



Response to COVID-19

Karnataka



Context

While the COVID-19 pandemic has spread like wild fire, some parts of the world have bucked the trend through careful planning, imaginative use of technology, efficient deployment of available resources, and community participation. Such efforts are leading to inspiring success stories. The world's urban centres, with high population density and close patterns of social interaction especially in indoor environments, have been particularly vulnerable to the spread of COVID-19. In India too, states with high level of urbanisation and any major urban hub have witnessed a spike in numbers.

The state of Karnataka is located in the south-western region of India, with a population of over 61 million¹; comparable to the population of the United Kingdom. Karnataka makes up for 5.05 percent of the Country's population. With 38.7% of the population living in urban

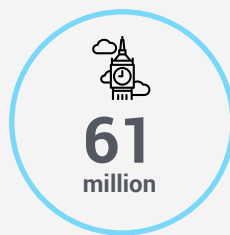
areas, the population density of the state is 319 per square kilometre.

While COVID-19 came to India when a case was reported in January this year, the first positive case in Karnataka was confirmed later, on 9th March². The state also reported the country's first COVID-19 fatality, recorded on 12th March, when a 76-year-old man with travel history to Saudi Arabia died in Kalburgi, Karnataka, testing positive two days after his death. Importantly, Karnataka was the first state in India to invoke the provisions of the Epidemic Diseases Act, 1987³. Karnataka widened the definition of 'contact' defined by the Indian government to include not only high-risk but also low-risk contacts; which helped to more effectively identify, trace and isolate exposed individuals and households, further helping in curbing the spread.

Karnataka: Overview



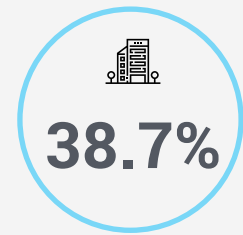
of country's
population



population,
comparable to UK



population
density



urban
population

As of Wednesday, June 24th, Bengaluru, the capital of Karnataka still reported lower numbers than other major Indian cities. If one takes into consideration the fact that Bengaluru is the third most populated city in the country, it has fewer cases than the other major cities in India.

Mumbai, with the most cases in India till it was overtaken by Delhi this week, has been hit hard, as was Chennai, in the south. These cities continue to face a considerable threat in terms of potentially overwhelmed health facilities, given their high population density.

1. As per 2011 census, the population of Karnataka was 61 million Source: https://censusindia.gov.in/2011-prov-results/data_files/karnataka/Size_growth_population_39_62.pdf.

As per 2011 census, the population of UK was 63 million <https://www.ons.gov.uk/census/2011census>

2. <https://www.thehindu.com/news/national/karnataka/coronavirus-karnataka-confirms-first-positive-covid-19-case/article31025099.ece>

3. <https://www.deccanherald.com/state/top-karnataka-stories/coronavirus-karnataka-becomes-first-state-to-invoke-provisions-of-epidemic-diseases-act-1897-amid-covid-19-fear-812850.html>

Innovations and outcomes

Karnataka used innovative approaches, not only in planning its tracking, isolation, and treatment, but also in its implementation process as a whole. It has worked with various stakeholders at the state, community, and field level, and collaborated with different partners for

better implementation. The vibrant IT sector in the state, especially in its capital Bengaluru, gave the technological backbone to the COVID-19 response. The State has been able to use various web-apps and telecommunication to collect data and disseminate information effectively.



Technology and Innovation for contact tracing



Health Risk Survey



Cluster Management



Testing and Hospital Management



Awareness strategy



Technology and Innovation for contact tracing

App for contact tracing: Comprehensive contact tracing is extremely critical to contain the pandemic and ensure that health infrastructure isn't overwhelmed. Karnataka launched a technology backed system in tracing COVID-19 contacts, which involved a multi-sectoral government team. Data was collected on the contact tracing application

through a two step process: first, data was collected from the COVID patient, and second, in the field, data was collected from contacts. Basic data was made publicly available on the Quarantine Watch app, which also aimed to help ensure that people were following the Standard Operating Procedure (SOP) for quarantine; thereby helping contain the spread of the epidemic⁴.

Seva Sindhu App: The 'Seva Sindhu' Portal allows people to register themselves before traveling or returning to the state. Focused on aiding migrant labourers, the app also allows for one-time financial assistance meant for daily wage workers and labourers. The data from the Seva Sindhu app was synced to the Quarantine Watch app to help monitor and implement the isolation and quarantine process.

Apthamitra teleconsultation helpline: A toll-free number and an app were launched to identify people with ILI, SARI and COVID like symptoms. Through Interactive Voice Response System (IVRS) and outbound calls, the campaign reaches out to households at risk, and those with COVID-like symptoms are further advised by telemedicine doctors.



Health Risk Survey

Out of 16.8 million households, Karnataka has conducted a physical and phone-based household survey covering 15 million households across the state to detect vulnerable populations like the elderly, persons with comorbidities, pregnant women, and those with ILI/SARI. Several sectors

and teams were involved to complete the survey in record time. Various government bodies at the state and local field level were involved in the process. Subsequently, the vulnerable populations are being regularly contacted through the Apthamitra teleconsultation helpline, as well as household visits to counsel them and track their health. The state government has employed IT firms, in addition to collecting data from government departments⁵. The Karnataka Health Watch app was also used in the survey and linked with the GIS portal to map information across the state.



Cluster Management

Institutional quarantine facilities were set up for households where meaningful quarantine⁶ was not possible. These centres were crucial in curtailing the spread of infection in slums within big corporation areas. Also the 'Seva Sindhu' portal was launched, which had information on travellers/ migrant labourers quarantined at the facilities. The quarantine watch app also enabled the monitoring and enforcement of the quarantine in these facilities.



4. <https://www.newindianexpress.com/states/karnataka/2020/jun/15/in-coronavirus-vs-karnataka-the-state-shines-against-all-odds-2156665.html>
<https://www.dnaindia.com/india/report-covid-19-centre-lauds-karnataka-s-it-based-model-of-comprehensive-contact-tracing-house-to-house-survey-2828724>
5. <https://www.hindustantimes.com/bengaluru/karnataka-maps-vulnerable-groups/story-jbBS8H47Bjg2IrsPc8JrsL.html>
6. Slums or in similar areas, meaningful quarantine is not possible due to the number of people living in a single room/house



Testing and Hospital Management

Karnataka was the first state to cap the prices for COVID testing and treatment costs in private hospitals. The state has roped in 500 private hospitals for COVID treatment. It follows a two-layered hospitalisation process where symptomatic patients are admitted to major COVID hospitals but asymptomatic cases are cared for at special centres made by converting a few stadiums and other facilities into COVID care centres. The patients are classified into two categories by symptoms, age, and

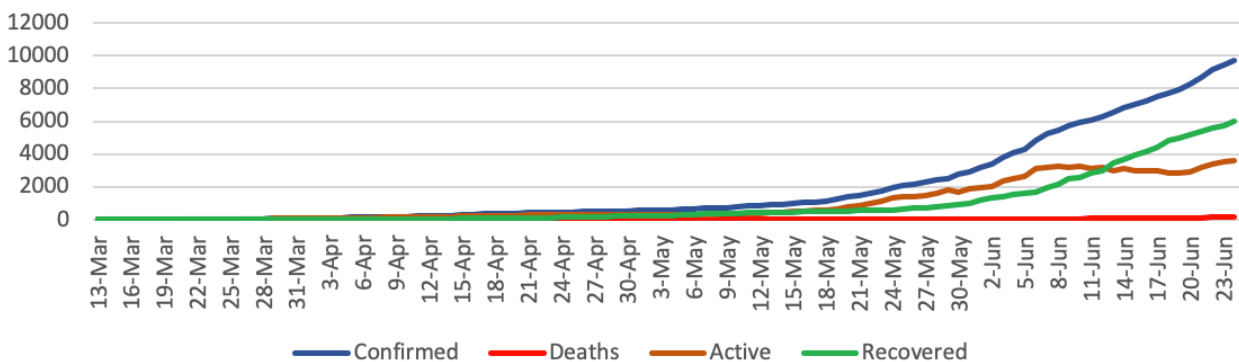
comorbidity, and moved to COVID state health centres or private hospitals, or special care centres.



Awareness strategy

A special task cell has been created for awareness through various channels, including social media and audio messages for rural Karnataka. Large scale information was disseminated through platforms such as WhatsApp, Facebook, Twitter etc, on which the state roped in celebrities to create various videos. Also, a “mask day” was implemented as a part of the awareness campaign⁷.

Outcomes and way forward



COVID-19 Karnataka Graph, June 2020

The two-step process of 1) tech support with real-time information on COVID contract tracing in collaboration with IT companies of the state, and 2) the actions of the field workers at the district and community level, created a robust system of curbing the spread of the pandemic. With an app that was developed in-house, the state roped in private players for data analysis and synced with various programmes for the best outcome in tracing, isolation, communication, and treatment for COVID cases. These organizations trained 10,000 government field staff with the technology that helped officials at the state level to directly communicate with citizens and exchange information quickly. The apps and programmes helped with better dissemination of information not only within the district and amongst field workers, but also amongst patients and high-risk individuals.

The app-based systems and the large-scale survey ensured the availability of data, through which quarantines could be monitored and implemented. Also, as the data

was made publicly available, this enabled effective community participation in the quarantine. The surveys and teleconsultation helped to reach out to the vulnerable, finding a large number of people in a short period.

Karnataka has witnessed an increase in new COVID-19 cases. Challenges remain in the monitoring of the home quarantine. Also, the state’s geofencing app (used for monitoring and tracking of quarantined individuals and households), witnessed a breach of quarantine regulations⁸—south Karnataka experienced the highest number of breaches.

Yet the Southern State of India has shown that in the time of disasters with unprecedented complexities and unclear solutions, collaboration between the State and private sector can prove to be an effective tool to mitigate the consequences.

7. <https://inc42.com/buzz/from-startups-to-tiktok-karnatakas-digital-strategy-to-fight-covid-19/>

8. <https://economictimes.indiatimes.com/news/politics-and-nation/monitoring-home-quarantined-people-a-tough-challenge-for-karnataka/articleshow/76295390.cms>

