

COVID-19 Cases in India Approaching Two Lakhs Mark

“Social Distancing and Personal Hygiene are some of the important measures need to be adopted to prevent the spread of COVID-19”.

- Vinod R. Alappad

INTRODUCTION

This is the second review of an article entitled “COVID-19 Pandemic”, which was authored by Mr. R. Rajasekharan Nair and myself and published in the April 2020 issue of Industrial Health and Safety Review. Incidentally, this article was also available online:

<https://www.isrmag.com/wp-content/uploads/2020/04/COVID-19-Pandemic-A-Review.pdf>

In the earlier article, we had discussed the scenario of COVID-19 up to 26th April, 2020, covering the lockdown period of First and Second phase. Since then, the lockdown was extended to Third and Fourth phase and the current phase will end on today the 31st May, 2020. For the last one month there is a drastic change in the Global and Indian scenario, which will be discussed in this article.

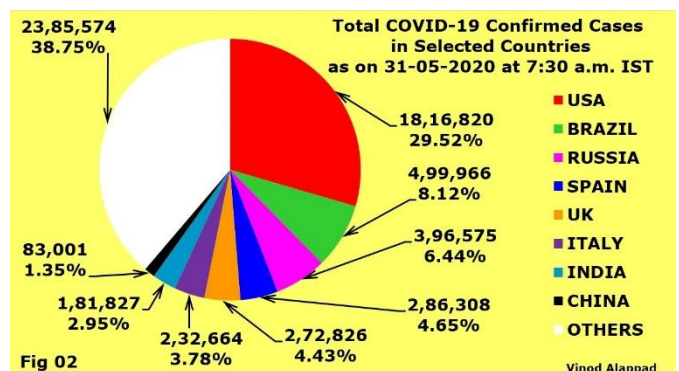
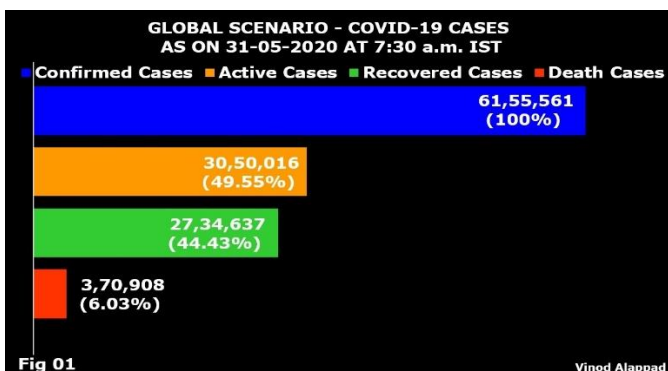
The graphs presented in this article are prepared from the basic data released by various sources such as: *Indian Council for Medical Research (ICMR); Ministry of Health & Family Welfare (MoHFW); World Health Organization (WHO); worldometer, covid19india.org*; etc. The compiled data is up to 31st May, 2020. As the basic data is being updated constantly, the data quoted in this article may vary, by the time this article is published.

GLOBAL SCENARIO

Ever since the number of deaths due to COVID-19 is increasing at an alarming rate, it is creating panic amongst the mankind. During the last 35 days 31,89,073 new confirmed cases were added worldwide and out of which 1,65,222 had died. For a detailed analysis, we can browse through **Fig 01 to Fig 06**.

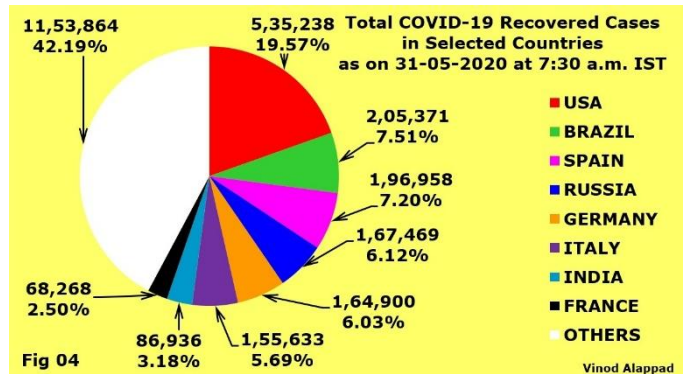
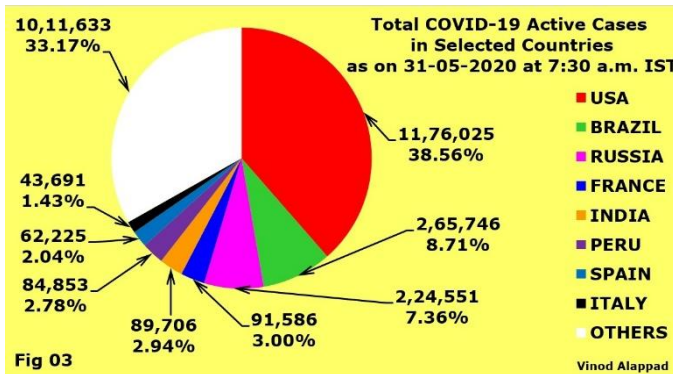
The **Fig 01** illustrates the Global Scenario of COVID-19 cases, which shows Confirmed Cases, Active Cases, Recovered Cases and Deaths. It can be seen that as on 31st May, 2020, there were 61,55,561 confirmed cases and out of which 3,70,908 had died, which is 6.03% of the total confirmed cases.

The total number of COVID-19 Confirmed Cases reported in selected countries are given in **Fig 02**. It may be seen from the figure that *USA* shared 29.52% (18,16,820) of the total confirmed cases in the world. Five countries viz. *Brazil, Russia, Spain, UK and Italy* together shared 27.43% (16,88,339) of the total confirmed cases in the world, ranging from 3.78% to 8.12%. It may be noted here that *India* shared 2.95% (1,81,827) of the total confirmed cases reported in the world. Though COVID-19 was originated from *China*, it has accounted for only 83,001 (1.35%) confirmed cases, so far. Rest of the 207 countries together shared 38.75% (23,85,574) of the total confirmed cases in the world.



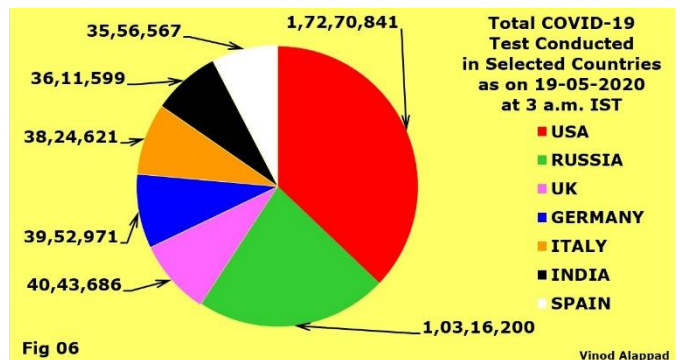
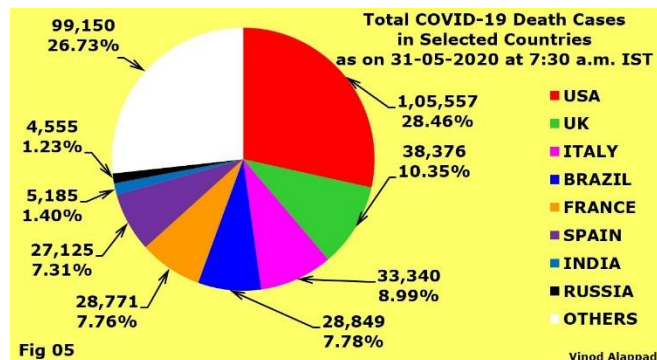
The total number of COVID-19 Active Cases reported in selected countries are given in **Fig 03**. It may be seen from the figure that *USA* shared 38.56% (11,76,025) of the total active cases in the world. *Brazil* comes next with 8.71% (2,65,746) cases. *Russia* is in the third position with 2,24,551 cases (7.36 %).

The total number of COVID-19 Recovered Cases reported in selected countries are given in **Fig 04**. From the figure it can be seen that in *USA* 5,35,238 (19.57%) persons got recovered from COVID-19, whereas in *Brazil* only 7.51% (2,05,371) persons got recovered. In *Spain* 1,96,958 (7.20%) persons got recovered from COVID-19.



The total number of COVID-19 Deaths reported in selected countries are given in **Fig 05**. It can be seen from the figure that *USA* accounts for 28.46% (1,05,557) of the total deaths reported in the world due to COVID-19. The second highest death toll reported in the world is from *UK*, which is 38,376. Five countries viz. *UK, Italy, Brazil, France* and *Spain* together shared 42.18% (1,56,461) of the total deaths reported in the world. Thus, six countries viz. *USA, UK, Italy, Brazil, France* and *Spain* together shared about 70.64% of the total deaths reported in the world due to COVID-19. However, *India* shared only 1.40% (5185) of the total deaths reported in the world.

Fig 06 shows the Tests conducted to identify COVID-19 cases in selected countries. It may be seen from the graph that as on 30th May, 2020, *USA* had tested 1,72,70,841 samples to identify COVID-19 infections, which is the highest number of tests carried out by any country in the world. *Russia* stands second in the graph and had tested 1,03,16,200 samples. According to *Union Health Ministry*, *India* had tested 36,11,599 samples up to 30th May, 2020, which works out to 2619 tests per One Million population. However, *India* stands 6th out of the seven top countries in the world.



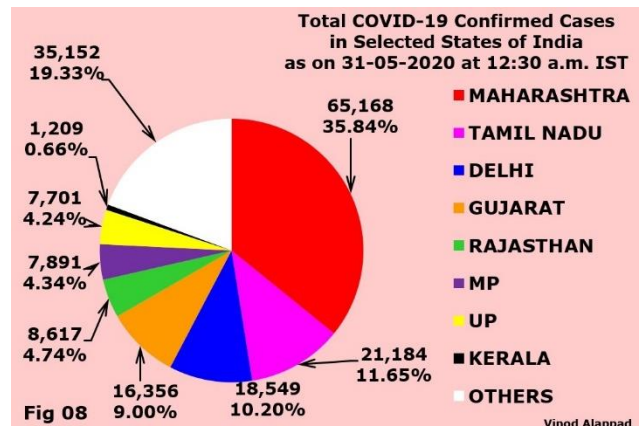
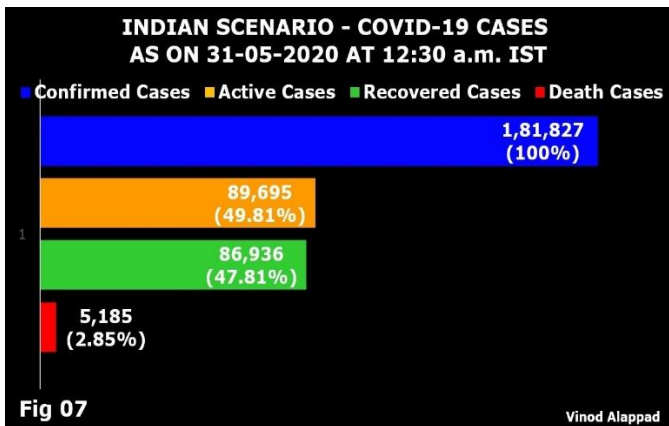
INDIAN SCENARIO

COVID-19 cases in *India* are on the increase. *India* had accounted for an addition of 4305 COVID-19 deaths for the last 35 days. The states like *Maharashtra* and *Gujarat* had reported high incidence of COVID-19 deaths. A detailed analysis of Indian Scenario is depicted in **Fig 07 to Fig 16**.

The **Fig 07** illustrates various parameters such as Confirmed Cases, Active Cases, Recovered Cases and Deaths of COVID-19 cases in *India*. It may be seen from the figure that as on 31st May, 2020, *India* has reported 1,81,827 confirmed cases of COVID-19, which climbed from 27,886 cases as on 26th April, 2020. It means that 1,53,941 cases had been added in 35 days, which amount to an increase of about 552%.

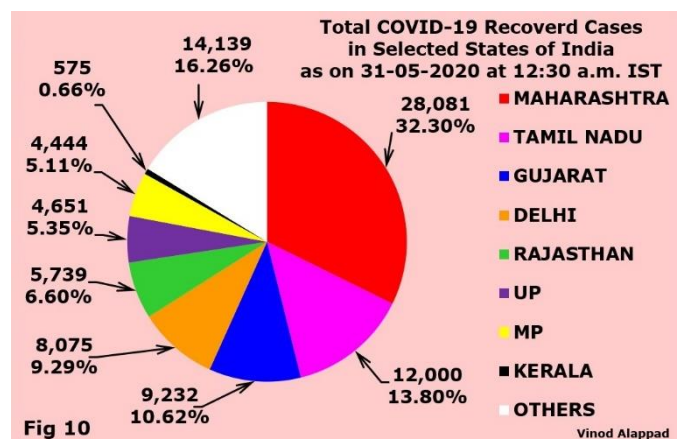
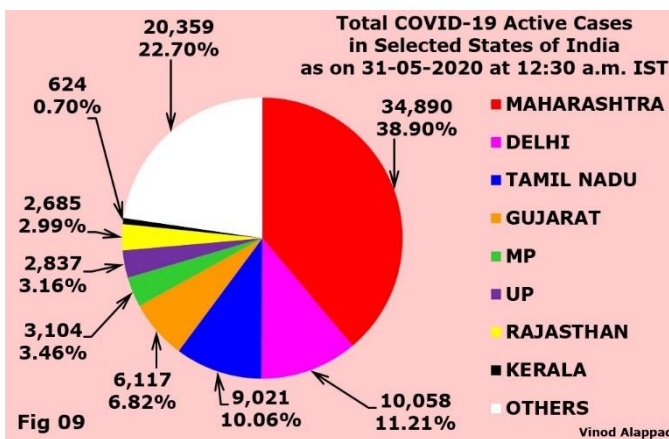
The **Fig 08** shows the distribution of confirmed cases of COVID-19 in selected states of *India*. As can be seen from the graph that *Maharashtra* leads amongst the states, which accounts for 65,168 (35.84%) confirmed cases. *Tamil Nadu* is in the second place, which accounts for 11.65% (21,184) of the total confirmed cases reported in *India*. *Delhi* and *Gujarat* shared 10.20% (18,549) and 9.00% (16,356) of confirmed cases respectively.

The above four states together shared 66.69% of the total confirmed cases reported in *India*. Another three states viz. *Rajasthan, Madhya Pradesh* and *Uttar Pradesh* together shared 13.31%. Thus, the seven states together contributed 80.00% of the total confirmed cases reported in *India*. Incidentally, The *Kerala*, who had reported the first three cases of COVID-19 in *India* had only 0.66% (1209 cases).



The **Fig 09** shows the Active Cases reported in selected states in *India*. Up to 31st May, 2020, there were 34,890 active cases reported in *Maharashtra*, which is 38.90% of the total cases reported in *India*. *Delhi, Tamil Nadu*, and *Gujarat* also accounts for large number of active cases, which ranges from 6.82% to 11.21%. *Madhya Pradesh, Uttar Pradesh* and *Rajasthan* also accounts for higher number of active cases ranging from 2.99% to 3.46%. All the above seven states together account for 76.61% of the total active cases reported in *India*.

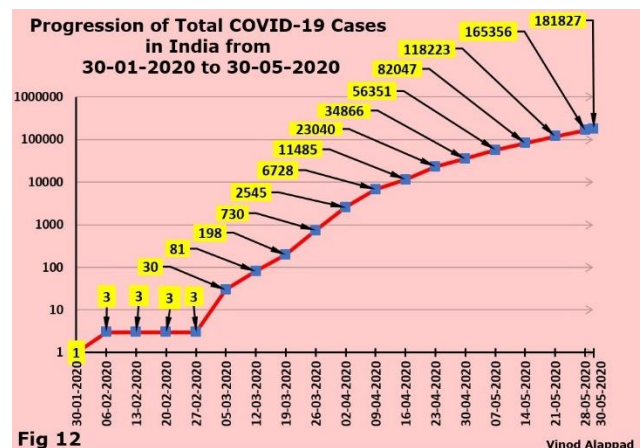
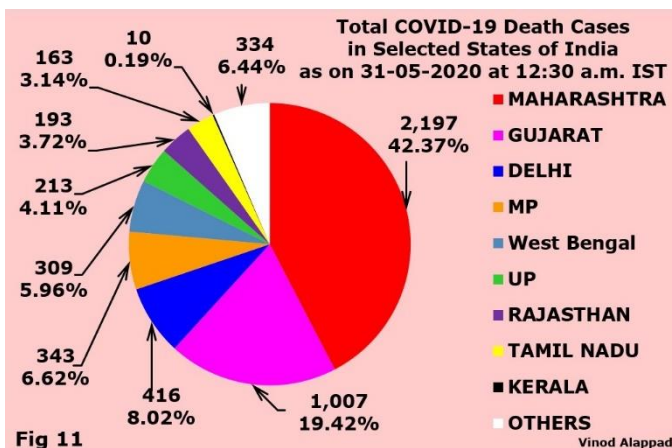
The **Fig 10** shows the Recovered Cases reported in selected states in *India*. Up to 31st May, 2020, in *Maharashtra*, 28,081 cases have been recovered out of 86,936 COVID-19 cases reported. *Tamil Nadu* could cure 12,000 COVID-19 cases up to 31st May, 2020. *Gujarat, Delhi* and *Rajasthan* were also got recovered large number of COVID-19 cases ranging from about 5000 to 9000 cases.



The **Fig 11** shows the total number of COVID-19 deaths reported in *India*. Up to 31st May, 2020, *Maharashtra* accounted for 2197 COVID-19 deaths, which is 42.37% of the total deaths reported in *India*. The next highest death cases reported is from *Gujarat*, which accounts for 19.42% (1007). *Delhi, Madhya Pradesh, West Bengal, Uttar Pradesh, Rajasthan* and *Tamil Nadu* accounted for 8.02% (416), 6.62% (343), 5.96% (309), 4.11% (213), 3.72% (193) and 3.14% (163) of COVID-19 deaths respectively.

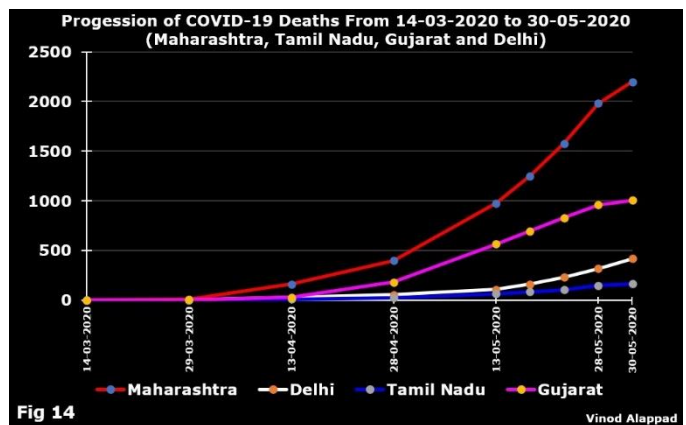
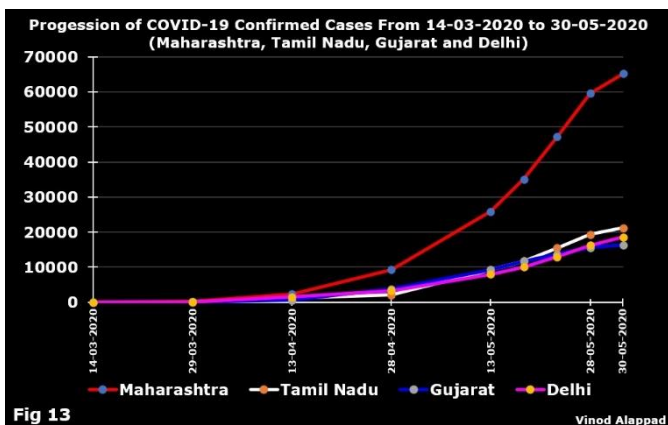
The **Fig 12** illustrates the progression of total confirmed COVID-19 cases in *India* from 30th January, 2020 to 30th May, 2020. It may be seen from the graph that from 30th January, 2020 to 27th February, 2020, there were only 3 cases reported in *India* and that too from *Kerala*. From 12th March, 2020, *India* witnessed a spike in COVID-19 cases and the trend is continuing even today.

Further it may be seen from the graph that *India* had reported 730 cases on 26th March, 2020, and within a span of 7 days it reached to 2545 cases and in another 7 days it reached 6728 cases. Another 4757 cases were added in the next 7 days to reach 11,485 cases. In the next 7 days (from 17-04-2020 to 23-04-2020) another 11,555 cases were added to reach 23,040 cases. During the next 7 days (from 24-04-2020 to 30-04-2020) another 11,826 cases were added to reach 34,866 cases. From 01-05-2020 to 07-05-2020 (7 days) another 21,485 cases were added to reach 56,351 cases. From 08-05-2020 to 14-05-2020 (7 days) another 25,696 cases were added to reach 82,047 cases. In the next 7 days (from 15-05-2020 to 21-05-2020) 36,176 cases were added to reach 1,18,223 cases. In the next 7 days (from 22-05-2020 to 28-05-2020) 47,133 cases were added to reach 1,65,356 cases. In the next two days 16,471 cases were added to reach 1,81,827 cases. By the time this article is published, most likely India will be crossing the Two Lakhs Mark. Therefore, one can conclude that there is a steep rise in COVID-19 cases in *India*. It seems that it may take much more time to flatten the curve.



The **Fig 13** illustrates the progression of confirmed COVID-19 cases from 14th March, 2020 to 30th May, 2020, for 4 leading states of *India* viz. *Maharashtra*, *Tamil Nadu*, *Gujarat* and *Delhi*. From the figure it can be seen that *Maharashtra* had a steep rise from 13th April, 2020 and reached 65,168 cases by 30th May, 2020, whereas *Tamil Nadu* had an increase from 28th April, 2020 and reached 21,184 cases by 30th May, 2020. It may be added here that during the same period the *Mumbai City* alone had registered 38,442 cases.

The **Fig 14** illustrates the progression of COVID-19 Deaths reported from 14th March, 2020 to 30th May, 2020, for 4 leading states of *India* viz. *Maharashtra*, *Gujarat*, *Delhi* and *Tamil Nadu*. From the figure it can be seen that *Maharashtra* had a steep rise from 29th March, 2020 and reached 2197 deaths by 30th May, 2020, whereas *Gujarat* had an increase from 13th April, 2020 and reached 1007 deaths by 30th May, 2020.



As the confirmed COVID-19 cases in 4 states of *India* viz. *Maharashtra*, *Tamil Nadu*, *Gujarat* and *Delhi* are on the higher side, its progression for 23 days from 8th May, 2020 to 30th May, 2020 are illustrated in **Fig 15**. Incidentally, from 8th May, 2020, onwards, the expatriates started arriving in India.

It may be seen from the graph that *Maharashtra* had spikes on 10th, 17th, 22nd, and 24th May, 2020, which registered 1943, 2347, 2940 and 3041 cases respectively and recorded 2940 cases on 30th May, 2020. *Gujarat* had only one spike on 16th May, 2020, registering 1057 cases. *Tamil Nadu* had a spike on 11th May, 2020, which registered 798 cases and from 27th May, 2020 onwards there was a steep rise in the cases and recorded 938 cases on 30th May, 2020. *Delhi* had a steep rise from 28th May, 2020 onwards and recorded 1163 cases on 30th May, 2020.

Since *Kerala* was one of the first state to detect a positive COVID-19 case in the country, it swung into action with people-centric measures and effective communication modes making it possible to flatten the curve. It may be noted here that the measures taken in *Kerala* was found to be very effective and the *Kerala* became a role model for other states and the country. However, the confirmed cases in *Kerala* started increasing drastically from 8th May, 2020 onwards, after the arrival of expatriates and Non-Resident Keralites from other states. Incidentally, as on 30th May, 2020, *Kerala* had tested samples from 77,257 persons. Since *Kerala* model is an interesting one, a progression for 23 days (from 8th May, 2020 to 30th May, 2020) might be interesting to the readers. Accordingly, the progression of confirmed COVID-19 cases in *Kerala* is shown in **Fig 16**. From the graph it can be seen that there were spikes on 23rd May, 2020 (62 cases); 26th May, 2020 (67 cases) and on 18th May, 2020 (85 cases).

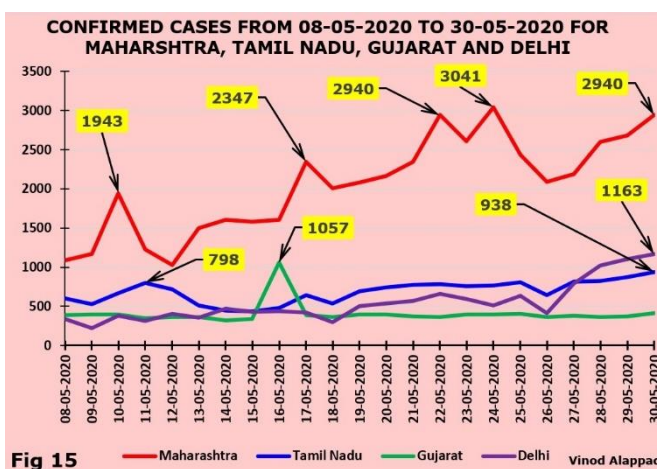


Fig 15

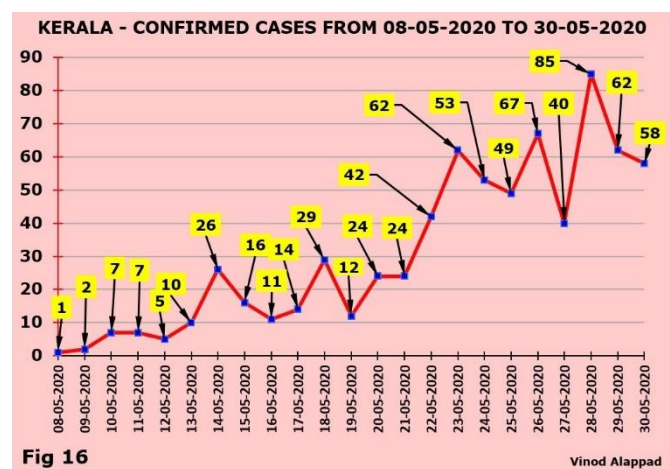


Fig 16

LOCKDOWN CONDITIONS

To contain the spread of Coronavirus, *India* has resorted various measures which include lockdowns. First Lockdown was announced on 25th March, 2020, and during this period, almost all economic activities were stalled. On expiry of the Lockdown 1.0 on 14th April, 2020, the Lockdown 2.0 was introduced which expired on 3rd May, 2020. On expiry of this, the Lockdown 3.0 was introduced, which expired on 17th May, 2020. During the Lockdown 3.0, some relaxations, in particular, partial opening of MSME units; Air travel to bring expatriates from selected countries; restricted train services and bus services for migrant labours to reach their home town; etc. were allowed.

Unfortunately, during the Lockdown 3.0, period, a series of major accidents occurred in the country and some of them are listed below:

1. A Styrene Gas leaked on 7th May, 2020, from *LG Polymers Pvt. Ltd, Vishakhapatnam*, where in 12 persons had died and 300 seriously injured.
2. A goods train ran over a group of migrant workers who fell asleep on the rail tracks in *Aurangabad* district on 8th May, 2020, which had killed 16 and injured 5 persons.
3. An *Uttar Pradesh* Government Bus mowed down Six migrant workers walking on a highway in *Muzaffarnagar* on 13th May, 2020 and injury to Five people.
4. In *Guna* district in *Madhya Pradesh*, eight migrant labourers were killed and over 40 injured after the truck they were travelling in collided with a bus on 14th May, 2020.
5. In *Auraiya* in *Uttar Pradesh*, 25 migrant workers were killed and 40 others injured when a trailer and a stationary truck on which they had hitched rides, collided on a highway in the early hours of 16th May, 2020.

During the Lockdown 3.0, Indian Railway had arranged hundreds of 'Shramik Special trains' to transport migrant workers and a set of 15 Special Trains for those persons who were stranded in other cities of India. From 7th May, 2020, onwards Air India and Air India Express had transported hundreds of persons stranded in other countries.

On 12th May, 2020, the *Prime Minister of India*, addressed the nation for the 5th time, since the lockdown began, and declared that his government has approved a plan worth over 20 Lakhs Crores to revive the Indian economy and the *Finance Minister of India* will announce a series of measures and reforms in the forthcoming week. In sequel to the *Prime Minister's* declaration, the *Finance Minister of India* announced a series of measures and reforms from 15th to 18th May, 2020.

On 18th May, 2020, Lockdown 4.0 was introduced, which expired on today the 31st May, 2020. On expiry of this, the Government of India has announced the introduction of Lockdown 5.0, which will expire on 30th June, 2020. However, this lockdown will be applicable only to containment zones. According to the *Ministry of Home Affairs*, Unlock 1.0 will be introduced for other zones, which will be implemented in three phases, effective from 8th June, 2020. The details are given in the Table 01, 02 and 03.

Table 01 UNLOCK 1.0 GUIDELINES	
PHASE 1 – 8TH JUNE, 2020	
ALLOWED	Religious places /places of worship for public
ALLOWED	Hotels, Restaurants, Other Hospitality Services
ALLOWED	Shopping Malls
PHASE 2 – To be decided in July, 2020	
DECISION POST CONSULTATION	Schools, Colleges, Educations/Training/Coaching Institutions
PHASE 3 – Date to be decided	
ALLOWED	International Air Travel (With Exceptions)
ALLOWED	Metro Rail Services
ALLOWED	Cinema Halls, Gymnasiums, Swimming Pools, Entertainment Parks, Theatres, Bars, Auditoriums, Assembly Halls and Similar Places
ALLOWED	Social/Political/Sports/Entertainment/Academic/Cultural /Religious functions and other large congregations

Table 02 UNLOCK 1.0 GUIDELINES	
NIGHT CURFEW	
9 PM TO 5 AM	All India, Except for Essential Services
CONTAINMENT ZONES	
LOCKDOWN	Till 30 th June, 2020
ALLOWED	Only Essential Services
BUFFER ZONES	May be identified around containment zones
MOVEMENT OF GOODS AND PEOPLE	
ALLOWED	Inter-State and Intra-State movement of Goods and People. No pass necessary.
VULNERABLE PERSONS	
RESTRICTED MOVEMENT	People above 65, people with co-morbidities, pregnant women, children below 10 years of age are advised to stay at home.

Table 03 UNLOCK 1.0 GUIDELINES	
OTHER DIRECTIVES	
RECOMMENDED	Use of Aarogya Setu Mobile App
MANDATORY	Use of Face Masks / Face Covers
MANDATORY	Social Distancing of 6 feet. Not more than 5 customers at a time in a shop.
LIMITED	Large Public Gatherings. Marriage Functions/Ceremonies with maximum 50 guest. Funeral Functions with maximum 20 people.
PROHIBITED	Spitting, consumption of Pan, Gataka, Liquor, Tobacco in public places.
ENCOURAGED	Work from Home, Staggering of Business Hours.

CONCLUSION

COVID-19 cases are increasing day-by-day at an alarming rate not only in India, but also worldwide. Stringent measures are to adopted to contain the pandemic. Social Distancing; Personal Hygiene; Use of Personal Protective Equipment like, Face Shield, Face Mask, Hand Gloves and Full Coveralls are some of the important measures need to be adopted to prevent the spread of COVID-19. A sound economic policy is the need of the hour, which can revive the crippled economy.

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