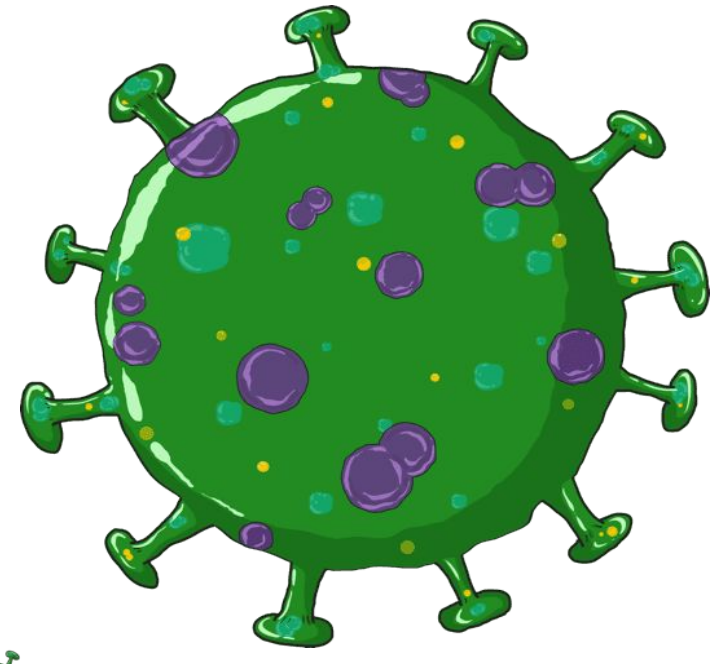


COVID-19
Dataset Analysis

Sep,22

DIPANJAN MAITY

MOHIT NAKADE

REEMA

Introduction

- The Coronavirus Disease Pandemic of 2019 (COVID-19) serves as a timely reminder of the characteristics and consequences of public health emergencies of global relevance.

- India had reported more than 5.28 Lakh deaths and over 4.45 crore cases as of September 12, 2022.

- This study's goal is to examine the COVID-19 pandemic's variable manifestation in order to draw conclusions for an efficient public health emergency response.

Method

Data Collection

- We collected different JSON file from data.covid19india.org. These JSON files contains numbers across Confirmed, Recovered, Deceased per states and districts.

Data Manipulation and Cleaning

- We built a csv file by extracting the necessary data from JSON files using Python
- We removed unnecessary columns and

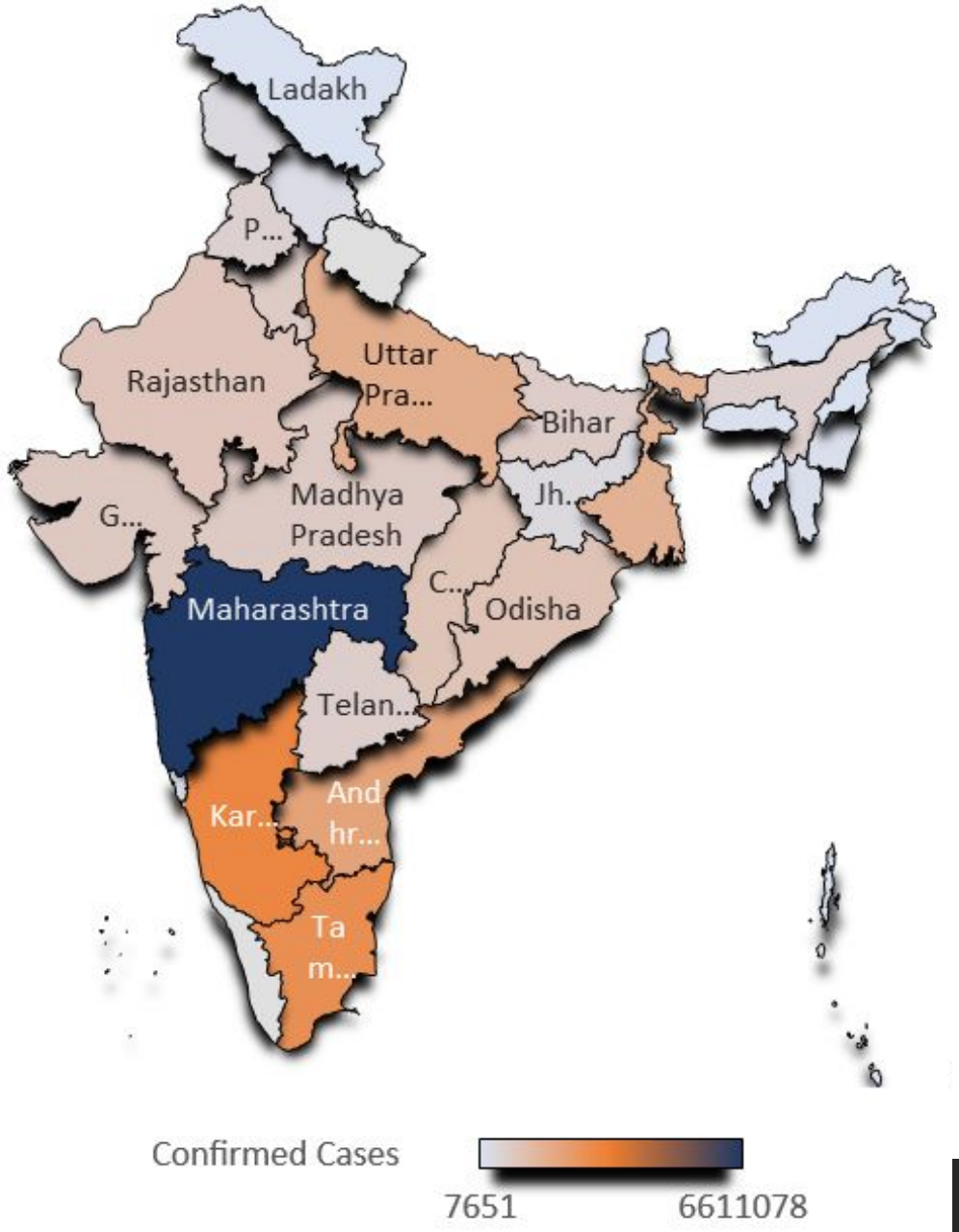
Data Aggregation

- To extract the necessary data and perform various forms of aggregation, we used MS SQL.

Dashboard Creation

- We used all the data we gathered to construct an interactive dashboard in MS Excel and presented all of our insights.

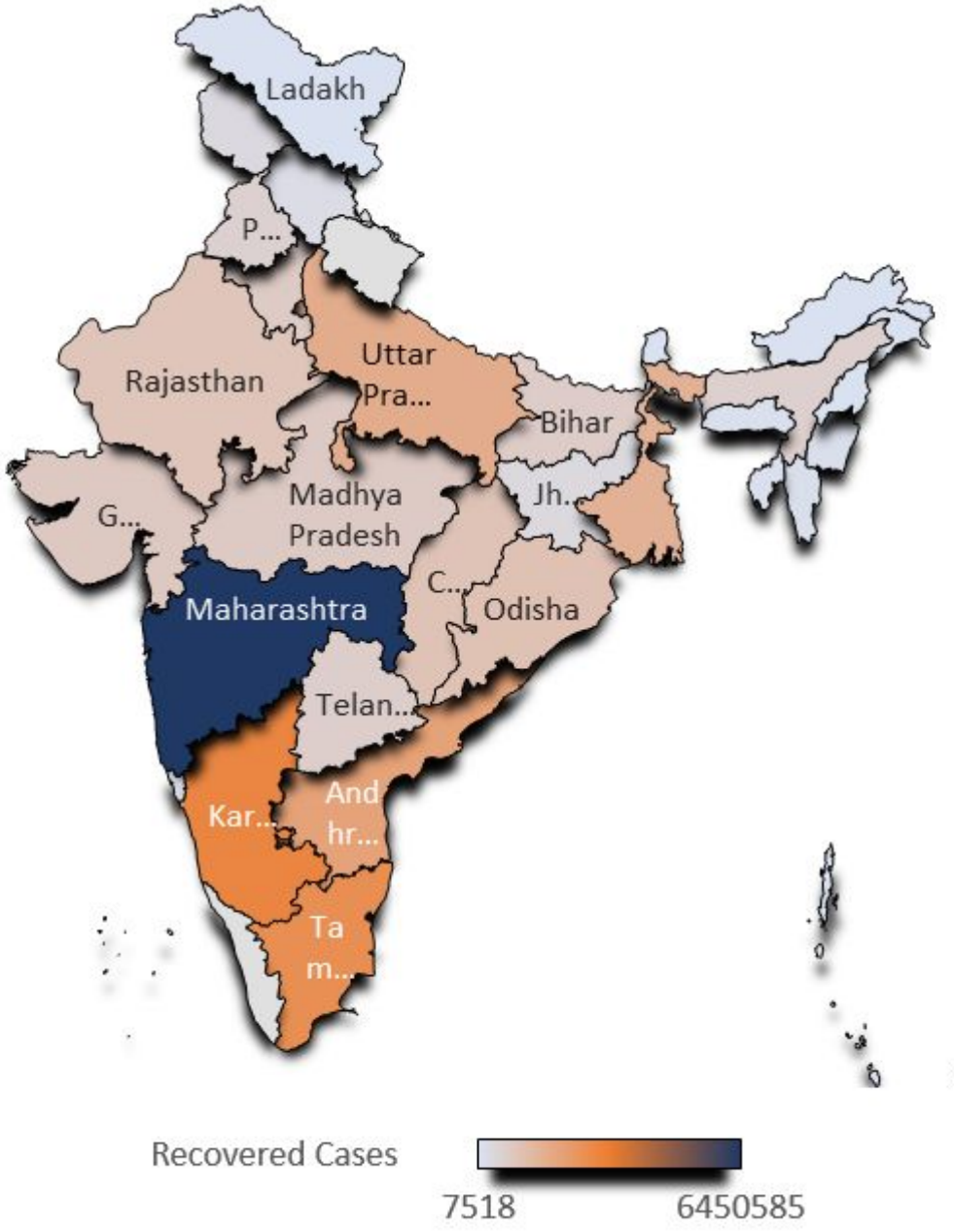
State-wise Confirmed Cases:



Top 10 states in terms of total number of Confirmed cases (in Millions) :

1. Maharashtra: 6.6M
2. Kerala: 4.9M
3. Karnataka: 2.9M
4. Tamil Nadu: 2.7M
5. Andhra Pradesh: 2.0M
6. Uttar Pradesh: 1.7M
7. West Bengal: 1.5M
8. Delhi: 1.4M
9. Orissa: 1.0M
10. Chhattisgarh: 1.0M

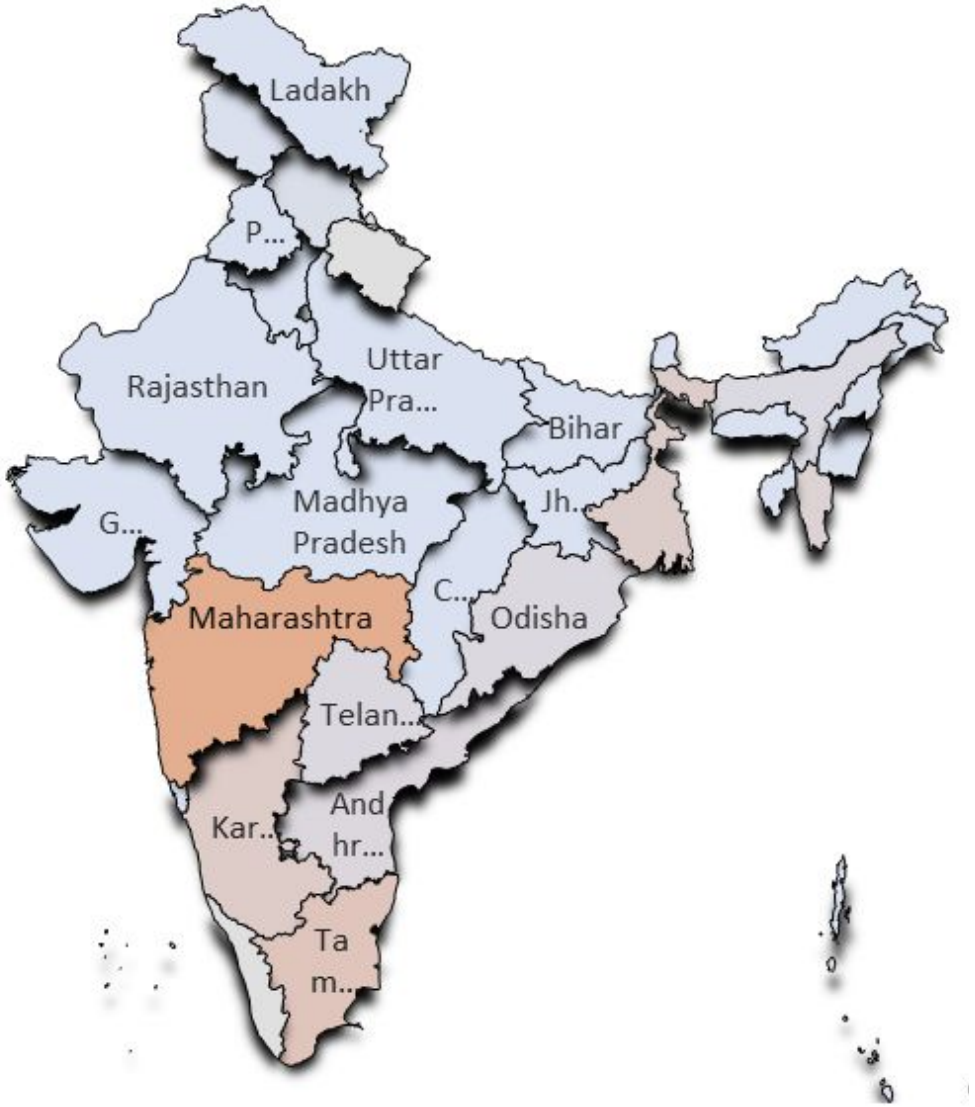
State-wise Recovered Cases:



Top 10 states in terms of total number of Recovered cases (in Millions) :

1. Maharashtra 6.4M
2. Kerala 4.8M
3. Karnataka 2.9M
4. Tamil Nadu 2.6M
5. Andhra Pradesh 2.0M
6. Uttar Pradesh 1.6M
7. West Bengal 1.5M
8. Delhi 1.4M
9. Orissa 1.0M
10. Chhattisgarh 9.9M

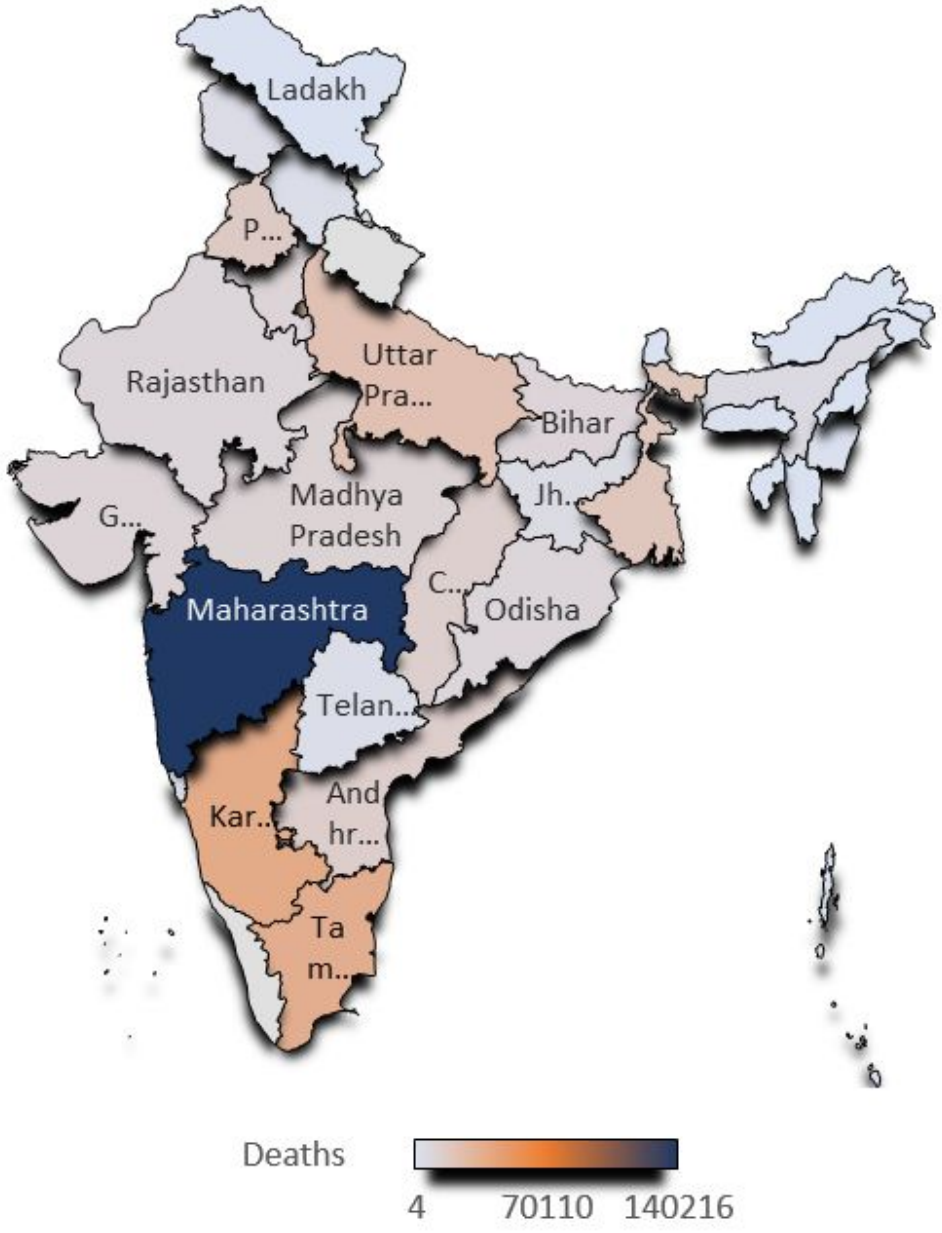
State-wise Active Cases:



Top 10 states in terms of total number of Active cases :

1. Kerala 79795
2. Maharashtra 20277
3. Tamil Nadu 11492
4. Karnataka 8673
5. "West Bengal" 8296
6. Mizoram 6315
7. "Andhra Pradesh" 4355
8. Telangana 4009
9. Orissa 3924
10. Assam 3674

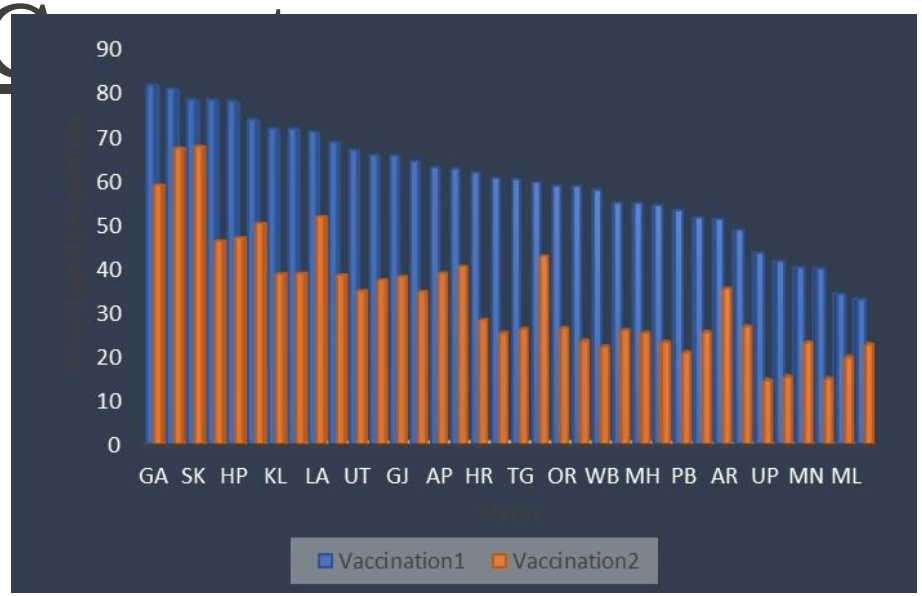
State-wise Death Count:

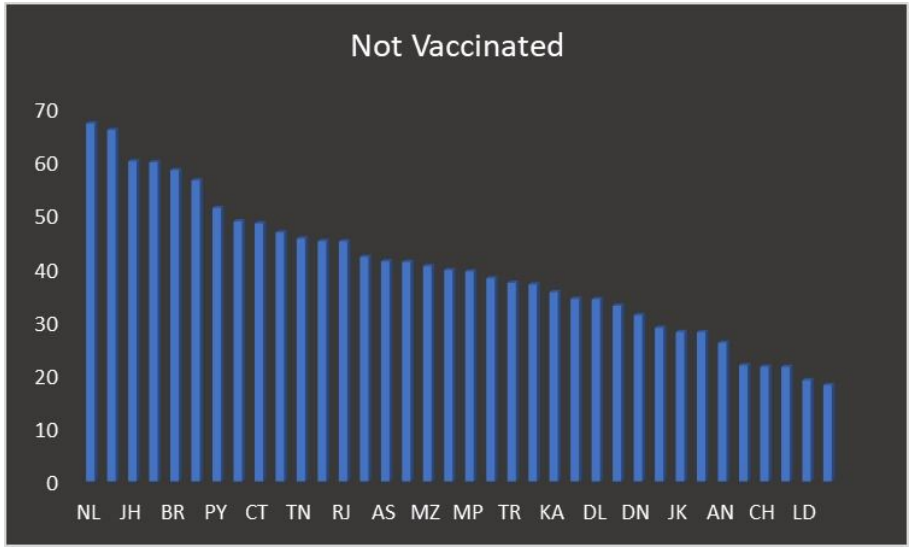


Top 10 states in terms of total number of Deaths:

1. Maharashtra 140216
2. Karnataka 38082
3. Tamil Nadu 36116
4. Kerala 31681
5. Delhi 25091
6. Uttar Pradesh 22900
7. West Bengal 19141
8. Punjab 16559
9. Andhra Pradesh 14373
10. Chhattisgarh 13577

State-wise Vaccination C





Top performing State in terms of Vaccination:

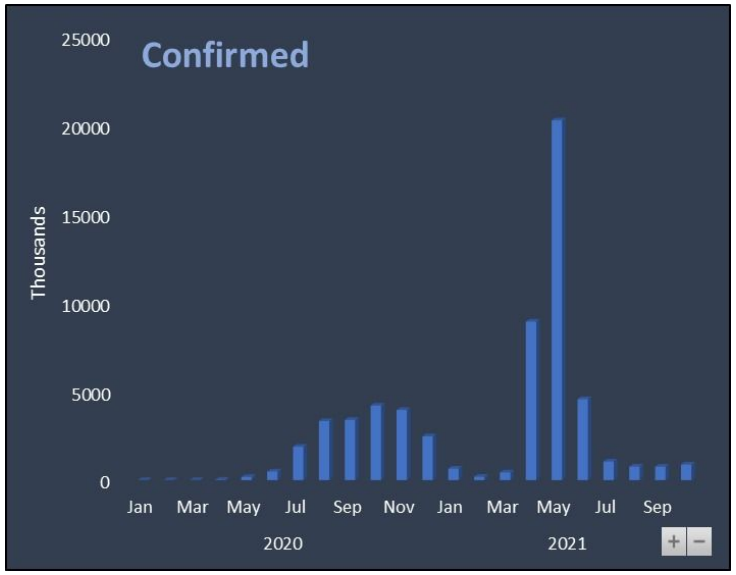
Sate	Dose	Vaccination Percentage (out of Total State Population)
Goa	1st Dose	81.98 %
Sikkim	2nd Dose	68 %

Lowest Performing State in terms of Vaccination:

State	Not Vaccinated % (out of Total State Population)
Nagaland	67%
Meghalaya	65%

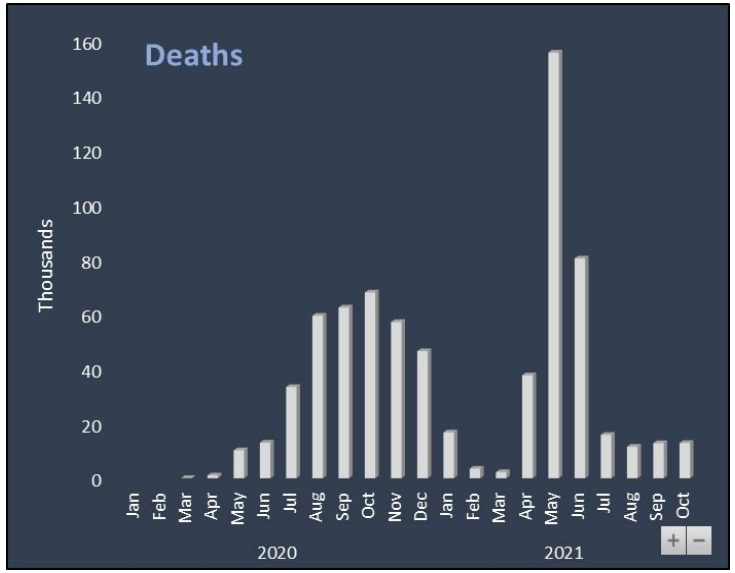
Chhattisgarh ,Himachal Pradesh, Jammu Kashmir, Kerala were the states where first vaccination dose was greater than 70% and Second Vaccination Dose was less than 50%. So in these states Govt should takes some initiatives to promote importance of second Vaccination.

Month-wise Confirmed and Death Analysis:



Year wise top month in terms of total number of Confirmed cases :

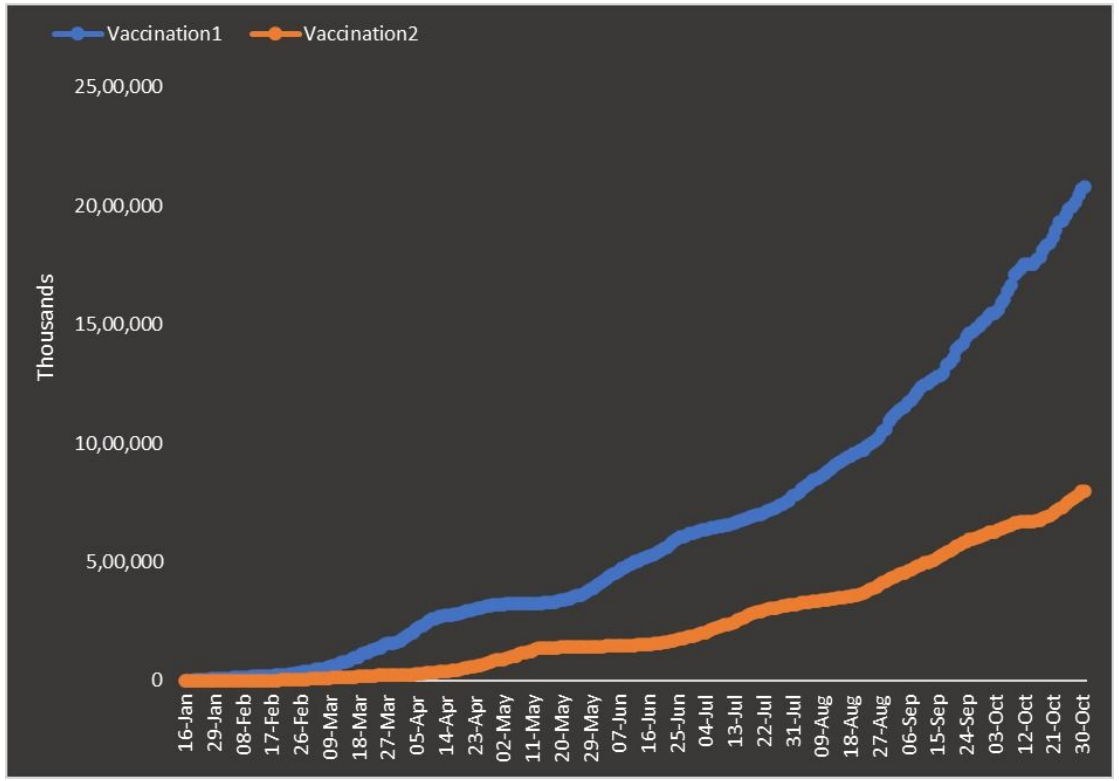
- May,2021 : 20276407
- October,2020 : 4198140



Year wise top months in terms of total number of Death Count :

- May,2021 : 155289
- October,2020 : 67788

Month-wise Vaccination Analysis:



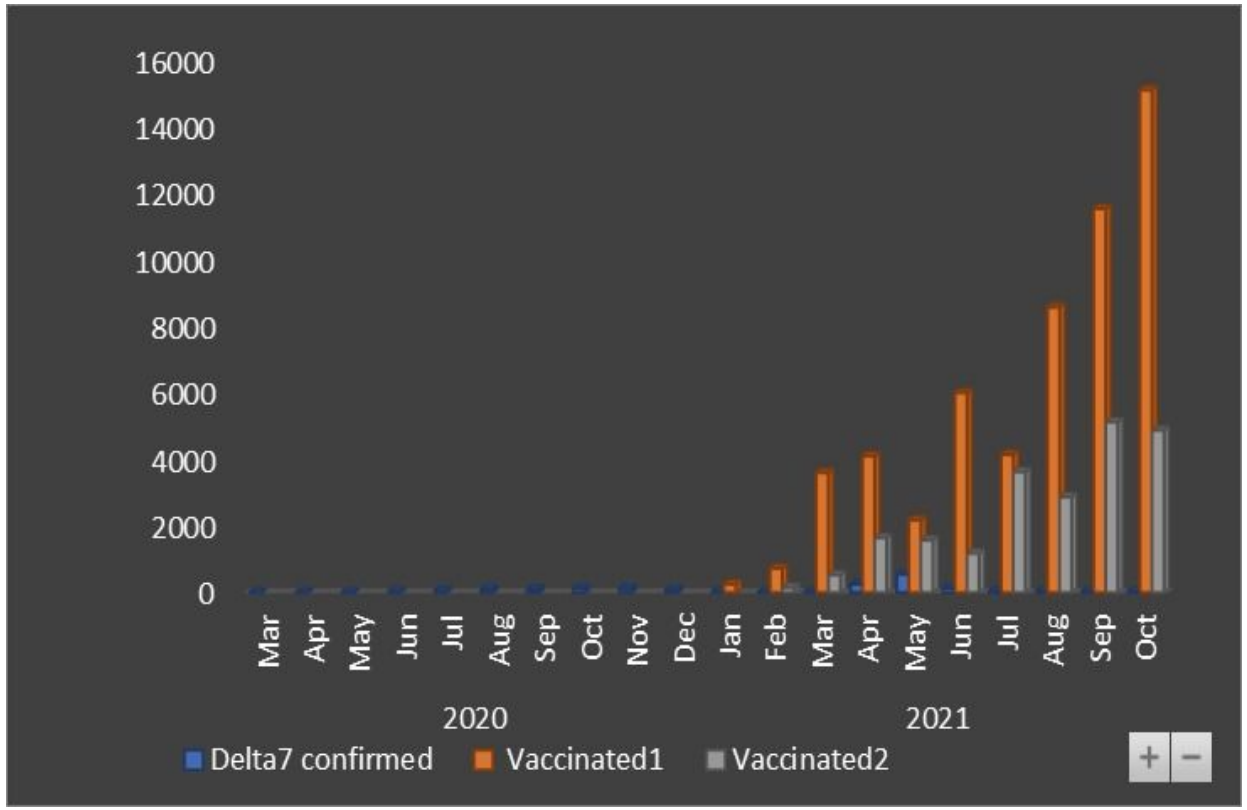
Vaccination Started : 16 January 2021

Total Vaccination (1st Dose) : 559055089
Total Vaccination (2nd Dose) : 180449555

Here, we can see that people participated in first vaccination very actively but in case of second dose of vaccination there is a huge drop in numbers due to lack of interest and awareness among people.

Month-wise Delta7 Analysis:

Delta7 confirmed cases with respect to vaccination



Observation:

Here we can see that after the vaccination drive started, the Number of vaccination done per month is greater than the number of confirmed cases per month.

Test Ratio Analysis:

testing ratio(tr) = (number of tests done) / (population)

Here we categorize every district in one of the following categories:

- Category A: $0 \leq tr \leq 0.1$
- Category B: $0.1 < tr \leq 0.3$
- Category C: $0.3 < tr \leq 0.5$
- Category D: $0.5 < tr \leq 0.75$
- Category E: $0.75 < tr \leq 1.0$
- Category F : $tr > 1$

Then we perform an analysis of number of % of deaths across all category.

Category	Number_of_District		Avg Testing Ratio	Percentage_decesed
Category_F	9	2.10	0.106044244	
Category_D	2	0.73	0.123740936	
Category_C	16	0.38	0.06633278	
Category_B	232	0.16	0.027178038	
Category_A	287	0.03	0.029220981	

Thank You