COVID-19

March 30, 2020

1 Preliminary plots

The data for this study was downloaded from www.covid19india.org . The following plots show the current COVID-19 incidence in the different Indian states. It also depicts the timeline of incidence of COVID-19 cases in India.
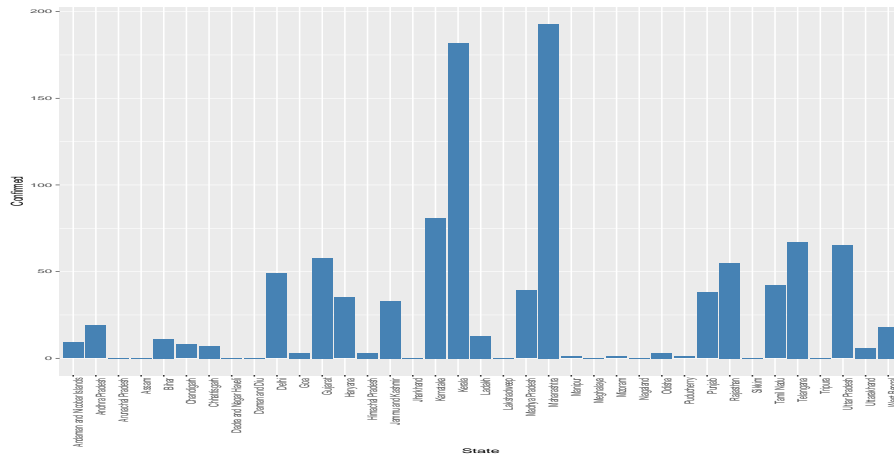

Figure 1: Number of confirmed COVID-19 cases.

The above barplot shows the number of confirmed cases of COVID-19 cases. Among the Indian states, Maharashtra and Kerala have the maximum number of COVID-19 positive cases. As of 30th March 2020 morning, around 215 individuals in Maharashtra and 202 individuals in Kerala have been tested positive for COVID-19. These two states are followed by Karnataka, Telengana and Uttar Pradesh where the number of positive cases are 83, 70, and 72 respectively.

Figure 2: Proportion of individuals who recovered.

In the above bar plot we have compared the recovery rates of COVID-19 positive patients across Indian states. We can see from the plot that Himachal Pradesh has the highest recovery rate. However, Himachal Pradesh is one of the few states that have been least affected by the COVID-19 outbreak with only 3 identified positive cases, out of which 2 have recovered. Haryana on the other hand has 35 positive cases of which 17 have recovered. Maharashtra, now leading in terms of active COVID-19 cases of 215 individuals has only around 10% recovery rate.

The next bar plot depicts the percentage of individuals who succumbed to the disease across all Indian states. In Himachal Pradesh, out of the 3 positively identified cases of COVID-19, 1 person died making the death rate highest among the other states. Although, few of the states like Maharashtra, Kerala, and Karnataka where the incidence of the disease is quite high (as shown in figure 1), death rate has been under 5%.

Figure 3: Proportion of individuals who died.

Figure 4 is the daily time series plot of number of confirmed, recovered, and deceased cases in India. Although, the timeline is followed from 30 January onwards, in India the number of confirmed cases have started rising from 3rd March onwards. From 18th March onwards the line shows a sharp exponential rise in the number of confirmed COVID-19

positive cases. There was a slight decline in the increase in number around 24th March after which there has been a steady increase in the number.

Similarly, figure 5 shows cumulative total number of confirmed, recovered and deceased cases over the last couple of months. Cumulatively the number of each has increased after 3rd March 2020 and kept on increasing thereafter.
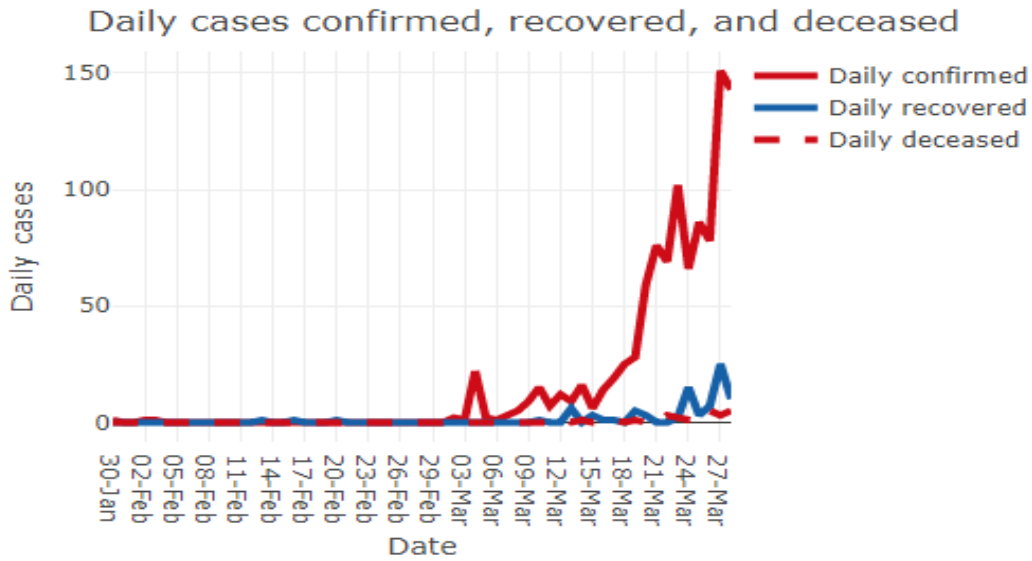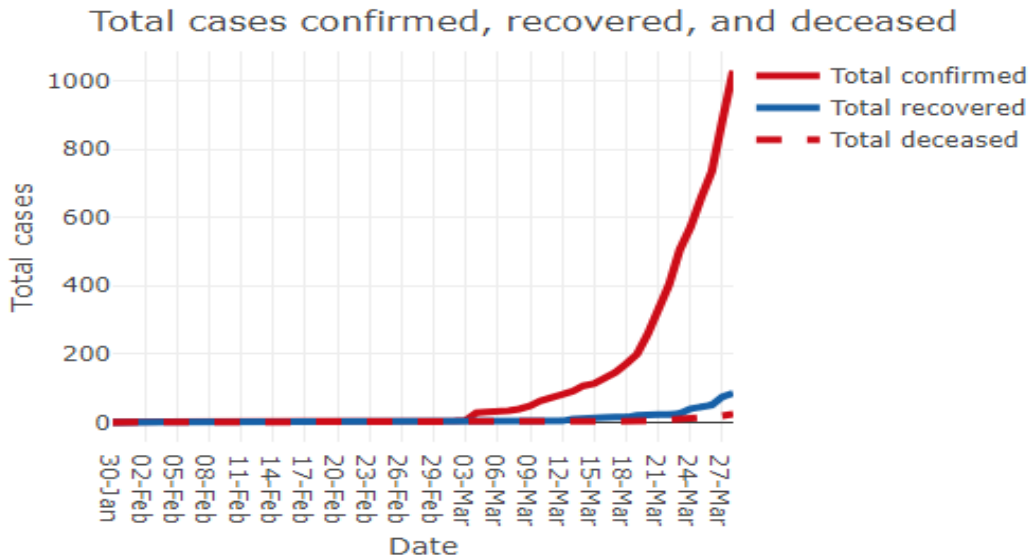
Figure 4: Number of incidences daily.

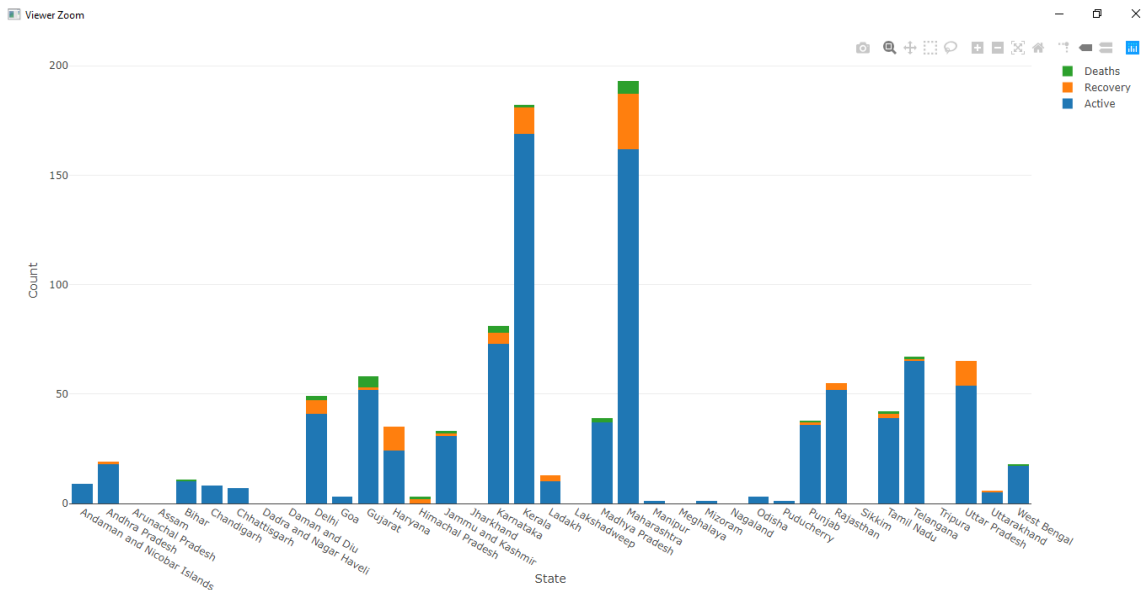Figure 5: Number of recovered, death and active cases of COVID-19.

Figure 6: Cumulative number of active, recovered and deceased cases in India.

The above stacked bar plot shows, by states, the number of active cases and the numbers of recovered and deceased cases. This make it possible to compare the status within states and also across them. For instance, in states like Maharashtra the number of active cases are highest but so is the recovered cases. Similar pattern is also seen in Kerala. However, in some states number of active cases asre low, but not much has been seen in terms of number of recovered, like in West Bengal. Whereas, in states like Chhatisgarh and Chandigarh very few active cases are seen without anyone having recovered yet.