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Waging War on Covid-19
using technology, information

Chief Minister B S Yediyurappa meets a team from Union Health Ministry in connection with Covid-19 pandemic in Karnataka.

When the state found itself in a full-blown war with Covid-19, it needed cutting-edge combat and control centres to exercise control over the invisible battlefield.

"This is where the idea of having war rooms came in," explained Munish Moudgil, Director of the State Covid War Room, which operates out of the historic Balboorie Guest House in the heart of the city.

The genesis of the war room was not so much the idea of a venue for health and government officials to congregate around a table, drawing up intricate battle plans to tackle the disease, but a facility to collect and analyze massive amounts of data on the statewide epidemic to build insight into how the disease was spreading. "The data would allow us to make critical decisions about control," Moudgil explained.

The first war room to be set up was at the Bruhat Bengaluru Mahanagara Palike (BBMP) offices on March 19. This was also the first war room set up in the country, explained Hephsiba Korlapati, Managing Director Bengaluru Smart Cities Mission and Special Officer, War Room.

The operations of the facility which was set up at the top floor of an annex building had a clear mandate: carry out surveillance, produce Information-Education-Communication materials, draw up containment plans and identify citizen volunteers able to help health officials to spread awareness about the disease and containment.

"The objective of the war room was to get a handle on the crisis," added the former BBMP Commissioner B H Anil Kumar who helped inaugurate the BBMP facility which was focused on city containment.

"We began tracking every new Covid-19 case. A detailed and well thought-out-flow of information was set up. Preparation is key," he said.

Of course, this was no easy thing to do, Hephsiba added. "The epidemic is changing everyday, it is dynamic. We have to constantly come up with new solutions to new problems, and planning is a constant activity," she said.

At its inception, the War Room had 36 consoles and also co-hosted the BBMP's central control room and the wireless control room to allow inter-office coordination. Two days later, a State Covid War Room was formed in the same building. Soon, officers from the Revenue Department, the Department of Health and Family Welfare (DOHFW) and Directorate of Information and Public Relations (DIPR) were jostling for space in the same facility.

"When the number of cases began to increase in April and with the first containment zones were enacted, it was decided that the State War Room would relocate to the Balboorie Guest House because they wanted to scale up their infrastructure, Hephsiba explained.

Moudgil clarified that the State War Room was set up to give the state a single origin point of all data while coordinating IT services to provide state-level overview.

To achieve this, the State War Room is outfitted with a dedicated Interactive Voice Response (IVR) system and a KSWAN cloud-computing network linked to district administration offices and the servers at the City War Room at the BBMP main office.

Like the BBMP War Room, it is operational round the clock, for seven days a week in two shifts. A core team of 25 work from the site, augmented by a panel of IT experts from the private sector, plus a team of 40 comprising the IT team, which works remotely.

The system delivers a seamless stream of digital data to the War Room from its networks across the state from data nodes. The focus is aligned across six categories: Covid-19 patients, primary and secondary contacts, migrant workers, healthy individuals, vulnerable individuals, and those under or supposed to be under quarantine.

"People move from one category to another as the epidemic progresses. The systems in place track the movements, collate data and allow the government to make informed movements. Containment of Covid-19 requires the identification of those who are likely to infect and likely to get infected, and then give citizens the best possible information," Moudgil said.

The State War Room parses about 10 gigabytes of "soft data" on a daily basis - made up of reams of statistics, patient data and contact tracing information. Much of the information originates in real-time from the Department of Health and Family Welfare and from field teams carrying out contact-tracing using set action points on a specially designed smartphone app.

At its BBMP counterpart, engineers developed the "Index App," a new bit of software, which is focused on issuing new Covid-19 patient ID numbers, verifying details about the case and then ensuring that the patient goes to hospital if need be.

The utilisation and development of technological solutions is a focus area of the war rooms, both directors said, however Hephsiba pointed out that app development comprises only 10% of war room activities.

"A large part of our work is interfacing and consulting with citizen groups, public health experts and data analysts, and arming them with the relevant information," she said. Beyond that, however, lies the analysis of granular information to determine where the next hotspot, where the next cluster or the next micro cluster will pop up.

The success at the hotspot of Padarayanapura is something that other cities are now looking at, she added.

In that sense, the operations of the war rooms are much like an iceberg. Only one third of what the public sees is manifested in interactions with citizens and daily public reports. What lies behind the public's gaze is a relentless system gathering, studying and channeling information about the outbreak to the government, upon which the most critical of decisions hinge.

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Primary and Secondary Education Minister S Suresh Kumar and Chief Minister B S Yediyurappa.

Examinations successful in testing times

The Covid scenario has affected the learning continuity of lakhs of children, particularly in the primary and secondary education level. Yet, the Karnataka government ensured continuity of education at all levels through a wide range of programmes and set a new precedent at the national level by successfully conducting the SSLC examination involving lakhs of students even as all other states chose to cancel the examinations.

The state government rolled out a separate Standard Operating Procedure (SoP) for ensuring the safety and health of students. The government's decision to hold SSLC exam was hailed by many at the national level. At a time when Central Boards and other states had cancelled the examination, Karnataka government's decision to continue with the exam did surprise many. However, successful conduct of examination across the state highlighted the government's focus on providing quality education and its commitment towards parents and students in fulfilling their aspirations.

Similarly, the record performance of II PU students in the last 10-years has also turned out to be a feather in the cap. Adopting safety measures and putting in place precautionary measures at evaluation centres, not only the results were produced on time but also the record percentage pass out reflected on the quality of education offered to students.

Primary and Secondary Education Minister led these efforts from the front. He regularly met all the stakeholders - students, parents, teachers, officials - personally and through all possible platforms. The regular 'Phone-in' programme by the minister helped the department address problems that the sector for years. Implementation of several suggestions made by parents, teachers and experts also brought the education department a step closer to all.

Introduction of 'Water Bell' at schools making students consume enough water during school hours was seen as a solution to a lot of health problems among kids in various districts. Sprucing up the school infrastructure, the government's decision to launch a mobile app to facilitate adoption of government schools received tremendous response besides ensuring transparency in donations. Going a step further, the government also issued orders directing all elected representatives to adopt at least three government schools within their constituencies. The department successfully repaired more than 6,500 classrooms in 3,386 government schools that were damaged due to floods and heavy rains, at a cost of Rs 758 cr.

Reducing the burden on school children, the government also sanctioned a long-pending proposal of introducing 'No bag Day' on selected Saturdays and named it as 'Sambhrama Shanivara'. The plan is expected to be implemented effectively in all schools during post-covid period. The government's decision to start 1,000 multi-medium schools has been widely appreciated.

The government also brought a teacher-friendly transfer making by bringing in appropriate amendments to the prevailing law. The recruitment of over 1,200 teachers to the government Pre University colleges which was pending since 2015 has also been finalised and the department of pre-university will soon conduct online counselling for these teachers for selection.

The education department has also requested the Doordarshan for a dedicated channel for the education department to facilitate continuous learning of students. The revision classes conducted for the benefit of SSLC students in Chandana channel was a tremendous success with lakhs of students especially in rural areas benefited by the classes.

Chief Minister B S Yediyurappa takes part in Mask Day Walk in Bengaluru. Deputy Chief Minister Govind Karjol, cricketer Anil Kumble, actress Ragini Dwivedi are seen.

Chief Minister B S Yediyurappa at a launch of a mobile Covid-19 sample testing booth in Bengaluru.

Free home isolation service in times of limited private care

The government partnered with Swasth, a non-profit consortium of healthcare partners, to monitor home isolation for asymptomatic or mildly symptomatic Covid patients. The service is free and the government bears the cost.

According to the Bruhat Bengaluru Mahanagara Palike (BBMP)'s July 21 bulletin, 8,920 Covid patients are in home isolation in the state capital alone. It is not known how many Covid patients are in home isolation across the state.

The government on July 4, after much deliberation issued guidelines for home isolation of Covid positive patients. All patients who are below 60 years of age, that is all, except senior citizens are allowed home isolation for 17 days. As soon as the guidelines were made public, private hospitals jumped at the opportunity and each devised its own personalised package.

A majority of Indians do not have health insurance and are saddled with out-of-pocket expenditure for any healthcare services. These packages ranged from Rs. 4,500 for seven days to Rs. 16,000 for 15 days.

In a major relief to Covid patients in the state, on July 16, the government partnered with Swasth, a non-profit consortium of healthcare partners, to monitor home isolation for asymptomatic or mildly symptomatic Covid patients. This is free for the patient and the cost is borne by the government.

The Commissionerate of Health and Family Welfare Services issued a work order on the same day for Swasth to implement a 10-day care package through service providers for patients isolated at home for an initial period of one month. This package includes daily monitoring of patients by healthcare professionals, and periodic check-ins by doctors.

Health Commissioner Pankaj Kumar Pandey told *DH*, "We are bearing a cost of Rs. 950 per patient in home isolation. The Swasth team apart from daily call and consultation will have a consultation with the doctor on the first, fourth and 10th day of home isolation. The booth-level team and local health worker will visit the homes of patients."

On the selection of Swasth, Pandey said that since it's a not-for-profit organisation and is doing work in other states also, its services are being used for a period of 21 days as a stop gap arrangement. "In the meantime, we are calling a tender to finalise an agency. It started its work on July 20 and has so far reached out to 400 patients," Pandey said.

Asked how a patient can get in touch with Swasth, the Commissioner said, "A call will be made to the patient as soon as he is eligible for home isolation."

State health authorities will inspect patients' homes to ensure 24/7 caregiver support. They will upload patient details and medical history to the Swasth platform.

Swasth will then forward these patient details to service providers who will onboard the patient, allocate a nurse/healthcare professional and doctor to the patient and orient the patient and caregiver on safety measures to be maintained for the patient and family during the home isolation period.

Service providers will share safety measures and the details of the system with patients and caregivers over three calls through the first day. The calls will be made in Kannada or English. A nurse or Ayush doctor will check in with the patient daily to monitor symptoms and check if the patient needs doctor's advice or is ready to be discharged. She will also check whether anyone in the family is showing symptoms.

If the person's condition worsens, he/she can get in touch with an emergency contact provided, and be connected with the doctor. The doctor may recommend a patient to call the 108 ambulance service or redirect them to government services. The service provider will follow up until the person has reached the health facility, and if there is a delay of more than two hours, the matter shall be escalated to a designated government official.

The patient shall be discharged at the end of the 10-day isolation period if he/she has no fever for three days, no symptoms and maintains an oxygen saturation level above 95%. If the person's symptoms persist, they may be advised to maintain home isolation for an additional three days. Feedback shall also be taken on a daily basis from patients and caregivers.

Swasth will share with the government a daily consolidated report of patients with the number of patients on active care, the number of patients discharged, and the health status of the patients and families. The state will also be able to monitor call times and duration to track the actions of service providers.