

COHABITING with COVID: Mortality Pattern & Analysis

August 2021

Project: Jeevan Raksha is an initiative of Proxima which focuses on Advocacy, Analytics, and Awareness in the area of healthcare.

Mission: Actively contribute towards Right to Health as a constitutional right of Indian citizens.

Project: Jeevan Raksha has been in the forefront of providing sharper analytical insights on emerging patterns of COVID 19 in India to the Central / State Government administrations, media, and general public. The contribution is appreciated by many state Governments.

Project: Jeevan Raksha acknowledges the technical support and guidance of Public Health Foundation of India (**PHFI**)



satyam-eva jayate, Truth alone triumphs, was adopted as the national motto of India on 26 January 1950

In COVID management, **Truthiness** in the disclosed data (data integrity) of Testing, Positivity, Recovery, and Fatality; or **truthfulness** of a individual about his/her (including family) health condition, is vital for India's efforts to save lives of the people.

India's COVID situation need to be viewed pragmatically



Govt expert panel warns of 'imminent 3rd wave' in Oct

Wants Medical Facilities For Kids Bolstered

Pradeep.Thakar
@timesgroup.com

New Delhi: A committee of experts constituted under the National Institute of Disaster Management (NIDM) has warned of an imminent third wave of Covid that could peak around October and sought better medical preparedness for children who might be at similar risk as adults.

The report of the committee, set up on the directions of the home ministry, has noted that "paediatric facilities—doctors, staff, equipment like ventilators and ambulances are nowhere close to what may be required in case a large number of children become infected".

The report has called for prioritising vaccination among children with comorbidities and a special focus on those with disability. Even with "strict interventions", the peak of the third

WOSP INFRA INADEQUATE

Panel report notes that "paediatric facilities—doctors, staff, equipment like ventilators, ambulances—are nowhere close to what may be required in case a large number of children become infected".

Biggest dip in India's weekly cases in 2 mths

India saw its sharpest percentage fall in weekly Covid-19 cases in nearly two months with infections declining by 13.6% in the week that ended Sunday, though testing was impacted during this period due to festivals. The country reported just over 2.21 lakh fresh cases in the week (August 16-22). P 13

Kerala TPR jumps to 3-month high of 18%
In Thiruvananthapuram (Saturday), Kerala reported a Covid-19 test positivity rate (TPR) of 17.73%, the highest in three months. The rate had been on a steady rise from 14.03% on August 16 and experts fear the relaxation of curbs amid the festive season may lead to a further spike in TPR. CM Pinarayi Vijayan has convened a Covid review meeting on Monday during which the government may consider imposing restrictions. The state has about 1.78 lakh active cases with occupancy at government hospitals averaging at more than 70%. P 13

Most experts are of the view that though they may not be prone to severe infections, children can pass the virus to others. Other estimates have said the third wave, seen to be the result of renewed mobility, may prove to be less severe than the second one. P 13

Pessimistic

3rd wave is stretch of someone's imagination: Top epidemiologist

Santha.Rao@timesgroup.com

Bengaluru: Instead of chasing the coronavirus with proactive measures like quarantine and isolation, India should focus on testing those with Covid-19 symptoms and preventing fatalities, believes Dr. Jayaprakash Mulyil, epidemiologist and chairperson, Scientific Advisory Committee, National Institute of Epidemiology.

In an interview, Dr Mulyil categorically ruled out the need for booster doses. He said the third wave is a stretch of someone's imagination and its status there is no threat to children. Excerpt:

Where does India stand currently in the Covid battle?
We are on the right track and in a little while, transmission of the virus will further reduce. As long as we are able to prevent fatalities, the virus can exist, and we don't have to worry. Large scale vaccination is already under way. Mortality is high among people above 60 years and that has not changed for variants like Delta and Delta Plus. When more people who are vulnerable are vaccinated, the fatality rate will decrease. Then,

the coronavirus will become a virus of no consequence, like other viruses.

COVID fatigue is setting in among the public.
If we remain neurotic about the disease, we will not achieve anything. There is no need to keep doing RT-PCR tests. Only those who are symptomatic should be tested. ICMR has also said this. We must ensure vaccination in places where seropositivity is low like in north-eastern states and Kerala. Where the positivity rate is high, we should only worry about people falling sick. The time has passed to send infected people into quarantine and isolation. Last year, someone said we should rid India of the virus by May. All these are false claims. We cannot get rid of a highly infectious virus. We are still in 2020 mode of wanting to get rid of the virus. As long as it doesn't hurt us, there is nothing to worry about. But quarantine and isolation have no meaning today since seroprevalence is high. More than 80 crore Indians are already immune to the infection and others are getting vaccinated.

HEALTH IMMUNITY Dr Jayaprakash Mulyil says some 80 crore Indians are already immune to the virus and the rest are being vaccinated

is under attack, memory cells will produce antibodies.



Are breakthrough infections a result of vaccine failure?
Infection among people who have been vaccinated may be a good opportunity to gain natural immunity. People who are vaccinated will not die of the infection. When you get vaccinated and have a breakthrough infection, the immunity gets boosted and is on par with natural immunity. We will have to wait for a study on this. However, breakthrough infections do not mean the vaccine has failed. The vaccine is

to prevent deaths. When the virus enters the body some do not produce a defence mechanism early enough. But the body's response system is exceptionally smart, and since people don't end up in ICUs, we cannot prevent the virus from sitting in the throat, but the body knows how to deal with it.

There are concerns that a third wave will affect children the most. What are your views on this?
I feel someone has played a game by linking a third wave and children, though there is no evidence of this happening. It is extremely rare to see a child under 12 years of age dying of Covid. It is less than one in one lakh. Those children who have died may have died because of other diseases, but most hospitals lack the expertise to figure it out. When the first serosurvey was conducted in 2021, the mortality rate was 0.07%. Last year, there were enough subjects for the virus to infect. I am sure there will be outbreaks here and there, but that is not a stretch of someone's imagination. For a wave to be created, the virus has to have enough people who are susceptible. And those are susceptible don't lie together in a corner.

THE INTERVIEW

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Cohabiting with Covid

A zero-Covid world looks less imminent. But humans can make the microbe less lethal

K.SRINATH REDDY



EVER SINCE COVID doubled down on its "zero Covid" strategy in the past week, government spokespersons in Australia and New Zealand have been downplaying the debate about persisting with this strategy.

THE REALISATION most change the behaviour of anti-maskers, vaccine opponents and vaccine hoarding nations. Otherwise, the virus will continue to follow its path, even though evolutionary pressure is not to do so.

AN AUSTRALIAN Prime Minister Scott Morrison said that in a highly unlikely case that the country would ever return to zero-Covid cases, New Zealand's Covid-19 Response Minister Chris Hipkins admitted that the highly infectious nature of the Delta variant has raised "pretty big questions" about the approach to "eliminate the disease". These were countermeasures to severely experienced with "travel bubbles" between them, while keeping not travellers from other countries, keeping in permanently close the door on the virus.

Suppose the leader goes upon the zero-Covid strategy and in the long run, we would like to see that the virus is under attack, memory cells will produce antibodies.

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THE REALISATION most change the behaviour of anti-maskers, vaccine opponents and vaccine hoarding nations. Otherwise, the virus will continue to follow its path, even though evolutionary pressure is not to do so.

Pragmatic

ing matter even a continuation of the present is our work.

Canary warnings that we should not sound military calls for microbial escalation in our response to infectious agents, comes from a scientist who has won the Nobel Prize for Medicine and Physiology at a very young age in 1908—Joshua Lederberg. In a seminal paper on the evolution of microorganisms, published in Science, 2003, he advised scientists and the "waging of" strategies and recognize the evolutionary imperatives that drive the microbe's behavior. Lederberg suggests that a "successful parasite" (one that will remain infectious for a long time) needs to play just those types of games. Bacteria that stimulate the immune system will provide responses that moderate but do not extinguish the immune response and inhibit other infections by competing with the same species or other species. In the Delta variant, it is clear that certain cells will get another variant emerge in these better balance between high infectivity and control presence among the human population, which it will not use for replication but the could be outgrowth.

Microbes evolve much faster than humans. However, we can exert evolutionary pressure on the virus by creating barriers for its propagation and prevent pathogen stay in infected humans and prevent further transmission. We do this by wearing masks, using hand sanitizers, and avoiding crowds. All of these are especially useful when we notice that the virus has a highly infectious spread through animals that serve as the bridge of the infection from one population to another. We achieve the later objective of limiting the duration of that period by the better of the factored groups through effective vaccines. By simultaneously pursuing these two strategies, we can exert evolutionary pressure on the virus to become a less virulent, albeit more infectious when given the opportunity. Why will the virus evolve less virulent over time? Because its survival advantage depends on having a human host, it will not replicate. It cannot afford to wipe out its species. It will evolve to meet the needs of its hosts. Why then does the SARS-CoV-2 virus

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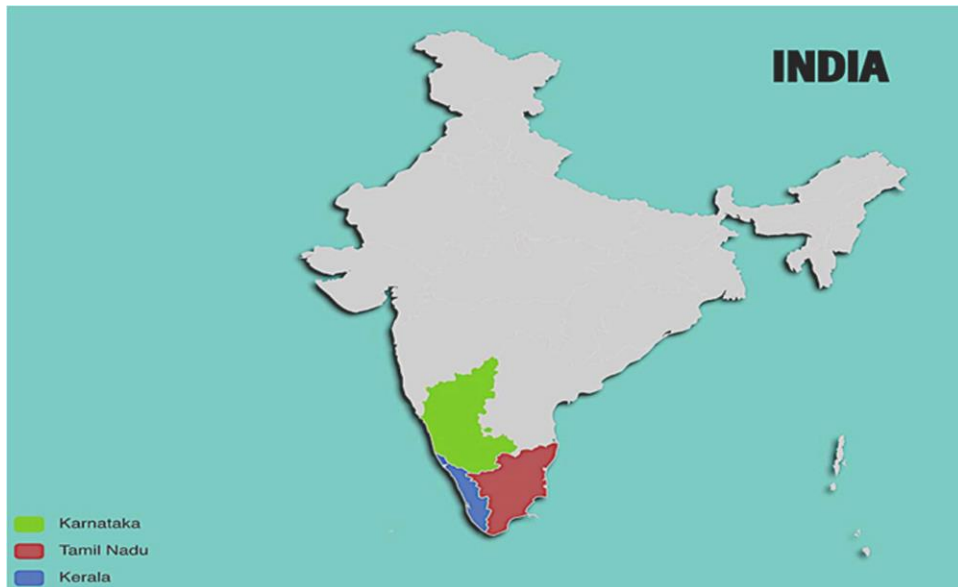


**India continues to be in the cusp of 3rd Wave: Pre-mature to celebrate
COVID Cases in the last 7 Days increases by 17%: In August Avg Daily death toll is 480!**

- India added over 1 Mn new cases in August. At present the surge is confined to Kerala only, which added 5.86 Lacs during the month.
- ~13400 people have succumbed in August due to COVID
- 10% of India's population is fully vaccinated, 24% are partly vaccinated. The benefit of vaccination in terms of reduction in CFR is likely to be visible only after atleast 50% of the population are fully vaccinated.
- India's approach has changed. It is trying to cohabit with COVID
- Many States have announced re-opening of schools and colleges starting from September. But, National Institute of Disaster Management (NIDM) has recently warned onset of 3rd wave in October.
- Parents are in dilemma. On one hand they are worried about the risk of their children getting infected with COVID, on the other hand concerned about negative impact on academic growth
- Home Isolation has its own advantage and disadvantages. But due to convenience as well as non-affordability of Hospital Isolation, many lower and middle income people, especially with comorbidities seems to be taking risk and opting for Home isolation.

COVID 19: Snapshot: Karnataka, Kerala and Tamil Nadu

- Kerala, Karnataka, and Tamil Nadu, the 3 neighbouring southern states have so far witnessed 9.5 Mn COVID Cases and 0.92 Mn Deaths
- 1 in every 3 COVID cases in India are traced in these 3 neighbouring southern states
- 1 in every 5 COVID deaths in India has occurred in these 3 neighbouring southern states
- Kerala which has 2.6% of the country's population and occupying 1.2% of the land area, has 55% of total active cases in India
- During the week 16-22 August, India unfortunately witnessed 2672 COVID deaths of which 47% of the deaths (1249) occurred in these 3 states



COVID 19: Status: 27 August 2021			
	Cases	Active	Deaths
India	32651201	355156	437476
Kerala	3946307	195279	20313
Karnataka	2944764	18970	37248
Tamil Nadu	2608748	17797	34835
	Cases (%)	Active (%)	Deaths (%)
Kerala	12	55	5
Karnataka	9	5	9
Tamil Nadu	8	5	8
Total Share (%)	29	65	21

**Kerala's poor containment strategy resulted in surge,
but strong grassroot clinical management and public health system is ensuring low CFR**

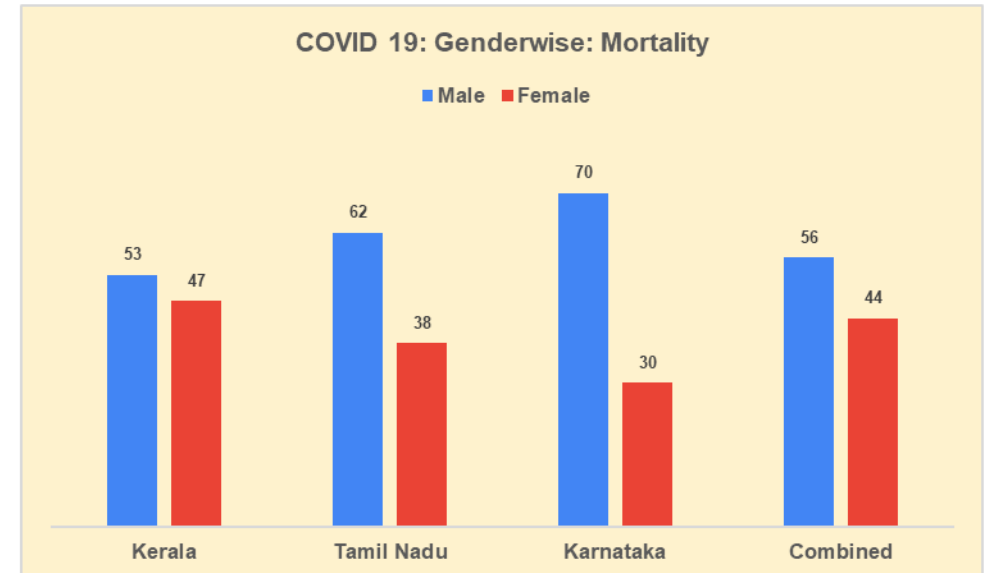
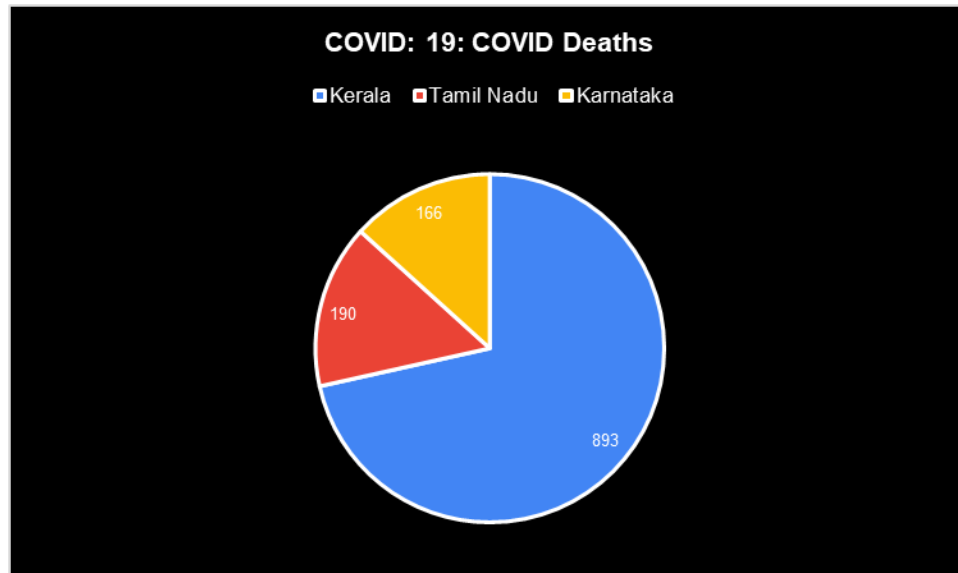


COVID 19: Snapshot: 1-28 August 2020				COVID 19: Snapshot: 1-28 August 2021			
States	Cases	Deaths	CFR	States	Cases	Deaths	CFR
Karnataka	211813	3275	1.5	Karnataka	40862	699	1.7
Kerala	45691	201	0.4	Kerala	586811	3685	0.6
Tamil Nadu	163379	3115	1.9	Tamil Nadu	50702	780	1.5

- Last August, Kerala added only ~46K COVID Cases and witnessed 201 deaths. On the other hand, Karnataka added over 2 Lakh cases and witnessed ~3200 deaths and Tamil Nadu added 1.6 lakh cases and witnessed 3.1K deaths.
- This August, situation has reversed. Kerala has added 5.9 Lac cases and witnessed ~3700 deaths. Whereas, Karnataka and Tamil Nadu has added around 40-50K cases and 700+ deaths each.
- ICMR recommended 70-30 **ratio of RT-PCR and RAT testing**. Kerala reversed the ratio in favour of RAT 70% and RT-PCR 30%.
- Kerala has carried out 4 Mn tests in August. But Test Per Case (TPC) of 7 confirms the testing capability of the state is not able to sustain the caseload. Therefore, testing is confined to symptomatic cases.
- Karnataka and Tamil Nadu too have carried out over 4 Mn tests in August. But, Test Per Case (TPC) is 106 and 87.
- Tamil Nadu carries out 100% RT-PCR Tests, whereas Karnataka carries over 85% RT-PCR Tests. This has helped them to break the chain of virus spread faster
- According to ICMR's 4th national serology survey, Kerala had a **seroprevalence of only 44%**, implying 56% lacked antibodies and consequently remained vulnerable to the infection. In spite of this pattern, Kerala's robust grassroot clinical management and public health system ensured relatively lower CFR, especially among less than 60 years of age.
 - On 15th May 2021, Active Cases in Kerala was 4.45 Lacs, whereas the number of people on ventilator was only 1465, ~ 0.3%
 - On 28th August 2021, Active Cases in Kerala was 2.04 Lacs, number of people on ventilator was 883. ~ 0.4%
- In Karnataka and Tamil Nadu, even though the absolute number of deaths is relatively lower than Kerala, but **Case Fatality Rate is more than 2.5 times of Kerala.**

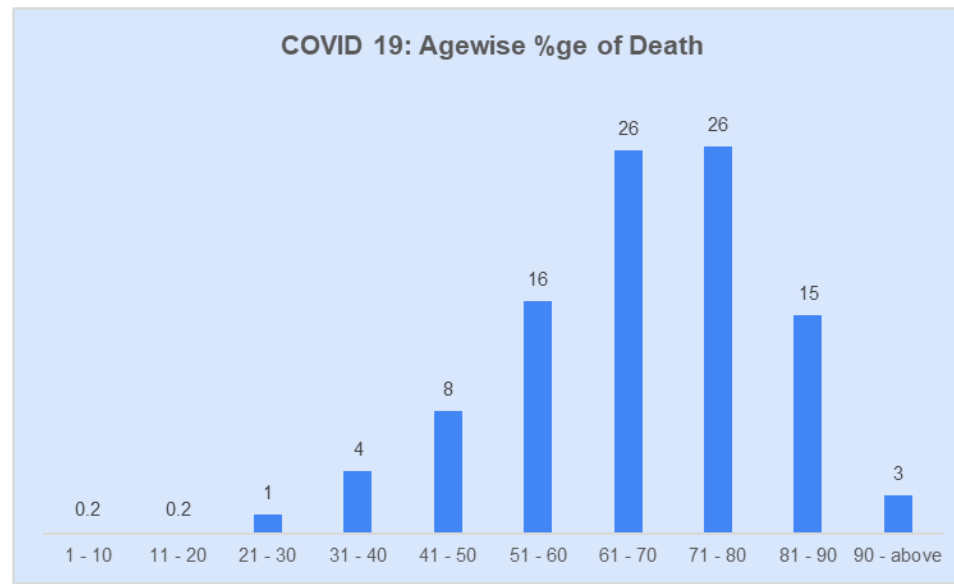
COVID 19: Mortality Pattern in Karnataka, Kerala, & Tamil Nadu: Period: 16 – 22 August

- Unfortunately, 1249 people succumbed to COVID in these 3 states during the week 16 – 22 August.
 - 71% of the death occurred in Kerala (893), 15% in Tamil Nadu (190) and 13% in Karnataka (166)
 - Karnataka: ~ 2 out of 3 COVID deaths are male. 116 were male and 50 were female
 - Kerala: 471 were male and 422 were female
 - Tamil Nadu: 117 were male and 73 were female
 - No sign of COVID deaths among children below 10 years of age in Karnataka and Tamil Nadu. In Kerala, there were 2 deaths



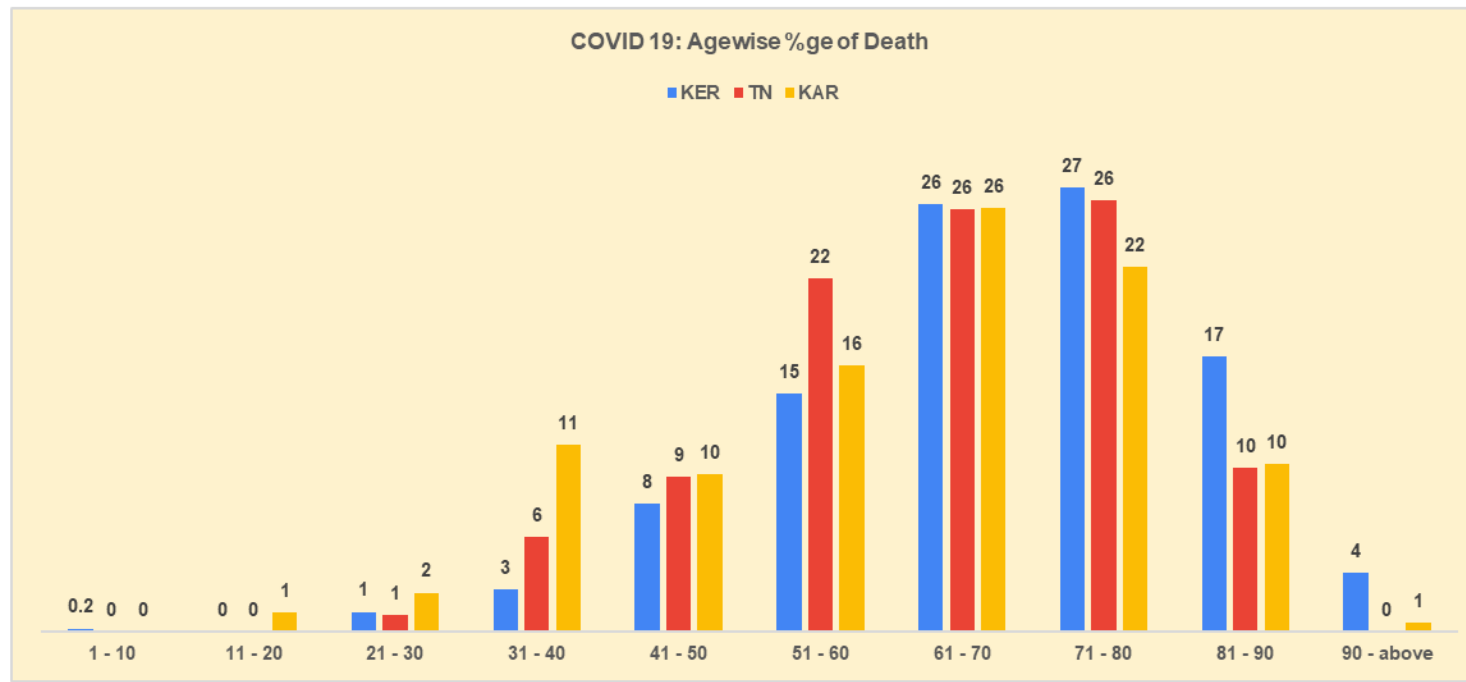
Hospital Isolation is safer for COVID Patients above 60 years, especially with Comorbidities

- During the week 16 – 22 August, the age group of the people who unfortunately succumbed to COVID 19 were-
 - 21 – 40 years: 6%
 - 41 – 60 Years: 24%
 - 61 – 80 years: 52%
 - 81 – 90 years: 15%
- 2 children in the age group of 1 – 10 years unfortunately succumbed to COVID in Kerala.
 - Baby of Divya Li (less than a year) at Tholar, Thrissur District On 12th August declared on 18th August
 - Aman Pramod (2 years), Koothuparamba, Kannur District on 18 July declared on 19th August
- 2 Teenagers unfortunately succumbed to COVID in Karnataka
 - 14 years old female, Bengaluru Urban Patient #2951797 due to ILI was a diabetic. She died within 24 hours of admission to the hospital
 - 15 year old boy at Haveri District, Patient # 2954574. Died within 48 hours of admission to the hospital



Delay and Reluctance for Isolating in Hospital is risky for patients

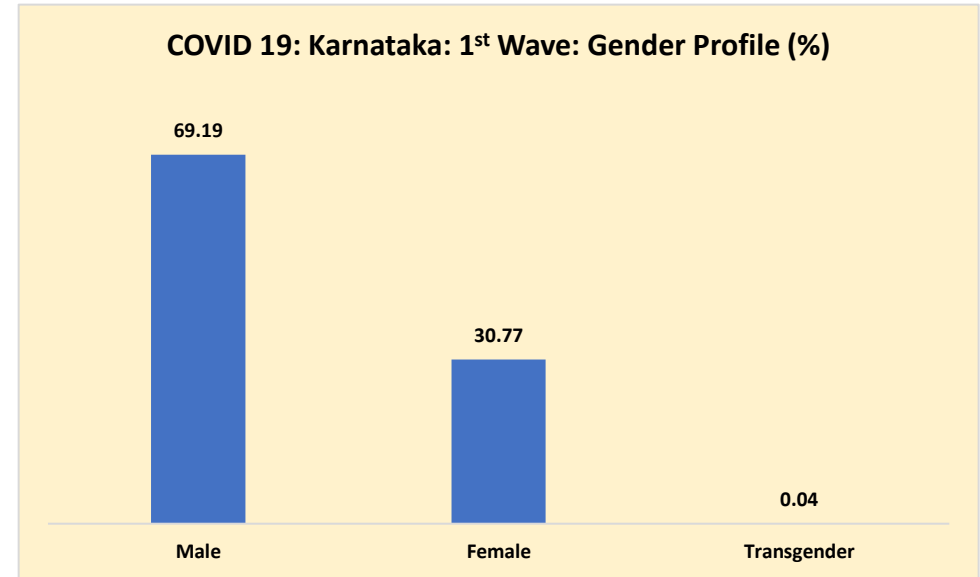
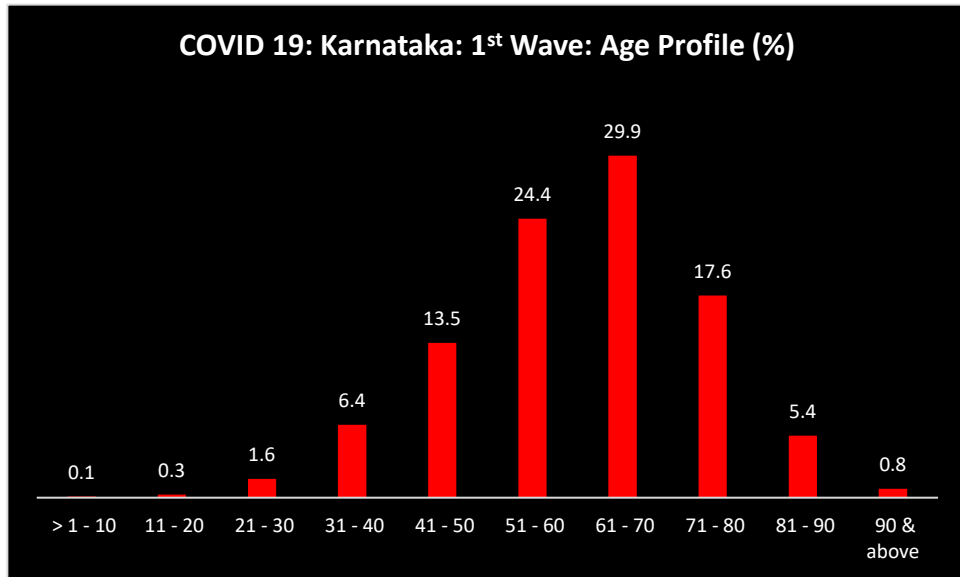
- Kerala
 - 1 in every 5 deaths are aged above 80 years. Kerala's elderly population who are living alone are the high risk group due to untimely tracing of infection and hospitalisation
 - 75% of the deaths are above 60 years of age
- Karnataka
 - 1 in every 4 deaths are aged below 50 years. Out of 166 deaths, 19 of them were in the age group of 31 – 40 years
 - In comparison with Kerala and Tamil Nadu, more younger people are dying in Karnataka
- Tamil Nadu
 - No death in the age group of 1 – 20 years
 - 1 in every 5 deaths are aged between 51 – 60 years.



Karnataka 1st Wave Mortality Pattern: Age and Gender profiles



Project: Jeevan Raksha had carried out a comprehensive analysis of COVID Mortality pattern during the 1-30 August 2020 in Karnataka. Data of 2697 deceased COVID patients in Karnataka was analysed.



In Karnataka, mortality pattern in 1st and 2nd Wave remains the same

For more details, send email to:

Mysore Sanjeev

Convenor

Project: Jeeavan Raksha

email: jeevanrakshe1@gmail.com

Thank you