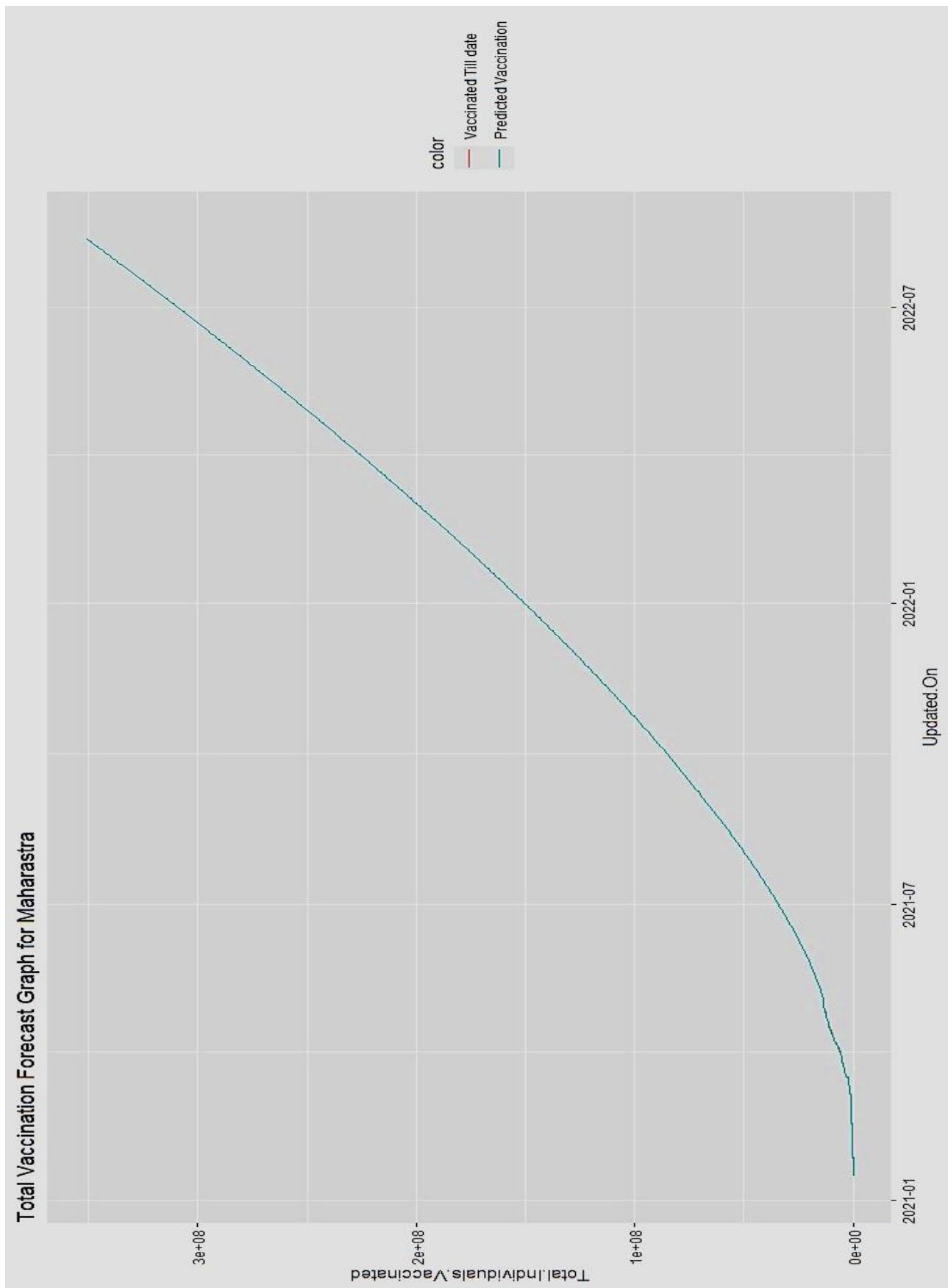
❖ Forecast Graph for Delhi:



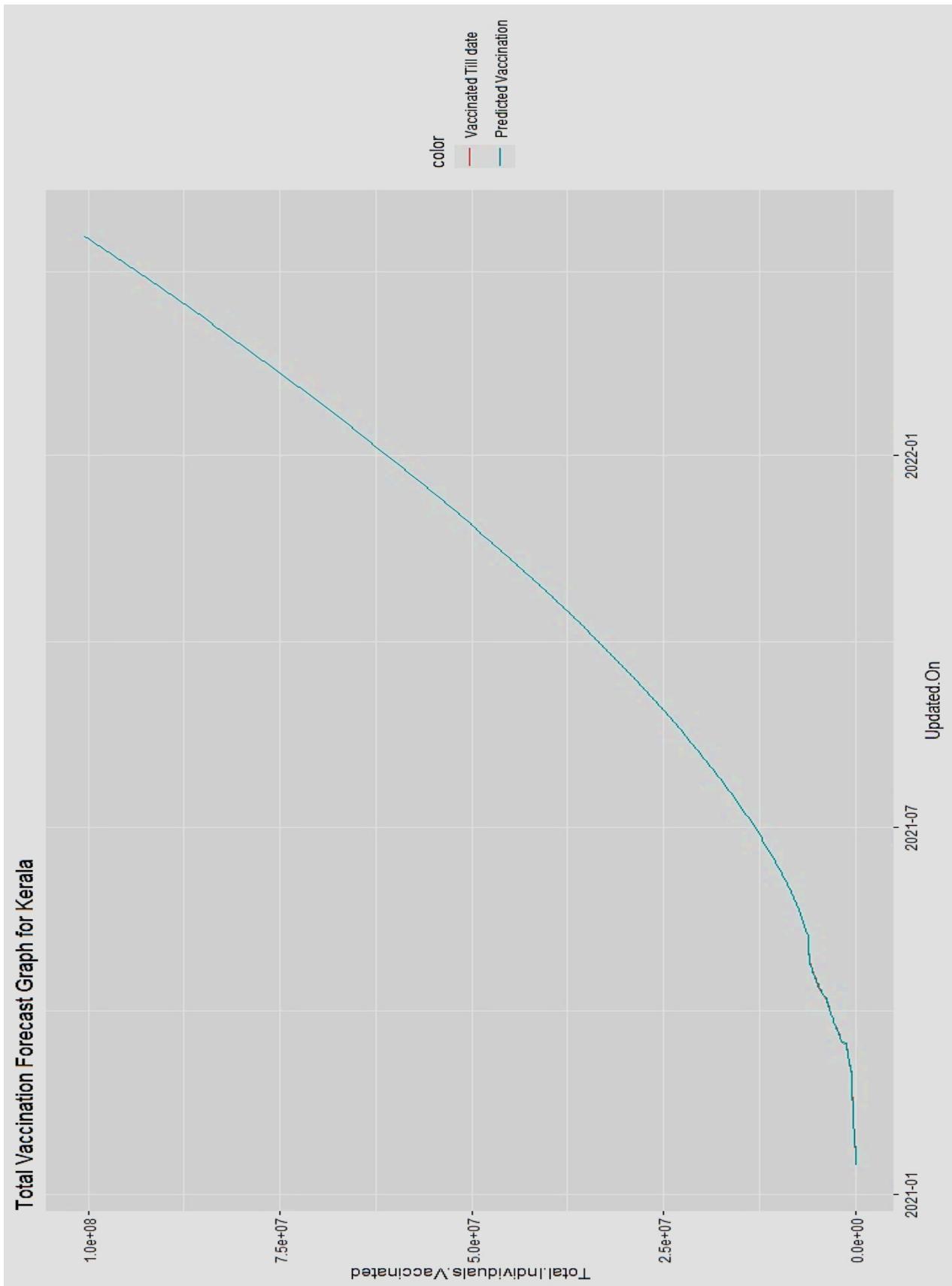
❖ **Forecast Graph for Uttar Pradesh:**



❖ **Forecast Graph for Maharashtra:**



❖ **Forecast Graph for Kerala:**



## ❖ **Conclusion:**

Let us conclude the results:

### Part 1: Conclusions of Exploratory Analysis

1. From 'The Total Vaccination' curve rises exponentially. From this we can conclude that not only the vaccination process is speeding up with time but also the vaccine production has also been accelerated. To keep this pace the vaccine production have to be increased gradually.
2. From the 'Inter-state graph' we find that the state of Maharashtra is highly efficient in Vaccination drive followed by Uttar Pradesh, West Bengal, Kerala, and Delhi.
3. From the pie chart, we find that every state has more male individual vaccinated than the female and transgender individual except for Kerala.
4. From the bar diagram we find that the production of Covishield is more than Covaxin.

### Part 2: Conclusions of Time Series Analysis

1. The forecast () function has used Exponential Trend Smoothing for the data of these cities. It has used double exponential smoothing.
2. The Fitting equation curve is so appropriate that the Vaccination Prediction Graph overlaps the Total Vaccination Graph perfectly.

3. The following analysis gave the following results of approximate date on when our States will be fully Vaccinated:-

<b>State</b>	<b>Predicted Time</b>
West Bengal	2022-10-16
Delhi	2022-07-13
Uttar Pradesh	2023-03-25
Maharashtra	2022-08-12
Kerala	2022-04-19

## **References:**

1. Introductory Statistics with R, Peter Daalgard
2. Fundamentals of statistics, Vol- I & Vol- II, Gun, Gupta, Dasgupta
3. The Analysis of Time series, Chatfield
4. Fundamental of Mathematical Statistics, S.C. Gupta, V.K. Kapoor.
5. Fundamental of Applied Statistics, S.C. Gupta, V.K. Kapoor.
6. Wikipedia

## ❖DATA:

Updated On	State	Total Individuals Vaccinated	First Dose Administered	Second Dose Administered	Male Individuals Vaccinated	Female Individuals Vaccinated	Transgender Individuals Vaccinated	Total Covaxin Administered	Total CoviShield Administered	Total Doses Administered
<b><u>Uttar Pradesh</u></b>										
16/01/2021	Uttar Pradesh	2212	2212	0	1341	871	0	55	2157	2212
17/01/2021	Uttar Pradesh	2224	2224	0	1345	879	0	55	2169	2224
18/01/2021	Uttar Pradesh	1532	1532	0	907	625	0	42	1490	1532
19/01/2021	Uttar Pradesh	1568	1568	0	930	638	0	43	1525	1568
20/01/2021	Uttar Pradesh	1568	1568	0	930	638	0	43	1525	1568
21/01/2021	Uttar Pradesh	1578	1578	0	933	645	0	43	1535	1578
22/01/2021	Uttar Pradesh	21325	21325	0	7096	14228	1	327	20998	21325
23/01/2021	Uttar Pradesh	30644	30644	0	10300	20343	1	446	30198	30644
24/01/2021	Uttar Pradesh	43669	43669	0	14952	28714	3	617	43052	43669
25/01/2021	Uttar Pradesh	59780	59780	0	20276	39501	3	915	58865	59780
26/01/2021	Uttar Pradesh	62477	62477	0	20961	41513	3	940	61537	62477
27/01/2021	Uttar Pradesh	95724	95724	0	31827	63892	5	1498	94226	95724
28/01/2021	Uttar Pradesh	268081	268081	0	82036	186025	20	3516	264565	268081
29/01/2021	Uttar Pradesh	429946	429946	0	130950	298960	36	5466	424480	429946
30/01/2021	Uttar Pradesh	433040	433040	0	131777	301226	37	5468	427572	433040
31/01/2021	Uttar Pradesh	434185	434185	0	132125	302023	37	5469	428716	434185
1/2/2021	Uttar Pradesh	434549	434549	0	132288	302224	37	5469	429080	434549
2/2/2021	Uttar Pradesh	435502	435502	0	132574	302891	37	5469	430033	435502
3/2/2021	Uttar Pradesh	435645	435645	0	132643	302965	37	5469	430176	435645
4/2/2021	Uttar Pradesh	555622	555622	0	173304	382272	46	6369	549253	555622
5/2/2021	Uttar Pradesh	636917	636917	0	224300	412566	51	9096	627821	636917
6/2/2021	Uttar Pradesh	638107	638107	0	225075	412980	52	9099	629008	638107
7/2/2021	Uttar Pradesh	638805	638805	0	225664	413089	52	9099	629706	638805
8/2/2021	Uttar Pradesh	640144	640144	0	226737	413355	52	9108	631036	640144
9/2/2021	Uttar Pradesh	640845	640845	0	227388	413405	52	9126	631719	640845
10/2/2021	Uttar Pradesh	643010	643010	0	229177	413780	53	9365	633645	643010
11/2/2021	Uttar Pradesh	746208	746208	0	322369	423786	53	69526	676682	746208
12/2/2021	Uttar Pradesh	863157	863157	0	428140	434964	53	138967	724190	863157
13/02/2021	Uttar Pradesh	864379	864379	2	429282	435044	53	139539	724840	864381
14/02/2021	Uttar Pradesh	864487	864487	2	429383	435051	53	139539	724948	864489
15/02/2021	Uttar Pradesh	955423	955423	19788	462664	492680	79	143448	811975	975211
16/02/2021	Uttar Pradesh	956093	956093	19814	462920	493094	79	143529	812564	975907
17/02/2021	Uttar Pradesh	956274	956274	19814	463088	493107	79	143589	812685	976088
18/02/2021	Uttar Pradesh	1034940	1034940	19927	579229	455637	74	182368	852572	1054867
19/02/2021	Uttar Pradesh	1135502	1135502	98768	618382	517041	79	185602	949900	1234270
20/02/2021	Uttar Pradesh	1136590	1136590	100271	619024	517486	80	185655	950935	1236861
21/02/2021	Uttar Pradesh	1136650	1136650	100709	619077	517493	80	185656	950994	1237359
22/02/2021	Uttar Pradesh	1237517	1237517	101889	709510	527927	80	200220	1037297	1339406
23/02/2021	Uttar Pradesh	1239758	1239758	102272	711520	528158	80	200739	1039019	1342030
24/02/2021	Uttar Pradesh	1240045	1240045	102273	711789	528176	80	200748	1039297	1342318
25/02/2021	Uttar Pradesh	1274807	1274807	246737	739506	535221	80	205862	1068945	1521544
26/02/2021	Uttar Pradesh	1281076	1281076	387553	741696	539301	79	206000	1075076	1668629
27/02/2021	Uttar Pradesh	1281076	1281076	387553	741696	539301	79	206000	1075076	1668629
28/02/2021	Uttar Pradesh	1281078	1281078	387553	741698	539301	79	206000	1075078	1668631
1/3/2021	Uttar Pradesh	1281078	1281078	387553	741698	539301	79	206000	1075078	1668631
2/3/2021	Uttar Pradesh	1294029	1294029	387630	749939	544010	80	207913	1086116	1681659
3/3/2021	Uttar Pradesh	1295029	1295029	387638	750628	544321	80	208073	1086956	1682667
4/3/2021	Uttar Pradesh	1365655	1365655	458641	789904	575662	89	209637	1156018	1824296
5/3/2021	Uttar Pradesh	1465524	1465524	522566	849180	616237	107	212206	1253318	1988090
6/3/2021	Uttar Pradesh	1485787	1485787	529204	861476	624204	107	213741	1272046	2014991
7/3/2021	Uttar Pradesh	1488836	1488836	530345	863277	625452	107	213834	1275002	2019181
8/3/2021	Uttar Pradesh	1679720	1679720	536991	972019	707574	127	215962	1463758	2216711
9/3/2021	Uttar Pradesh	1711412	1711412	538548	990838	720442	132	217393	1494019	2249960
10/3/2021	Uttar Pradesh	1737105	1737105	539469	1006181	730788	136	218731	1518374	2276574
11/3/2021	Uttar Pradesh	1742377	1742377	539846	1009111	733130	136	219022	1523355	2282223
12/3/2021	Uttar Pradesh	1994435	1994435	612327	1166348	827912	175	239616	1754819	2606762
13/03/2021	Uttar Pradesh	2030532	2030532	621088	1188535	841820	177	242321	1788211	2651620
14/03/2021	Uttar Pradesh	2046614	2046614	621449	1197364	849073	177	242692	1803922	2668063

15/03/2021	Uttar Pradesh	2320717	2320717	668124	1351009	969500	208	249415	2071302	2988841
16/03/2021	Uttar Pradesh	2456849	2456849	731673	1432819	1023810	220	362797	2825725	3188522
17/03/2021	Uttar Pradesh	2723448	2723448	740940	1584905	1138257	286	376630	3087758	3464388
18/03/2021	Uttar Pradesh	3034854	3034854	846226	1771561	1262978	315	418999	3462081	3881080
19/03/2021	Uttar Pradesh	3348666	3348666	882861	1950313	1397998	355	441139	3790388	4231527
20/03/2021	Uttar Pradesh	3497298	3497298	893146	2035408	1461513	377	452418	3938026	4390444
21/03/2021	Uttar Pradesh	3522238	3522238	894606	2049491	1472366	381	454527	3962317	4416844
22/03/2021	Uttar Pradesh	3797621	3797621	952102	2207786	1589409	426	483124	4266599	4749723
23/03/2021	Uttar Pradesh	3982323	3982323	977876	2314924	1666947	452	502614	4457585	4960199
24/03/2021	Uttar Pradesh	4087684	4087684	982809	2376980	1710235	469	514209	4556284	5070493
25/03/2021	Uttar Pradesh	4337751	4337751	1006786	2518497	1818750	504	538954	4805583	5344537
26/03/2021	Uttar Pradesh	4549205	4549205	1014440	2634688	1913991	526	558041	5005604	5563645
27/03/2021	Uttar Pradesh	4627476	4627476	1017283	2678999	1947941	536	567886	5076873	5644759
28/03/2021	Uttar Pradesh	4631003	4631003	1017592	2680872	1949592	539	568460	5080135	5648595
29/03/2021	Uttar Pradesh	4631064	4631064	1017594	2680908	1949617	539	568460	5080198	5648658
30/03/2021	Uttar Pradesh	4659569	4659569	1018413	2696915	1962110	544	572872	5105110	5677982
31/03/2021	Uttar Pradesh	4726820	4726820	1021066	2734855	1991413	552	583666	5164220	5747886
1/4/2021	Uttar Pradesh	4929565	4929565	1033825	2847676	2081317	572	616118	5347272	5963390
2/4/2021	Uttar Pradesh	5281547	5281547	1054168	3038247	2242682	618	676291	5659424	6335715
3/4/2021	Uttar Pradesh	5511428	5511428	1066273	3163765	2347011	652	710725	5866976	6577701
4/4/2021	Uttar Pradesh	5663490	5663490	1073973	3245840	2416985	665	729257	6008206	6737463
5/4/2021	Uttar Pradesh	5917539	5917539	1106521	3382139	2534709	691	753963	6270097	7024060
6/4/2021	Uttar Pradesh	6199023	6199023	1141236	3531382	2666896	745	780410	6559849	7340259
7/4/2021	Uttar Pradesh	6619721	6619721	1171936	3756137	2862783	801	817628	6974029	7791657
8/4/2021	Uttar Pradesh	6950868	6950868	1193098	3932633	3017373	862	846469	7297497	8143966
9/4/2021	Uttar Pradesh	7169348	7169348	1226853	4049576	3118869	903	870313	7525888	8396201
10/4/2021	Uttar Pradesh	7255753	7255753	1238088	4096709	3158131	913	883832	7610009	8493841
11/4/2021	Uttar Pradesh	7558409	7558409	1265684	4255205	3302238	966	894285	7929808	8824093
12/4/2021	Uttar Pradesh	8013755	8013755	1342857	4497208	3515475	1072	907334	8449278	9356612
13/04/2021	Uttar Pradesh	8329706	8329706	1388442	4677156	3651403	1147	916001	8802147	9718148
14/04/2021	Uttar Pradesh	8605823	8605823	1421804	4826390	3778235	1198	924425	9103202	10027627
15/04/2021	Uttar Pradesh	8790085	8790085	1482329	4930473	3858375	1237	933198	9339216	10272414
16/04/2021	Uttar Pradesh	8978071	8978071	1559991	5036285	3940518	1268	953649	9584413	10538062
17/04/2021	Uttar Pradesh	9102301	9102301	1609896	5108217	3992782	1302	974094	9738103	10712197
18/04/2021	Uttar Pradesh	9106335	9106335	1612014	5110551	3994481	1303	975462	9742887	10718349
19/04/2021	Uttar Pradesh	9224739	9224739	1684314	5180547	4042875	1317	996628	9912425	10909053
20/04/2021	Uttar Pradesh	9356225	9356225	1764289	5259926	4094964	1335	1018393	10102121	11120514
21/04/2021	Uttar Pradesh	9449601	9449601	1809439	5313227	4134975	1399	1032111	10226929	11259040
22/04/2021	Uttar Pradesh	9563554	9563554	1877188	5377729	4184398	1427	1065189	10375553	11440742
23/04/2021	Uttar Pradesh	9679629	9679629	1943675	5443500	4234615	1514	1095389	10527915	11623304
24/04/2021	Uttar Pradesh	9779700	9779700	1997222	5500723	4277413	1564	1114240	10662682	11776922
25/04/2021	Uttar Pradesh	9783480	9783480	2000449	5502900	4279015	1565	1114989	10668940	11783929
26/04/2021	Uttar Pradesh	9883742	9883742	2063635	5559233	4322917	1592	1134086	10813291	11947377
27/04/2021	Uttar Pradesh	9953817	9953817	2107421	5598797	4353410	1610	1153996	10907242	12061238
28/04/2021	Uttar Pradesh	10018842	10018842	2150199	5635333	4381884	1625	1174101	10994940	12169041
29/04/2021	Uttar Pradesh	10125866	10125866	2228129	5695500	4428709	1657	1196960	11157035	12353995
30/04/2021	Uttar Pradesh	10240750	10240750	2317056	5759852	4479210	1688	1230635	11327171	12557806
1/5/2021	Uttar Pradesh	10331285	10331285	2369407	5813773	4515800	1712	1271629	11429063	12700692

2/5/2021	Uttar Pradesh	10334346	10334346	2371091	5815570	4517064	1712	1272354	11433083	12705437
3/5/2021	Uttar Pradesh	10439785	10439785	2445210	5876658	4561356	1771	1316011	11568984	12884995
4/5/2021	Uttar Pradesh	10544891	10544891	2517744	5937921	4605162	1808	1357973	11704662	13062635
5/5/2021	Uttar Pradesh	10642247	10642247	2585759	5994986	4645434	1827	1398479	11829527	13228006
6/5/2021	Uttar Pradesh	10742503	10742503	2660032	6054233	4686425	1845	1441050	11961485	13402535
7/5/2021	Uttar Pradesh	10833025	10833025	2726932	6107405	4723751	1869	1479703	12080254	13559957
8/5/2021	Uttar Pradesh	10914754	10914754	2779994	6154586	4758280	1888	1515553	12179195	13694748
9/5/2021	Uttar Pradesh	10916895	10916895	2780682	6155890	4759115	1890	1516757	12180820	13697577

**West  
Bengal:**

16/01/2021	West Bengal	1917	1917	0	956	961	0	0	1917	1917
17/01/2021	West Bengal	2085	2085	0	996	1089	0	0	2085	2085
18/01/2021	West Bengal	5060	5060	0	2253	2807	0	0	5060	5060
19/01/2021	West Bengal	12364	12364	0	4823	7541	0	0	12364	12364
20/01/2021	West Bengal	14624	14624	0	5497	9127	0	0	14624	14624
21/01/2021	West Bengal	20206	20206	0	7545	12661	0	0	20206	20206
22/01/2021	West Bengal	41970	41970	0	14409	27526	35	0	41970	41970
23/01/2021	West Bengal	43180	43180	0	14762	28377	41	0	43180	43180
24/01/2021	West Bengal	46143	46143	0	15780	30318	45	0	46143	46143
25/01/2021	West Bengal	87815	87815	0	28568	59165	82	0	87815	87815
26/01/2021	West Bengal	88627	88627	0	28788	59755	84	0	88627	88627
27/01/2021	West Bengal	130937	130937	0	41351	89485	101	0	130937	130937
28/01/2021	West Bengal	161415	161415	0	51073	110239	103	0	161415	161415
29/01/2021	West Bengal	191566	191566	0	60682	130779	105	0	191566	191566
30/01/2021	West Bengal	214018	214018	0	68401	145512	105	0	214018	214018
31/01/2021	West Bengal	214256	214256	0	68502	145649	105	0	214256	214256
1/2/2021	West Bengal	238178	238178	0	77261	160810	107	0	238178	238178
2/2/2021	West Bengal	259341	259341	0	85365	173863	113	0	259341	259341
3/2/2021	West Bengal	271828	271828	0	90102	181609	117	44	271784	271828
4/2/2021	West Bengal	290908	290908	0	97245	193544	119	115	290793	290908
5/2/2021	West Bengal	314065	314065	0	106261	207680	124	185	313880	314065
6/2/2021	West Bengal	323825	323825	0	110061	213639	125	238	323587	323825
7/2/2021	West Bengal	323859	323859	0	110082	213652	125	238	323621	323859
8/2/2021	West Bengal	346113	346113	0	120095	225893	125	688	345425	346113
9/2/2021	West Bengal	372621	372621	0	135808	236688	125	1935	370686	372621
10/2/2021	West Bengal	396442	396442	0	150028	246289	125	3278	393164	396442
11/2/2021	West Bengal	421678	421678	0	165702	255851	125	4771	416907	421678
12/2/2021	West Bengal	451987	451987	0	184971	266891	125	7600	444387	451987
13/02/2021	West Bengal	480743	480743	1084	203029	277587	127	10798	469945	481827
14/02/2021	West Bengal	484229	484229	1136	204982	279120	127	11774	472455	485365
15/02/2021	West Bengal	519678	519678	6240	226771	292779	128	15762	503916	525918
16/02/2021	West Bengal	521537	521537	6538	228169	293240	128	16238	505299	528075
17/02/2021	West Bengal	538752	538752	12285	238483	300141	128	19050	519702	551037
18/02/2021	West Bengal	544667	544667	18623	251544	293031	92	23610	521057	563290
19/02/2021	West Bengal	596408	596408	35680	278191	318098	119	28205	568203	632088
20/02/2021	West Bengal	620329	620329	44526	296740	323474	115	33376	586953	664855
21/02/2021	West Bengal	625050	625050	44711	300846	324089	115	35367	589683	669761
22/02/2021	West Bengal	662851	662851	64029	330217	332532	102	44461	618390	726880
23/02/2021	West Bengal	712116	712116	76160	369791	342221	104	57820	654296	788276
24/02/2021	West Bengal	778861	778861	94156	422228	356527	106	72499	706362	873017
25/02/2021	West Bengal	864083	864083	114768	489528	374446	109	90503	773580	978851
26/02/2021	West Bengal	953882	953882	138847	561866	391908	108	109727	844155	1092729
27/02/2021	West Bengal	953882	953882	138847	561866	391908	108	109727	844155	1092729
28/02/2021	West Bengal	953882	953882	138847	561866	391908	108	109727	844155	1092729
1/3/2021	West Bengal	953882	953882	138847	561866	391908	108	109727	844155	1092729
2/3/2021	West Bengal	1012276	1012276	157761	606914	405230	132	120556	891720	1170037
3/3/2021	West Bengal	1081891	1081891	179460	659059	422695	137	129822	952069	1261351
4/3/2021	West Bengal	1151159	1151159	201021	708931	442082	146	138714	1012445	1352180
5/3/2021	West Bengal	1226222	1226222	222294	759685	466385	152	147504	1078718	1448516

6/3/2021	West Bengal	1299938	1299938	237628	807498	492278	162	156379	1143559	1537566
7/3/2021	West Bengal	1308982	1308982	238471	812952	495868	162	157046	1151936	1547453
8/3/2021	West Bengal	1424182	1424182	260000	881077	542933	172	167152	1257030	1684182
9/3/2021	West Bengal	1555051	1555051	283056	955886	598984	181	178475	1376576	1838107
10/3/2021	West Bengal	1670989	1670989	302753	1021860	648932	197	186381	1484608	1973742
11/3/2021	West Bengal	1731847	1731847	313451	1057942	673700	205	189905	1541942	2045298
12/3/2021	West Bengal	1889627	1889627	338608	1145614	743794	219	199075	1690552	2228235
13/03/2021	West Bengal	1992510	1992510	357809	1201057	791216	237	204539	1787971	2350319
14/03/2021	West Bengal	2004416	2004416	359632	1207632	796547	237	205295	1799121	2364048
15/03/2021	West Bengal	2212132	2212132	388295	1318127	893732	273	214892	1997240	2600427
16/03/2021	West Bengal	2400215	2400215	417956	1422806	977119	290	234263	2583908	2818171
17/03/2021	West Bengal	2688119	2688119	433675	1577709	1110077	333	254897	2866897	3121794
18/03/2021	West Bengal	2808898	2808898	451670	1645672	1162885	341	264813	2995755	3260568
19/03/2021	West Bengal	3086159	3086159	474968	1790533	1295254	372	281268	3279859	3561127
20/03/2021	West Bengal	3263416	3263416	494597	1882984	1380032	400	301990	3456023	3758013
21/03/2021	West Bengal	3294084	3294084	497397	1898738	1394941	405	307460	3484021	3791481
22/03/2021	West Bengal	3505433	3505433	523662	2010192	1494805	436	333598	3695497	4029095
23/03/2021	West Bengal	3727569	3727569	557282	2126625	1600493	451	371779	3913072	4284851
24/03/2021	West Bengal	3850626	3850626	578299	2192309	1657860	457	396831	4032094	4428925
25/03/2021	West Bengal	3976580	3976580	600700	2261811	1714302	467	418638	4158642	4577280
26/03/2021	West Bengal	4261110	4261110	622358	2405782	1854839	489	446642	4436826	4883468
27/03/2021	West Bengal	4448531	4448531	633855	2499459	1948561	511	463250	4619136	5082386
28/03/2021	West Bengal	4453685	4453685	634050	2502055	1951119	511	463391	4624344	5087735
29/03/2021	West Bengal	4475456	4475456	635490	2513314	1961626	516	467291	4643655	5110946
30/03/2021	West Bengal	4671332	4671332	652386	2613576	2057218	538	486308	4837410	5323718
31/03/2021	West Bengal	4798424	4798424	669015	2676605	2121264	555	502999	4964440	5467439
1/4/2021	West Bengal	4932709	4932709	681742	2742833	2189310	566	515820	5098631	5614451
2/4/2021	West Bengal	5103078	5103078	693906	2825920	2276577	581	530967	5266017	5796984
3/4/2021	West Bengal	5260046	5260046	707854	2902501	2356946	599	543432	5424468	5967900
4/4/2021	West Bengal	5427490	5427490	720668	2985675	2441198	617	556008	5592150	6148158
5/4/2021	West Bengal	5657151	5657151	739324	3097050	2559453	648	572148	5824327	6396475
6/4/2021	West Bengal	5881580	5881580	758183	3204767	2676149	664	589806	6049957	6639763
7/4/2021	West Bengal	6222811	6222811	797802	3370530	2851586	695	626747	6393866	7020613
8/4/2021	West Bengal	6465014	6465014	846672	3492756	2971542	716	663838	6647848	7311686
9/4/2021	West Bengal	6783892	6783892	889377	3647663	3135469	760	710993	6962276	7673269
10/4/2021	West Bengal	6972586	6972586	918582	3741766	3230032	788	753017	7138151	7891168
11/4/2021	West Bengal	7051017	7051017	931259	3782206	3268014	797	776483	7205793	7982276
12/4/2021	West Bengal	7241680	7241680	983108	3877922	3362932	826	835631	7389157	8224788
13/04/2021	West Bengal	7328009	7328009	1017050	3926414	3400769	826	872814	7472245	8345059
14/04/2021	West Bengal	7398413	7398413	1044479	3964545	3433037	831	896362	7546530	8442892
15/04/2021	West Bengal	7415379	7415379	1053426	3974353	3440191	835	903609	7565196	8468805
16/04/2021	West Bengal	7499090	7499090	1109692	4018864	3479382	844	930115	7678667	8608782
17/04/2021	West Bengal	7577053	7577053	1162663	4060679	3515521	853	953764	7785952	8739716
18/04/2021	West Bengal	7593056	7593056	1171094	4069772	3522428	856	960216	7803934	8764150
19/04/2021	West Bengal	7701111	7701111	1275030	4128110	3572137	864	986681	7989460	8976141
20/04/2021	West Bengal	7830594	7830594	1379100	4198697	3631015	882	1007847	8201847	9209694
21/04/2021	West Bengal	7934464	7934464	1461604	4254741	3678829	894	1026194	8369874	9396068
22/04/2021	West Bengal	8024582	8024582	1533651	4303341	3720337	904	1041310	8516923	9558233
23/04/2021	West Bengal	8139244	8139244	1641011	4365184	3773140	920	1060048	8720207	9780255
24/04/2021	West Bengal	8227116	8227116	1711307	4413135	3813048	933	1075009	8863414	9938423
25/04/2021	West Bengal	8243729	8243729	1725523	4422524	3820268	937	1078588	8890664	9969252
26/04/2021	West Bengal	8363314	8363314	1865680	4487398	3874965	951	1096741	9132253	10228994
27/04/2021	West Bengal	8467133	8467133	1970532	4544342	3921834	957	1119849	9317816	10437665
28/04/2021	West Bengal	8539976	8539976	2090793	4584349	3954665	962	1136359	9494410	10630769
29/04/2021	West Bengal	8596240	8596240	2185401	4614983	3980290	967	1150817	9630824	10781641
30/04/2021	West Bengal	8662227	8662227	2309721	4650922	4010327	978	1171721	9800227	10971948
1/5/2021	West Bengal	8689947	8689947	2368106	4666310	4022654	983	1177124	9880929	11058053

2/5/2021	West Bengal	8692844	8692844	2373480	4667838	4024023	983	1177581	9888743	11066324
3/5/2021	West Bengal	8725020	8725020	2531077	4685336	4038697	987	1191584	10064513	11256097
4/5/2021	West Bengal	8750404	8750404	2659493	4699482	4049922	1000	1204436	10205461	11409897
5/5/2021	West Bengal	8764695	8764695	2742032	4707646	4056047	1002	1214446	10292281	11506727
6/5/2021	West Bengal	8777268	8777268	2817455	4715269	4060997	1002	1226791	10367932	11594723
7/5/2021	West Bengal	8808010	8808010	3031670	4732280	4074724	1006	1246103	10593577	11839680
8/5/2021	West Bengal	8823763	8823763	3128641	4741259	4081493	1011	1260663	10691741	11952404
9/5/2021	West Bengal	8825922	8825922	3137939	4742419	4082492	1011	1262952	10700909	11963861

**Delhi:**

16/01/2021	Delhi	892	892	0	525	367	0	33	859	892
17/01/2021	Delhi	1005	1005	0	603	402	0	36	969	1005
18/01/2021	Delhi	1366	1366	0	840	526	0	46	1320	1366
19/01/2021	Delhi	3041	3041	0	1837	1204	0	164	2877	3041
20/01/2021	Delhi	3041	3041	0	1837	1204	0	164	2877	3041
21/01/2021	Delhi	5308	5308	0	2975	2333	0	264	5044	5308
22/01/2021	Delhi	5331	5331	0	2994	2337	0	264	5067	5331
23/01/2021	Delhi	12312	12312	0	6644	5668	0	550	11762	12312
24/01/2021	Delhi	12614	12614	0	6808	5806	0	558	12056	12614
25/01/2021	Delhi	20373	20373	0	10941	9432	0	983	19390	20373
26/01/2021	Delhi	20427	20427	0	10958	9469	0	983	19444	20427
27/01/2021	Delhi	27603	27603	0	14895	12708	0	1334	26269	27603
28/01/2021	Delhi	35881	35881	0	19361	16520	0	1785	34096	35881
29/01/2021	Delhi	35937	35937	0	19388	16549	0	1787	34150	35937
30/01/2021	Delhi	44758	44758	0	23969	20789	0	2174	42584	44758
31/01/2021	Delhi	44840	44840	0	24023	20817	0	2176	42664	44840
1/2/2021	Delhi	52760	52760	0	28237	24523	0	2640	50120	52760
2/2/2021	Delhi	62086	62086	0	33295	28791	0	3869	58217	62086
3/2/2021	Delhi	69462	69462	0	37191	32271	0	4863	64599	69462
4/2/2021	Delhi	78948	78948	0	42617	36331	0	5969	72979	78948
5/2/2021	Delhi	88045	88045	0	47686	40359	0	6990	81055	88045
6/2/2021	Delhi	97492	97492	0	53760	43732	0	7983	89509	97492
7/2/2021	Delhi	97495	97495	0	53761	43734	0	7983	89512	97495
8/2/2021	Delhi	107116	107116	0	60642	46474	0	9413	97703	107116
9/2/2021	Delhi	119917	119917	0	70521	49393	3	11440	108477	119917
10/2/2021	Delhi	134600	134600	0	82321	52270	9	13731	120869	134600
11/2/2021	Delhi	150348	150348	0	95078	55255	15	16941	133407	150348
12/2/2021	Delhi	164976	164976	0	106900	58057	19	19955	145021	164976
13/02/2021	Delhi	178174	178174	1967	117328	60826	20	22509	155665	180141
14/02/2021	Delhi	178176	178176	1967	117330	60826	20	22510	155666	180143
15/02/2021	Delhi	192891	192891	4140	128980	63887	24	25669	167222	197031
16/02/2021	Delhi	207447	207447	6826	140385	67026	36	28598	178849	214273
17/02/2021	Delhi	223511	223511	8033	153075	70390	46	32389	191122	231544
18/02/2021	Delhi	241096	241096	11747	168106	72928	62	38030	203066	252843
19/02/2021	Delhi	270025	270025	13604	189330	80618	77	43994	226031	283629
20/02/2021	Delhi	291137	291137	18273	205007	86047	83	49981	241156	309410
21/02/2021	Delhi	291146	291146	18273	205016	86047	83	49981	241165	309419
22/02/2021	Delhi	312680	312680	23864	221784	90810	86	56177	256503	336544
23/02/2021	Delhi	330559	330559	26103	235887	94578	94	60898	269661	356662
24/02/2021	Delhi	344481	344481	30557	246901	97485	95	64670	279811	375038
25/02/2021	Delhi	357350	357350	36121	256955	100290	105	68484	288866	393471

26/02/2021	Delhi	367699	367699	38732	264730	102860	109	71286	296413	406431
27/02/2021	Delhi	367699	367699	38732	264730	102860	109	71286	296413	406431
28/02/2021	Delhi	367699	367699	38732	264730	102860	109	71286	296413	406431
1/3/2021	Delhi	367699	367699	38732	264730	102860	109	71286	296413	406431
2/3/2021	Delhi	383386	383386	44991	275223	108053	110	75701	307685	428377
3/3/2021	Delhi	394019	394019	49823	282017	111891	111	79096	314923	443842
4/3/2021	Delhi	405213	405213	55099	289098	116004	111	82300	322913	460312
5/3/2021	Delhi	414969	414969	60620	295038	119819	112	85019	329950	475589
6/3/2021	Delhi	426890	426890	68264	301985	124793	112	88221	338669	495154
7/3/2021	Delhi	426957	426957	68286	302019	124826	112	88270	338687	495243
8/3/2021	Delhi	440429	440429	75759	310101	130214	114	91856	348573	516188
9/3/2021	Delhi	453140	453140	84367	317869	135156	115	95284	357856	537507
10/3/2021	Delhi	463523	463523	92795	324152	139256	115	97948	365575	556318
11/3/2021	Delhi	473832	473832	100481	330559	143158	115	100791	373041	574313
12/3/2021	Delhi	484043	484043	110212	336420	147508	115	103611	380432	594255
13/03/2021	Delhi	498281	498281	120758	344550	153615	116	107714	390567	619039
14/03/2021	Delhi	498295	498295	120806	344557	153622	116	107714	390581	619101
15/03/2021	Delhi	513705	513705	131284	353619	159969	117	112056	401649	644989
16/03/2021	Delhi	539287	539287	143560	370906	168264	117	137588	545259	682847
17/03/2021	Delhi	731870	731870	152935	473623	258086	161	184514	700291	884805
18/03/2021	Delhi	758842	758842	166768	488818	269860	164	195177	730433	925610
19/03/2021	Delhi	776830	776830	177682	498736	277926	168	202405	752107	954512
20/03/2021	Delhi	810104	810104	192567	516701	293229	174	215262	787409	1002671
21/03/2021	Delhi	811261	811261	192811	517351	293736	174	215631	788441	1004072
22/03/2021	Delhi	839942	839942	206825	533079	306685	178	227593	819174	1046767
23/03/2021	Delhi	871370	871370	219393	550333	320853	184	240728	850035	1090763
24/03/2021	Delhi	889115	889115	226687	560185	328745	185	247730	868072	1115802
25/03/2021	Delhi	923806	923806	234844	579493	344123	190	261334	897316	1158650
26/03/2021	Delhi	941076	941076	239510	589085	351798	193	267273	913313	1180586
27/03/2021	Delhi	977993	977993	244115	608614	369184	195	280988	941120	1222108
28/03/2021	Delhi	978569	978569	244144	608920	369454	195	281159	941554	1222713
29/03/2021	Delhi	978572	978572	244147	608913	369464	195	281150	941569	1222719
30/03/2021	Delhi	1013442	1013442	251797	627800	385438	204	295739	969500	1265239
31/03/2021	Delhi	1034327	1034327	259730	639330	394788	209	304874	989183	1294057
1/4/2021	Delhi	1087850	1087850	267295	667341	420294	215	325561	1029584	1355145
2/4/2021	Delhi	1152888	1152888	274181	702254	450407	227	351251	1075818	1427069
3/4/2021	Delhi	1211419	1211419	281748	734068	477117	234	373679	1119488	1493167
4/4/2021	Delhi	1290748	1290748	287504	777740	512765	243	404762	1173490	1578252
5/4/2021	Delhi	1352825	1352825	296402	811003	541572	250	429497	1219730	1649227
6/4/2021	Delhi	1396046	1396046	302735	833942	561844	260	447796	1250985	1698781
7/4/2021	Delhi	1469113	1469113	315870	873038	595813	262	477505	1307478	1784983
8/4/2021	Delhi	1565572	1565572	331947	923456	641838	278	515071	1382448	1897519
9/4/2021	Delhi	1613146	1613146	343540	948404	664454	288	532226	1424460	1956686
10/4/2021	Delhi	1705350	1705350	357341	995965	709088	297	570732	1491959	2062691
11/4/2021	Delhi	1780609	1780609	365110	1037794	742505	310	602240	1543479	2145719
12/4/2021	Delhi	1855493	1855493	380409	1079935	775235	323	635229	1600673	2235902
13/04/2021	Delhi	1912002	1912002	392881	1115142	796535	325	661547	1643336	2304883
14/04/2021	Delhi	1971274	1971274	405713	1149522	821419	333	688050	1688937	2376987
15/04/2021	Delhi	2031982	2031982	422889	1185074	846567	341	716471	1738400	2454871
16/04/2021	Delhi	2065695	2065695	438376	1205218	860130	347	730737	1773334	2504071
17/04/2021	Delhi	2121099	2121099	451586	1239449	881283	367	756067	1816618	2572685
18/04/2021	Delhi	2162307	2162307	458970	1264802	897129	376	774240	1847037	2621277
19/04/2021	Delhi	2202752	2202752	479340	1289105	913261	386	795593	1886499	2682092
20/04/2021	Delhi	2238271	2238271	494236	1310586	927296	389	813979	1918528	2732507
21/04/2021	Delhi	2277803	2277803	509313	1332312	945097	394	832393	1954723	2787116
22/04/2021	Delhi	2325997	2325997	529660	1358333	967263	401	857044	1998613	2855657
23/04/2021	Delhi	2347381	2347381	544476	1370063	976915	403	866767	2025090	2891857
24/04/2021	Delhi	2395935	2395935	566296	1396008	999520	407	892412	2069819	2962231
25/04/2021	Delhi	2425352	2425352	578125	1411612	1013331	409	904993	2098484	3003477
26/04/2021	Delhi	2461970	2461970	599597	1431247	1030308	415	924779	2136788	3061567
27/04/2021	Delhi	2495676	2495676	619156						

3/5/2021	Delhi	2676373	2676373	739355	1551202	1124715	456	1054775	2360953	3415728
4/5/2021	Delhi	2742953	2742953	764682	1591565	1150913	475	1093302	2414333	3507635
5/5/2021	Delhi	2800013	2800013	776078	1626372	1173158	483	1117442	2458649	3576091
6/5/2021	Delhi	2883317	2883317	810497	1676526	1206289	502	1165057	2528757	3693814
7/5/2021	Delhi	2951479	2951479	822589	1717488	1233474	517	1193011	2581057	3774068
8/5/2021	Delhi	3044458	3044458	861454	1771228	1272699	531	1244664	2661248	3905912
9/5/2021	Delhi	3045394	3045394	862075	1771717	1273146	531	1244756	2662713	3907469

### Kerala :

16/01/2021	Kerala	1681	1681	0	593	1088	0	0	1681	1681
17/01/2021	Kerala	1836	1836	0	643	1193	0	0	1836	1836
18/01/2021	Kerala	2566	2566	0	746	1820	0	0	2566	2566
19/01/2021	Kerala	5355	5355	0	1529	3826	0	0	5355	5355
20/01/2021	Kerala	5398	5398	0	1552	3846	0	0	5398	5398
21/01/2021	Kerala	9175	9175	0	2557	6618	0	0	9175	9175
22/01/2021	Kerala	15501	15501	0	4180	11321	0	0	15501	15501
23/01/2021	Kerala	21944	21944	0	5715	16229	0	0	21944	21944
24/01/2021	Kerala	23324	23324	0	6036	17288	0	0	23324	23324
25/01/2021	Kerala	43561	43561	0	11213	32347	1	0	43561	43561
26/01/2021	Kerala	43766	43766	0	11269	32496	1	0	43766	43766
27/01/2021	Kerala	58323	58323	0	15292	43030	1	0	58323	58323
28/01/2021	Kerala	82794	82794	0	21316	61477	1	0	82794	82794
29/01/2021	Kerala	110719	110719	0	27902	82814	3	0	110719	110719
30/01/2021	Kerala	134225	134225	0	33810	100409	6	0	134225	134225
31/01/2021	Kerala	140906	140906	0	35488	105412	6	0	140906	140906
1/2/2021	Kerala	173482	173482	0	43684	129791	7	0	173482	173482
2/2/2021	Kerala	204449	204449	0	51042	153398	9	0	204449	204449
3/2/2021	Kerala	225664	225664	0	56100	169554	10	0	225664	225664
4/2/2021	Kerala	250831	250831	0	61871	188949	11	0	250831	250831
5/2/2021	Kerala	266068	266068	0	65605	200452	11	0	266068	266068
6/2/2021	Kerala	271731	271731	0	67041	204679	11	0	271731	271731
7/2/2021	Kerala	272221	272221	0	67185	205025	11	0	272221	272221
8/2/2021	Kerala	287787	287787	0	71255	216521	11	0	287787	287787
9/2/2021	Kerala	302655	302655	0	75265	227379	11	1	302654	302655
10/2/2021	Kerala	306802	306802	0	76472	230319	11	1	306801	306802
11/2/2021	Kerala	314425	314425	0	81044	233370	11	563	313862	314425
12/2/2021	Kerala	326974	326974	0	90610	236353	11	8514	318460	326974
13/02/2021	Kerala	338167	338167	0	99315	238841	11	18256	319911	338167
14/02/2021	Kerala	340407	340407	45	100976	239420	11	20439	319968	340452
15/02/2021	Kerala	353940	353940	3323	109097	244832	11	28363	325577	357263
16/02/2021	Kerala	370481	370481	12148	117056	253413	12	33717	336764	382629
17/02/2021	Kerala	377376	377376	15388	120403	256961	12	36217	341159	392764
18/02/2021	Kerala	377981	377981	23336	123526	254442	13	42079	335902	401317
19/02/2021	Kerala	400463	400463	32101	131165	269285	13	47318	353145	432564
20/02/2021	Kerala	406728	406728	38833	134630	272085	13	52144	354584	445561
21/02/2021	Kerala	407098	407098	38841	134841	272244	13	52355	354743	445939
22/02/2021	Kerala	413599	413599	56034	138369	275217	13	57459	356140	469633
23/02/2021	Kerala	422676	422676	62077	143120	279543	13	60036	362640	484753

24/02/2021	Kerala	431070	431070	70173	147423	283634	13	60822	370248	501243
25/02/2021	Kerala	449826	449826	88541	156111	293702	13	61483	388343	538367
26/02/2021	Kerala	489113	489113	104220	173522	315577	14	62561	426552	593333
27/02/2021	Kerala	489113	489113	104220	173522	315577	14	62561	426552	593333
28/02/2021	Kerala	489113	489113	104220	173522	315577	14	62561	426552	593333
1/3/2021	Kerala	489113	489113	104220	173522	315577	14	62561	426552	593333
2/3/2021	Kerala	534490	534490	118709	195372	339100	18	62855	471635	653199
3/3/2021	Kerala	564199	564199	127659	209978	354203	18	63138	501061	691858
4/3/2021	Kerala	627900	627900	147038	240900	386981	19	63956	563944	774938
5/3/2021	Kerala	689867	689867	166330	270499	419345	23	64566	625301	856197
6/3/2021	Kerala	756016	756016	187155	301470	454518	28	64997	691019	943171
7/3/2021	Kerala	767969	767969	188358	307239	460702	28	64997	702972	956327
8/3/2021	Kerala	829751	829751	209019	337866	491853	32	65335	764416	1038770
9/3/2021	Kerala	882614	882614	227996	364094	518483	37	65913	816701	1110610
10/3/2021	Kerala	908813	908813	240021	376311	532462	40	65993	842820	1148834
11/3/2021	Kerala	937804	937804	249459	389724	548037	43	66140	871664	1187263
12/3/2021	Kerala	1004716	1004716	269548	421252	583415	49	66737	937979	1274264
13/03/2021	Kerala	1042086	1042086	279614	438226	603811	49	67645	974441	1321700
14/03/2021	Kerala	1045645	1045645	280408	439861	605735	49	67646	977999	1326053
15/03/2021	Kerala	1115552	1115552	296711	472803	642691	58	68602	1046950	1412263
16/03/2021	Kerala	1188099	1188099	312374	506856	681178	65	82435	1418038	1500473
17/03/2021	Kerala	1695387	1695387	321316	768897	926350	140	89070	1927633	2016703
18/03/2021	Kerala	1832205	1832205	333447	834871	997172	162	95005	2070647	2165652
19/03/2021	Kerala	1954868	1954868	343587	892887	1061807	174	101174	2197281	2298455
20/03/2021	Kerala	2066624	2066624	352307	944605	1121838	181	107378	2311553	2418931
21/03/2021	Kerala	2073902	2073902	352925	948016	1125704	182	107808	2319019	2426827
22/03/2021	Kerala	2203735	2203735	360314	1008762	1194773	200	113327	2450722	2564049
23/03/2021	Kerala	2339164	2339164	373548	1071966	1266982	216	124751	2587961	2712712
24/03/2021	Kerala	2398567	2398567	377588	1099916	1298425	226	127294	2648861	2776155
25/03/2021	Kerala	2555550	2555550	383692	1173561	1381745	244	131207	2808035	2939242
26/03/2021	Kerala	2682089	2682089	388263	1231380	1450450	259	133243	2937109	3070352
27/03/2021	Kerala	2795930	2795930	392138	1283227	1512430	273	135202	3052866	3188068
28/03/2021	Kerala	2807351	2807351	392308	1288539	1518538	274	135210	3064449	3199659
29/03/2021	Kerala	2956227	2956227	396814	1355104	1600818	305	136924	3216117	3353041
30/03/2021	Kerala	3106682	3106682	403525	1421478	1684885	319	139738	3370469	3510207
31/03/2021	Kerala	3167015	3167015	407842	1448053	1718636	326	141297	3433560	3574857
1/4/2021	Kerala	3242747	3242747	411067	1481276	1761139	332	141781	3512033	3653814
2/4/2021	Kerala	3307374	3307374	414525	1510014	1797019	341	142408	3579491	3721899
3/4/2021	Kerala	3416400	3416400	422083	1555388	1860659	353	143446	3695037	3838483
4/4/2021	Kerala	3463563	3463563	424768	1575071	1888134	358	143892	3744439	3888331
5/4/2021	Kerala	3573568	3573568	431649	1620368	1952832	368	144425	3860792	4005217
6/4/2021	Kerala	3608126	3608126	434218	1635201	1972554	371	144684	3897660	4042344
7/4/2021	Kerala	3698854	3698854	441833	1673913	2024554	387	145437	3995250	4140687
8/4/2021	Kerala	3899533	3899533	457415	1757681	2141438	414	146408	4210540	4356948
9/4/2021	Kerala	4099009	4099009	476570	1841931	2256641	437	147850	4427729	4575579
10/4/2021	Kerala	4270854	4270854	492896	1915320	2355073	461	149328	4614422	4763750
11/4/2021	Kerala	4333798	4333798	496868	1944347	2388985	466	149990	4680676	4830666

12/4/2021	Kerala	4571524	4571524	526491	2045082	2525926	516	152985	4945030	5098015
13/04/2021	Kerala	4714085	4714085	553088	2109225	2604323	537	156460	5110713	5267173
14/04/2021	Kerala	4730173	4730173	557313	2117216	2612419	538	157699	5129787	5287486
15/04/2021	Kerala	4899502	4899502	597051	2193316	2705623	563	172708	5323845	5496553
16/04/2021	Kerala	5040807	5040807	639307	2257490	2782737	580	199162	5480952	5680114
17/04/2021	Kerala	5158591	5158591	673957	2312598	2845392	601	240926	5591622	5832548
18/04/2021	Kerala	5189796	5189796	680436	2328909	2860281	606	255745	5614487	5870232
19/04/2021	Kerala	5299053	5299053	727279	2381261	2917173	619	288756	5737576	6026332
20/04/2021	Kerala	5443386	5443386	800229	2449699	2993054	633	312000	5931615	6243615
21/04/2021	Kerala	5512304	5512304	841296	2483037	3028625	642	322945	6030655	6353600
22/04/2021	Kerala	5602945	5602945	900089	2525828	3076458	659	333703	6169331	6503034
23/04/2021	Kerala	5673943	5673943	954445	2559741	3113525	677	339373	6289015	6628388
24/04/2021	Kerala	5788568	5788568	1039187	2615457	3172415	696	343411	6484344	6827755
25/04/2021	Kerala	5801281	5801281	1045794	2621806	3178777	698	344350	6502725	6847075
26/04/2021	Kerala	5885170	5885170	1105948	2662083	3222372	715	349708	6641410	6991118
27/04/2021	Kerala	5947361	5947361	1159581	2691909	3254720	732	352774	6754168	7106942
28/04/2021	Kerala	5967887	5967887	1176196	2701673	3265481	733	362293	6781790	7144083
29/04/2021	Kerala	6006391	6006391	1222786	2720059	3285590	742	368302	6860875	7229177
30/04/2021	Kerala	6051350	6051350	1325584	2741857	3308741	752	375938	7000996	7376934
1/5/2021	Kerala	6069726	6069726	1355690	2750902	3318069	755	382103	7043313	7425416
2/5/2021	Kerala	6069760	6069760	1356416	2750908	3318097	755	382111	7044065	7426176
3/5/2021	Kerala	6092349	6092349	1419105	2761697	3329892	760	387629	7123825	7511454
4/5/2021	Kerala	6110419	6110419	1466885	2770380	3339264	775	396731	7180573	7577304
5/5/2021	Kerala	6118358	6118358	1482126	2774337	3343245	776	402333	7198151	7600484
6/5/2021	Kerala	6137985	6137985	1567300	2784001	3353206	778	407131	7298154	7705285
7/5/2021	Kerala	6168780	6168780	1700489	2799186	3368802	792	412346	7456923	7869269
8/5/2021	Kerala	6187280	6187280	1764703	2808977	3377510	793	416141	7535842	7951983
9/5/2021	Kerala	6187652	6187652	1764904	2809173	3377686	793	416217	7536339	7952556

#### **Maharashtra:**

16/01/2021	Maharashtra	5726	5726	0	3668	2057	1	85	5641	5726
17/01/2021	Maharashtra	6521	6521	0	3953	2566	2	94	6427	6521
18/01/2021	Maharashtra	6151	6151	0	3569	2581	1	105	6046	6151
19/01/2021	Maharashtra	13699	13699	0	6328	7367	4	214	13485	13699
20/01/2021	Maharashtra	23880	23880	0	9658	14205	17	439	23441	23880
21/01/2021	Maharashtra	24148	24148	0	9784	14347	17	443	23705	24148
22/01/2021	Maharashtra	44369	44369	0	16546	27802	21	840	43529	44369
23/01/2021	Maharashtra	69295	69295	0	25333	43937	25	1156	68139	69295
24/01/2021	Maharashtra	70196	70196	0	25661	44510	25	1157	69039	70196
25/01/2021	Maharashtra	107073	107073	0	38512	68527	34	1433	105640	107073
26/01/2021	Maharashtra	107338	107338	0	38562	68728	48	1433	105905	107338
27/01/2021	Maharashtra	150102	150102	0	53245	96795	62	1642	148460	150102
28/01/2021	Maharashtra	189743	189743	0	66834	122840	69	1893	187850	189743
29/01/2021	Maharashtra	225132	225132	0	79060	145999	73	2193	222939	225132
30/01/2021	Maharashtra	233693	233693	0	82464	151156	73	2282	231411	233693
31/01/2021	Maharashtra	234150	234150	0	82628	151449	73	2282	231868	234150
1/2/2021	Maharashtra	275348	275348	0	99441	175829	78	2708	272640	275348
2/2/2021	Maharashtra	284107	284107	0	103217	180812	78	2760	281347	284107
3/2/2021	Maharashtra	318918	318918	0	117360	201467	91	3170	315748	318918
4/2/2021	Maharashtra	352676	352676	0	131909	220669	98	3691	348985	352676
5/2/2021	Maharashtra	397889	397889	0	152168	245610	111	3942	393947	397889
6/2/2021	Maharashtra	436229	436229	0	171578	264525	126	4205	432024	436229
7/2/2021	Maharashtra	436400	436400	0	171672	264602	126	4206	432194	436400

8/2/2021	Maharashtra	475193	475193	0	192223	282839	131	4472	470721	475193
9/2/2021	Maharashtra	503757	503757	0	210039	293586	132	4732	499025	503757
10/2/2021	Maharashtra	544726	544726	0	234241	310353	132	4877	539849	544726
11/2/2021	Maharashtra	579241	579241	0	255793	323314	134	5018	574223	579241
12/2/2021	Maharashtra	620539	620539	0	281870	338533	136	5258	615281	620539
13/02/2021	Maharashtra	652801	652801	170	303019	349645	137	5403	647398	652971
14/02/2021	Maharashtra	653135	653135	170	303296	349702	137	5403	647732	653305
15/02/2021	Maharashtra	682610	682610	4527	322414	360058	138	5771	676839	687137
16/02/2021	Maharashtra	711043	711043	8901	341277	369626	140	6176	704867	719944
17/02/2021	Maharashtra	752088	752088	16607	367162	384760	166	6713	745375	768695
18/02/2021	Maharashtra	787086	787086	23820	395447	391467	172	7323	779763	810906
19/02/2021	Maharashtra	825846	825846	27528	415984	409681	181	7694	818152	853374
20/02/2021	Maharashtra	868244	868244	45414	445173	422875	196	8295	859949	913658
21/02/2021	Maharashtra	871567	871567	46395	446831	424540	196	8332	863235	917962
22/02/2021	Maharashtra	907200	907200	67861	472516	434486	198	9341	897859	975061
23/02/2021	Maharashtra	938078	938078	79336	494986	442893	199	10284	927794	1017414
24/02/2021	Maharashtra	969314	969314	104475	516434	452680	200	11427	957887	1073789
25/02/2021	Maharashtra	997308	997308	130773	536075	461032	201	12205	985103	1128081
26/02/2021	Maharashtra	1028360	1028360	158658	557475	470681	204	13184	1015176	1187018
27/02/2021	Maharashtra	1028365	1028365	158658	557480	470681	204	13184	1015181	1187023
28/02/2021	Maharashtra	1028520	1028520	158658	557603	470713	204	13184	1015336	1187178
1/3/2021	Maharashtra	1028520	1028520	158658	557603	470713	204	13184	1015336	1187178
2/3/2021	Maharashtra	1071612	1071612	179807	583429	487976	207	14917	1056695	1251419
3/3/2021	Maharashtra	1119835	1119835	197501	611358	508266	211	16279	1103556	1317336
4/3/2021	Maharashtra	1174258	1174258	213731	641880	532164	214	18652	1155606	1387989
5/3/2021	Maharashtra	1244617	1244617	234417	680964	563432	221	20513	1224104	1479034
6/3/2021	Maharashtra	1325264	1325264	259577	725150	599889	225	22376	1302888	1584841
7/3/2021	Maharashtra	1331000	1331000	260448	728051	602724	225	22432	1308568	1591448
8/3/2021	Maharashtra	1454112	1454112	285711	793934	659947	231	27182	1426930	1739823
9/3/2021	Maharashtra	1536355	1536355	305927	839907	696211	237	29698	1506657	1842282
10/3/2021	Maharashtra	1687750	1687750	338709	922488	765016	246	36551	1651199	2026459
11/3/2021	Maharashtra	1734147	1734147	348804	947989	785912	246	37223	1696924	2082951
12/3/2021	Maharashtra	1900122	1900122	383425	1039801	860063	258	45358	1854764	2283547
13/03/2021	Maharashtra	2006329	2006329	411776	1097386	908680	263	51243	1955086	2418105
14/03/2021	Maharashtra	2013155	2013155	412322	1101171	911720	264	52018	1961137	2425477
15/03/2021	Maharashtra	2198788	2198788	444527	1201925	996578	285	70402	2128386	2643315
16/03/2021	Maharashtra	2316957	2316957	468500	1267604	1049059	294	100256	2685201	2785457
17/03/2021	Maharashtra	3229723	3229723	500240	1744987	1484314	422	181565	3548398	3729963
18/03/2021	Maharashtra	3408977	3408977	524988	1841970	1566567	440	247217	3686748	3933965
19/03/2021	Maharashtra	3622709	3622709	556049	1957125	1665128	456	313185	3865573	4178758
20/03/2021	Maharashtra	3815920	3815920	588924	2060334	1755107	479	394596	4010248	4404844
21/03/2021	Maharashtra	3847301	3847301	593653	2077416	1769401	484	406716	4034238	4440954
22/03/2021	Maharashtra	4060919	4060919	621945	2191844	1868558	517	481938	4200926	4682864
23/03/2021	Maharashtra	4262362	4262362	649364	2300351	1961476	535	550924	4360802	4911726
24/03/2021	Maharashtra	4494807	4494807	669410	2424948	2069291	568	604161	4560056	5164217
25/03/2021	Maharashtra	4701964	4701964	684692	2538168	2163205	591	643432	4743224	5386656
26/03/2021	Maharashtra	4944116	4944116	704407	2668802	2274706	608	678503	4970020	5648523
27/03/2021	Maharashtra	5163746	5163746	717827	2785993	2377123	630	708937	5172636	5881573
28/03/2021	Maharashtra	5183711	5183711	718554	2797355	2385726	630	712396	5189869	5902265
29/03/2021	Maharashtra	5235606	5235606	721196	2825369	2409604	633	719696	5237106	5956802
30/03/2021	Maharashtra	5421876	5421876	734458	2923002	2498222	652	747431	5408903	6156334
31/03/2021	Maharashtra	5618555	5618555	751706	3028628	2589252	675	771814	5598447	6370261
1/4/2021	Maharashtra	5833743	5833743	762336	3143391	2689657	695	797453	5798626	6596079
2/4/2021	Maharashtra	6182629	6182629	777775	3330683	2851204	742	831611	6128793	6960404
3/4/2021	Maharashtra	6496037	6496037	792535	3498169	2997098	770	854490	6434082	7288572
4/4/2021	Maharashtra	6841397	6841397	805729	3682530	3158056	811	876863	6770263	7647126
5/4/2021	Maharashtra	7167016	7167016	822149	3851303	3314856	857	894246	7094919	7989165
6/4/2021	Maharashtra	7421245	7421245	835795	3983541	3436823	881	906206	7350834	8257040
7/4/2021	Maharashtra	7988151	7988151	868513	4285845	3701369	937	938502	7918162	8856664
8/4/2021	Maharashtra	8434286	8434286	903504	4529795	3903507	984	970024	8367766	9

13/04/2021	Maharashtra	9717561	9717561	1035890	5236582	4479847	1132	1086699	9666752	10753451
14/04/2021	Maharashtra	10038913	10038913	1086062	5403569	4634179	1165	1103553	10021422	11124975
15/04/2021	Maharashtra	10356338	10356338	1154685	5576754	4778365	1219	1129851	10381172	11511023
16/04/2021	Maharashtra	10658902	10658902	1226928	5741917	4915732	1253	1161603	10724227	11885830
17/04/2021	Maharashtra	10849828	10849828	1289143	5848545	4999988	1295	1206905	10932066	12138971
18/04/2021	Maharashtra	10959390	10959390	1314373	5908230	5049845	1315	1225133	11048630	12273763
19/04/2021	Maharashtra	11240031	11240031	1409299	6062034	5176641	1356	1305411	11343919	12649330
20/04/2021	Maharashtra	11447258	11447258	1497461	6177116	5268751	1391	1401015	11543704	12944719
21/04/2021	Maharashtra	11691829	11691829	1587560	6306172	5384230	1427	1457704	11821685	13279389
22/04/2021	Maharashtra	11966150	11966150	1707683	6452197	5512485	1468	1518540	12155293	13673833
23/04/2021	Maharashtra	12184886	12184886	1815052	6571578	5611811	1497	1568825	12431113	13999938
24/04/2021	Maharashtra	12326873	12326873	1903104	6647519	5677836	1518	1611245	12618732	14229977
25/04/2021	Maharashtra	12404273	12404273	1937912	6687026	5715713	1534	1622286	12719899	14342185
26/04/2021	Maharashtra	12768316	12768316	2137509	6877612	5889111	1593	1656856	13248969	14905825
27/04/2021	Maharashtra	13030894	13030894	2290836	7016228	6013031	1635	1701178	13620552	15321730
28/04/2021	Maharashtra	13184469	13184469	2393167	7096557	6086252	1660	1752353	13825283	15577636
29/04/2021	Maharashtra	13360080	13360080	2510368	7186686	6171712	1682	1791689	14078759	15870448
30/04/2021	Maharashtra	13561437	13561437	2622410	7294154	6265566	1717	1811340	14372507	16183847
1/5/2021	Maharashtra	13637082	13637082	2655671	7336072	6299281	1729	1819842	14472911	16292753
2/5/2021	Maharashtra	13677591	13677591	2665223	7360208	6315650	1733	1822158	14520656	16342814
3/5/2021	Maharashtra	13739753	13739753	2686134	7396138	6341872	1743	1831851	14594036	16425887
4/5/2021	Maharashtra	13799328	13799328	2729017	7430828	6366715	1785	1842007	14686338	16528345
5/5/2021	Maharashtra	13935541	13935541	2866714	7504642	6429098	1801	1857429	14944826	16802255
6/5/2021	Maharashtra	14214775	14214775	3081334	7656559	6556365	1851	1894014	15402095	17296109
7/5/2021	Maharashtra	14458039	14458039	3235335	7791637	6664529	1873	1957794	15735580	17693374
8/5/2021	Maharashtra	14628881	14628881	3318539	7886870	6740099	1912	2013967	15933453	17947420
9/5/2021	Maharashtra	14712246	14712246	3351099	7934067	6776255	1924	2053522	16009823	18063345