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Uttar Pradesh: state governance and response in COVID-19 pandemic

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1. Introduction

The COVID-19 Pandemic has unprecedentedly changed the whole landscape, posing several challenges for the respective state governments in India. The impacts of the pandemic have penetrated through all three major sectors of the Indian Economy, namely primary (agriculture and allied activities), secondary (industrial and manufacturing), and tertiary (health, education, telecom, tourism, etc.). The impacts of the COVID-19 Pandemic in Uttar Pradesh was marked by massive job losses and livelihood in the informal sector like daily wage labors, factory workers, household workers, street vendors, etc.

Analyzing both quantitative and qualitative sources of information of Uttar Pradesh, considering the different factors as well as farmer survey, suggests that the lockdown led severe disruption of farming systems and the agricultural sector as a whole followed by shortages of food supplies and price hike especially for poor and urban population. Thus sustainable agro-policies are very much required anticipating the future pandemic in India (Kumar, Singh, Pandey, et al., 2021).

After the first national level lockdown in March end in 2020, the state government had ordered the closure of nonessential activities like all educational institutes, gyms, malls, cinema hall, and swimming pools till April 2020 and added 52,000 additional beds (17,000 beds by the Health Department, and 35,000 beds by the Medical Educational Department) in the COVID-19 hospitals in the state in the month end. Furthermore four institutes in UP were approved from Indian Council of Medical Research to conduct tests for coronavirus in initial stage. From March 2020, till April 2, 2020, government announced the closure of all educational institutions, cinemas, shopping malls, swimming pool, gyms, multiplexes, and tourist places in the state including slaughterhouses. Anticipating the spike in cases in near future, the strategy of state government in this direction from beginning was to increase the number

of beds like 10,000 beds in level one, 5000 beds in level two, and 2000 beds in level three defined in level of Hospital L1, L2 (with oxygen), and L3 (with ventilator). Various training was imparted to frontline health-care workers and had better overall knowledge, attitude, and practice (KAP) toward COVID-19 compared to any HCWs specially technicians and students (Maurya et al., 2021).

COVID-19 pandemic led to eventually very low anthropogenic activities leading to a significant improvement of the environment not only in India but also across the world. The air quality changes during the lockdown in nine major cities in Uttar Pradesh, including three cities (Ghaziabad, Noida, and Greater Noida) in the national capital region, which is counted among most polluted cities in the world.

Not only there was significant reduction in the total column density of NO₂, CO, and ground-level pollution load of PM₁₀, PM_{2.5}, NO₂, and SO₂ was observed but also the average summer temperature was recorded (Kumar, Singh, Kumar, et al., 2021).

2. COVID-19 pandemic in Uttar Pradesh

In Uttar Pradesh, out of 75 districts, Lucknow, Kanpur Nagar, Prayagraj, Gorakhpur, Ghaziabad, Meerut, Varanasi, etc., were the worst COVID-19 affected districts. Figs. 19.1 and 19.2 show the top five affected districts with respect to cumulative confirmed cases and deaths respectively till October 27, 2020. The capital city of Uttar Pradesh, Lucknow was the worst affected.

Fig. 19.2 shows top five COVID-19 affected districts in terms of death cases in Uttar Pradesh.

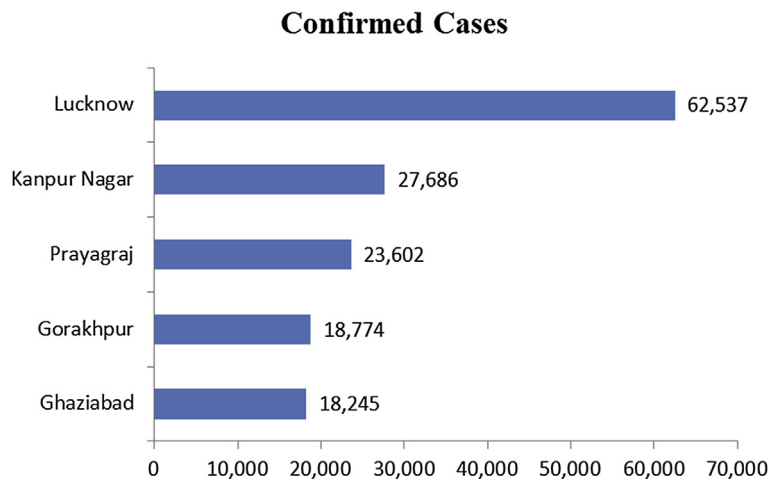


FIGURE 19.1 Top five COVID-19 affected districts in terms of confirmed cases in Uttar Pradesh, Oct 2020.

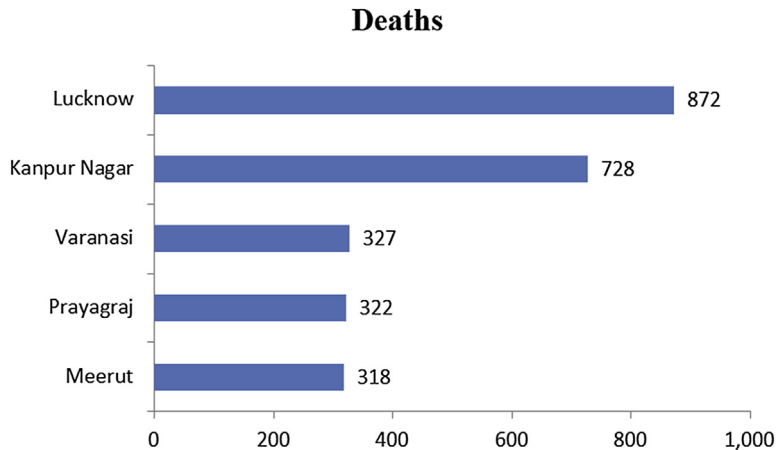


FIGURE 19.2 Top five COVID-19 affected districts in terms of death cases in Uttar Pradesh, Oct 2020.

3. The strategy for containment and quarantine in 2020

After the Prime Minister introduced the lockdown nationwide “Janata curfew” on March 22, 2020 (COVID-19: Lockdown across India, in Line with WHO Guidance, n.d.), the Uttar Pradesh government extended the closure of all educational institutions, cinemas, shopping malls, swimming pool, gyms, multiplexes, and tourist places in the state till April 2, 2020. Initially only 15 districts of 75 districts in state that included Noida, Ghaziabad, Agra, Aligarh, Allahabad, Kanpur, Varanasi, Bareilly, Lucknow, Saharanpur, Meerut, Lakhimpur, Azamgarh, Firozabad, and Gorakhpur were declared to come under lockdown restriction by the state government. While in the end of May 2020, the state government declared that compulsory 14-day quarantine for flight and 6th day of home quarantine and finally tested at the end of quarantine time limit. The awareness campaign posters and banners on the viral disease started while appealing religious leaders to avoid crowding at worship places. Restriction in interdistrict travel was also imposed with permission e-pass to those who are needy.

In June, the state government declared open up of all offices, supermarkets, beauty parlors, and salons, while schools and colleges were still not opened. Retail markets were allowed to open up in rotation basis from 9 a.m. to 9 p.m. Wedding functions were allowed at limited hours and people of not more than 30. Restaurant with inside dining space was also not allowed to open.

4. Transportation

The interstate transportation of migrant workers remains one of the biggest challenges to bring them back home to their domicile state, especially when there is no work or prolonged uncertain lockdown period. While Uttar Pradesh together with Bihar remain among top state witnessing high outflux of migrant worker going to other states for the livelihood

(Ghosh, 2020). In this direction, state government arranged about 1000 buses to ferry migrant labors that were stranded on the border districts especially in National Capital Region of Delhi (UP Govt Arranges 1,000 Buses for Stranded Migrant Workers - The Economic Times, 2020). About 2224 workers, who completed quarantine period in Haryana in the first batch in the first phase, were brought back to the home state (UP Starts Bringing Back Migrant Workers, First Batch of 2,224 from Haryana Reach Home- The New Indian Express, 2020). Transport department played a vital role in this phase, where about 65,000 workers have been brought back from different other states in the month of May. About 56 trains carrying migrant labors from different state brought them in their domicile state at different stations such as Agra, Kanpur, Lucknow, Jaunpur, Gorakhpur, Pratapgarh, RaeBareli, Kannauj, Banda, Azamgarh, Barabanki, Sitapur, and Unnao. According to the authorities, about 184 trains were arranged to bring back 2.26 lakh migrant workers from other states in May 2020, while around 1 lakh migrant workers also returned by their own conveyance (Migrants' Return Leading to Rise in Coronavirus Cases: U.P. - The Hindu, n.d.). According to the state government of Uttar Pradesh, 318 "Shramik Special" trains were arranged to bring back 384,260 people to Uttar Pradesh. In this regard more special trains were allowed to ply the migrant labors. Besides, Air India Express flight also brought back 182 Indians to Lucknow from Sharjah, UAE.

Lack of coordination was reflected between government of Delhi and Uttar Pradesh, when the Uttar Pradesh government arranged for 1000 buses to ferry migrant labors owing to a countrywide lockdown without consulting Delhi State Government that resulted in huge chaos on border on March 28, 2020, leaving the people stranded in Noida, Ghaziabad, Bulandshahr, and Aligarh, among other places.

The chief minister Yogi Adityanath's government made an announcement on April 25, 2020, that it would bring back U.P. labors stranded in other states and the first batch of 2224 workers, who had completed quarantine period of 2 weeks in Haryana, were brought back to the state in the first phase. Although the study shows that reducing the daily arrival rate of high migrant workers from state like Uttar Pradesh and Bihar can help to lower the surge in confirmed and active cases (Maji et al., 2020).

In this direction, over 65,000 workers were brought back from different states in the month of May. Web-based "Jansunwai" e-portal was used for anyone seeking help from another state who is stranded in UP. People from UP stranded in other states can get themselves registered onto it as well. In this direction, it can be assumed that 3-week lockdown is found insufficient to prevent a resurgence but sustaining the lockdown with periodic relaxation is better way to deal it, counting on age and social contact structures (Singh & Adhikari, 2020).

5. Relief distribution

State government declared to give ₹1000 (US\$14) to all daily wage laborers affected due to coronavirus in the state. Ration card which is issued by the government of India for public distribution system of essential items like food, fuel, or other goods to certain very low-income group or Below Poverty Line (BPL) was used as a tool to allow to avail food resources stranded even in other state, which was earlier not possible but only to those domicile holder

in their respective state ([Most Viewed Business News Articles, Top News Articles | The Economic Times, n.d.](#)). Besides, who were left without it were supported by food packets from State Disaster Response Fund (SDRF) who are specialized trained teams deputed in the state at predetermined location to respond to disaster like situations.

Various migration commission were formulated, namely, like “Kaamgar,” “Shramik (Seva Ayojan and Rojgaar),” and “Kalyan Ayog” to provide employment to migrant workers/labors.

Buses were arranged for inter-state transportation of stranded people willing to comeback in Uttar Pradesh. In this direction about 250 buses from Uttar Pradesh were arranged to pick up about 9000 stranded students in Kota city in Rajasthan, which is also major coaching hub city of the country. Besides, about 300 UPSRTC buses were facilitated for the students to take home city in the second round. Financial assistance of total amount of ₹225.39 Crores (around 30.66 million dollar) was distributed directly through bank transfer among beneficiaries of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA¹) that gives legal guarantees 100 days of employment in a financial year to any rural household to enhance livelihood security in rural areas for unskilled manual work ([Objective of NREGA | Official Website of State Rural Employment Society, Government of Meghalaya, India, n.d.](#)).

COVID-19 has questioned the resilience and preparedness of the health-care sector, while it has dramatically enhanced in awareness the sanitation and hygiene culture in the state. Social distancing, using mask, and hand sanitization are now known practices and had become part of everyday life. Uttar Pradesh already had the existing problems of low health status, wide interdistrict and interregion health disparity, and an inadequate health infrastructure. The WHO criterion of doctor–patient ratio is 1:1000; however, in the state, 1 government doctor serves about 19,962 patients. The combined effects of these existing problems and COVID-19 have exacerbated the existing vulnerabilities and COVID-19 response.

Uttar Pradesh is one of the worst COVID-19 affected states of India. Owing to the havoc posed by the pandemic, several departments ranging from Health to Transport took measures in response of the COVID-19 Pandemic. Several measures were taken and response mechanism was planned to control the situation. The report is a compilation of the measures undertaken by several departments to respond to COVID-19. To effectively deal with a pandemic of such great intensity, emergency planning and efficient government response play a significant role.

6. Governance of line departments in Uttar Pradesh

The first COVID-19 confirmed case in Uttar Pradesh was reported on March 4, 2020, in Ghaziabad. From March 4 to April 30, 2020, there was 276 times increase in the cumulative confirmed cases. The [Fig. 19.3](#) shows that age-group wise COVID-19 death distribution in Uttar Pradesh. It is seen that COVID-19 deaths are the most prevalent in the age group 60–74 years, followed by 45–59 years, 30–44 year, >74 years, and 15–29 years. Religious congregation like Tablighi Jammah organized from March 1 to March 21, 2020, resulted in its increase as about 59% of such cases in Uttar Pradesh were relevant to this event according to the Health Ministry.

¹ Mahatma Gandhi Employment Guarantee Act, 2005, is an Indian labor law and social security measure that aims to guarantee the “right to work.”

Age-group wise death distribution

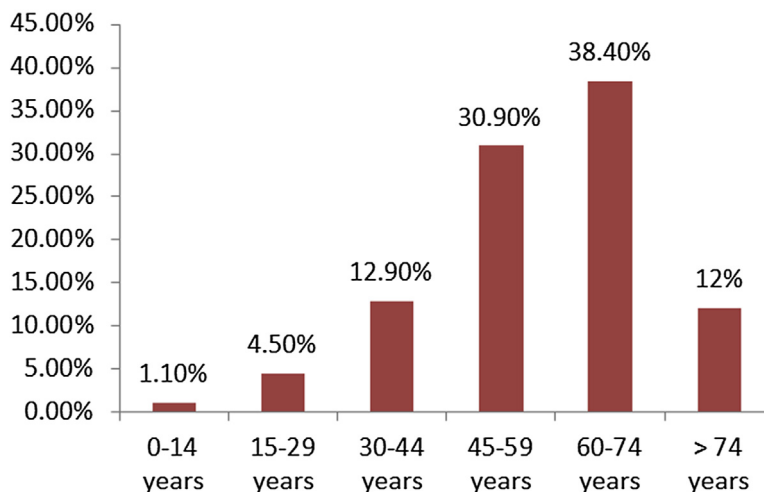


FIGURE 19.3 Age-group wise COVID-19 death distribution.

6.1 Health department

In the beginning, the state government gave the order to set up isolation wards with 10 beds in the medical college as well in the district hospitals and to increase the vigilance on the borders and in the airports while later on had to set up dedicated 24 × 7 COVID-19 control room consisting of 11 teams; Call Center Management Team, HR Management Team, Surveillance Team, Training and Documentation Team, Infrastructure Management Teams, Material Management Team, etc.

The Uttar Pradesh state government passed an order to impose the lockdown on March 22, 2020, in 16 districts including Lucknow from March 23, 2020, to March 25, 2020, prior to the nationwide lockdown be declared on March 24, 2020.

COVID-19 has questioned the resilience and preparedness of the health-care sector. Uttar Pradesh already had the existing problems of low health status, wide interdistrict and inter-region health disparity, and an inadequate health infrastructure. Based on the facts that several proactive measures taken by the health department (Directorate of Medical & Health Services, Uttar Pradesh) to effectively respond to COVID-19 in the early stage, given the large population in Uttar Pradesh, nailed it to certain extent. The imminent steps taken by the state government was to categorization of specific health-care facilities into L1, L2 and, L3 COVID-19 quarantine facilities depending on the criticality of the patient case. According to the information the provided by the government web-sources, the differences between L1, L2, and L3 facilities are shown in [Table 19.1](#). Health department set up isolation wards consisting of 200–300 beds in 51 private and medical colleges. Besides, the Corona Treatment Protocol Team was constituted to monitor it continuously. Clear responsibilities of the Community Health Workers like ASHAs, ANMs, and Aganwadis were given. To facilitate trace and track, the CM Helpline Number 1076 was activated for public to take the queries on COVID-19.

TABLE 19.1 Based on the information on government forum the differences between L1, L2 and L3 COVID-19 facilities are mentioned below.

L1	L2	L3
All the 75 districts should have 1 community health center with more than 30 beds. This would be useful for the treatment of noncomplicated noncritical COVID-19 cases that do not require ventilators or the ICUs. In case of the deterioration of health, they will be referred to the higher facilities.	This should include a health facility at the district to deal with the emergency and referred COVID-19 cases. This includes the noncomplicated cases that require ICU facilities. There should be ample availability of ventilators and 2 nurses and 1 MO should be available for 25 beds.	This should include a health facility in the medical college for managing the referred and emergency cases. All the cases that require ICU and ventilator come under this. Ample quantity of ventilators and oxygen support is required.

Source: From <http://dgmhup.gov.in/en/default>.

District Disaster Control Center came into existence to ensure an effective coordination between the various departments like health, civil supplies, etc. In addition, one testing lab was in all district hospital. The government also passed the order to establish Bio-Safety Level (BSL)-3 testing labs at the district and divisional hospitals as well as medical mobile unit. The government passed several guidelines to use “death audit portal” regarding the COVID-19 deaths and its regular updating in the website on July 9, 2020. The state government gave the order to distribute free Ivermectin tablets to the affected COVID-19 patients. In Lucknow, 40 mobile kiosks were set up throughout the city to distribute the tablets. The government also formed an integrated COVID Command and Control System for sample collection, screening for home isolation, monitoring of home isolated cases, and patient transport. Endeavor was always there to repair and arrange the ventilators in the districts. The UP government also provided the list of contact details of Health Counselors from UNICEF and NHM in several districts.

Situation was reviewed daily by Honorable Chief Minister. CM helpline under CM office does daily random calls to hospitalized and home isolation cases to assess their general well-being. Any grievance related to doctor’s visit, availability of food, and cleanliness is appropriately addressed and forwarded to relevant nodal officer.

State has operationalized integrated command and control center in all districts to facilitate sample collection, screening for home isolation, monitoring of home isolated cases, and patient transport. Proactive village and Mohalla Nigrani Samiti’s formation made difference at micro level.

6.2 Office of industrial infrastructure development corporation

An order was passed on March 21, 2020, regarding providing assistance during the COVID-19 stating that all the district head and gram panchayat will find daily wage workers who lost their jobs and district head will give them 1000 rupees per month. Another order was passed on April 1, 2020, to provide relaxation for especially abled employees working in essential services during lockdown imposed due to COVID-19.

On April 3, 2020, an order was passed to clarify about the process of online E-pass system implemented for the availability of essential commodities during lockdown. Furthermore, maintenance of the database of District Control Room Numbers was emphasized.

6.3 Urban development

The department exercised preventive activities like the disinfection of malls, commercial places and public places, and metro station. COVID-19 campaigns and awareness generation programs were performed and data of the daily wage laborers were updated for the urban areas. The regular supply of food products, milk, and other dairy products in the urban areas was ensured. Also, providing door-to-door ration under the Integrated Child Development Scheme was proposed according to the order dated April 7, 2020. An order emphasizing the different roles of the urban authorities in the prevention of COVID-19 infection was also passed on April 8, 2020.

6.4 Labor department

On March 20, 2020, the state government enacted the Epidemic Disease Act, 1897. An order was passed to exercise of powers mentioned under section-2 of the Act, i.e., the employees or the workmen infected with COVID-19 would be permissible paid leave of 28 days after showing a medical certificate. Also, on March 30, 2020, an order was passed to find solutions for the problems being faced by the daily wage laborers during the lockdown.

An order was passed on March 21, 2020, to provide relief of Rs 2000 to the daily wage workers and affected people due to COVID-19.

6.5 Revenue (relief) department

An order was passed on March 3, 2020, to collect the data of all the private hospitals, doctors, paramedics, government and private ambulances numbers, number of beds and stretchers availability in the private hospitals, etc. On March 12 and March 14, 2020, specific focus was given on the subject to spread awareness regarding COVID-19. Also, an order regarding providing the grants to hospitals and health department for COVID-19 awareness was passed (Table 19.2).

TABLE 19.2 COVID-19 awareness generation material.

Sr. No.	Name of districts	Posters		Flare/pamphlet	
		District headquarters per district	Per block level	District headquarters per district	Per block level
1	Agra, Ghaziabad, and Gautam Budh nagar	20,000	2000	20,000	3000
2	Other districts of the state	5000	200	10,000	500
Total material used by the district of the state for publicity		625,400		1,247,500	

Source: From <https://rahat.up.nic.in/>.

An order was passed on March 19, 2020, regarding training 50 officers of different departments and Rs 10,000 should be given to the districts from the Disaster Relief Fund. On March 25, 2020, Rs 50 crore Indian rupees were allocated to buy masks, PPE, RT PCR equipment, and ventilators for reducing the COVID-19 risk. Another order was passed on March 26, 2020, to establish COVID-19 Control Room with the facilities like 1 computer, table, and chair for 4 persons, telephone, and internet connection. Also, an order was passed to provide a daily report on the help given to the daily wage workers by the government.

On March 27, 2020, three important orders were passed considering the risk of COVID-19 to the laborers and migrants. Hence, the subject of the order was to set up temporary shelters in schools, college, hotels, hostels, public rest house, Dharamshala, etc. Also, the interstate mobility restrictions were imposed.

6.6 Water, sanitation, and hygiene

According to Jal Shakti Ministry Data, Uttar Pradesh has only 1% of rural households with a tap connection for piped-water supply and this report was submitted before the Lok Sabha on March 5, 2020. Access to tap water is very limited in rural households of Uttar Pradesh, compromising only 12.16% of rural households have access tap water supply in their homes (Jal Jeevan Mission, n.d.). This indicates villagers have to walk away distant places for drinking water, where regular washing remains major challenges.

During the COVID-19 outbreak and lockdown situation, the supply of menstrual health products were disrupted, hence the trainers from Water Supply and Sanitation Collaborative Council (WSSCC), India, made most of the templates of the booklet to promote safe hygiene practices, especially concerning menstruation, across the country.

The online and onground training programmes informing the people about safe hygiene practices for menstruation in times of COVID-19 came as tool for mass awareness.

6.7 Role of Aga Khan Foundation: WASH facilities

Together with other nonprofit organization, Aga Khan Foundation (AKF) being also working in humanitarian sector within its network also contributed implementing its COVID-19 response as far as safe water, adequate sanitation, and hygiene services are concerned in Uttar Pradesh and Bihar.

Organizing dissemination of information about COVID-19 hazards risk information through audio messages and digital posters especially on hygiene awareness against COVID-19 was made. The awareness programmes for other preventive measures like community toilets, handwashing, importance of physical distancing, respiratory hygiene, precautions at health-care facilities, and management of waste at health-care facilities were done. They started with preparation of preliminary database of around 22,000 functionaries that included frontline workers, elected members, government officials, and community leaders to communicate through platform of WhatsApp, bulk SMS, and other mediums reaching over 40,000 people.

AKF provided 7226 Government frontline functionaries for COVID-19 response planning and preventive resources like 8000 facemasks, 2500 gloves, 31 handwashing stations and

sanitizers, and 51,000 soaps to essential service providers (frontline workers, sanitation workers and ragpickers) ([Responding to COVID-19 through Comprehensive WASH Interventions: Experiences from Two Indian States - Sanitation Learning Hub, n.d.](#)).

6.8 Transport department

Due to countrywide lockdown, 1000 buses were arranged by the state government for the migrant laborers. The Uttar Pradesh government said 300 buses would be used to help students reach their respective districts. Transportation facilities were provided in a phased manner for about 9000–10,000 students in Prayagraj. Moreover, arrangements were made for the return of 12,000 migrant laborers from Haryana.

6.9 Food department

Distribution of food grains to 1.94 crores people with ration card was also facilitated in the state through its Public Distribution System (PDS) network. About 35,843 were benefitted from the Antyodaya scheme that seeks to provide food to the poorest of the poor ration card holders. Currently the state is home to 3.33 crore ration card holders and about 71 lakh Antyodaya scheme beneficiaries.

6.10 Police department

In Uttar Pradesh, 567 policemen were infected so far, of which 533 have recovered, 27 are undergoing treatment, while 7 have died. In the training, the personnel were also being told about the “Mission Shakti” campaign launched in the state and till now, 3174 police personnel were given training in 72 districts of the state and about 32,000 police personnel were deployed in the police emergency service 112. Out of these, 3000 police person were deployed on four-wheelers, while 1500 policemen were deployed on two-wheelers ([PTI, 2020](#)).

COVID-19 affected places across 15 districts in Uttar Pradesh were sealed. About 11,500 FIRs were registered and over 37,000 persons violated the orders imposed during the lockdown from March 24, 2020. Offenders were majorly concentrated in the cities like Lucknow, Kanpur, Meerut, Agra, and Noida ([Tripathi, 2020](#)).

6.11 Donation by Samsung to Uttar Pradesh state disaster management authority

Samsung India announced its contribution of Rs 2 crores to UPSDMA to fight against COVID-19, also provided about 6000 PPEs and 10,000 masks, infrared thermometer, and 300 air purifiers for strengthening the medical facilities. They also supported the distribution of food packets with the help of the local administration in Noida. Medical equipment was also provided by the South Korean giant to support the local administration in a specific area. State line department and agencies allocated paramount fund as well as other requisite resources as part of preventive and relief measures ([Table 19.3](#)).

TABLE 19.3 Funds allocated or COVID-19 precautionary equipment distributed by several agencies/corporates.

Name of the department	Revenue/fund	Major works
Relief commissioner office	Rs. 10,000	Disaster relief fund
Medical, health, and family welfare	Rs. 50 crores	Buy mask, PPE, RT, PCR, and ventilators
UPSDMA (donation by Samsung)	Rs. 2 crores	10,000 mask, 6000 PPE kits, 300 air purifiers
Aga Khan foundation		2500 gloves, 51,000 soaps, 8000 mask 71 lakh Antyodaya scheme, 3.33 crore ration card holders
Total material used by the district of the state for publicity		625,400 posters, 1,247,500 flare/pamphlets
Home department	Rs. 2000	Provided daily wage workers and affected people

7. Futuristic arrangements by the state government

Although many vaccines were in the third phase of trial, the Uttar Pradesh Government had geared up planning regarding the distribution of the vaccines in the first phase. It had been planned that in the first phase, frontline workers include doctors; public and private health workers would be vaccinated. The state successfully conducted a 16-day COVID-19 test from October 29, 2020, to November 12, 2020. Besides, the state government had decided that all the residents would be provided with free vaccines and also planned to arrange the cold storage for the proposed vaccine at several locations.

8. Good practices of Uttar Pradesh observed by central team

- Daily monitoring by highest level.
- Situation reviewed daily by Honorable Chief Minister.
- CM helpline under CM office does daily random calls to hospitalized and home isolation cases to assess their general well-being.
- Any grievance related to doctor's visit, availability of food, and cleanliness is appropriately addressed and forwarded to relevant nodal officer.
- Categorization of quarantine facilities into L1, L2, and L3.
- Integrated Command Center: State has operationalized integrated command and control center in all districts to facilitate sample collection, screening for home isolation, monitoring of home isolated cases, and patient transport.
- Proactive village and Mohalla Nigrani Samiti's.
- Development of training protocols and resource materials and extensive training.

9. Governance challenges

- Shortage of health-care workers: Despite one of the worst COVID-19 affected states in the country, there is a 33% shortage of doctors with about 45% unfilled posts of nurses. The government sector in U.P. had sanctioned about 18,772 posts, out of which 12,000 were filled while the remaining 6000 were unfilled or vacant posts.
- Human resource for surveillance and RRTs needed to be upgraded as they may fall short in future if cases increase.
- Hospital bed availability needs to be analyzed and augmented duly analyzing each district.
- Oxygen supply needs to be ramped up long with buffer capacity.
- Influx of cases from neighboring districts to major districts like Lucknow, Ghaziabad, and GB Nagar for better treatment facilities may lead to more cases and deaths being reported from these districts.
- Upcoming festival season pose a challenge.
- Declining trend as observed since last 10 days should not bring complacency in state's response.
- Interdepartment Coordination in response mechanism is very necessary to especially in area of food supplies and public transport.

10. Conclusion

All the departments have played a significant role in this fight against COVID-19. The health department (DGMH) of Uttar Pradesh took several measures in response to the pandemic; some of the notables were the categorization of L1, L2, and L3 facilities, formation of COVID Command Center, implementation of pooled testing at the initial phases, provision of medical mobile units, etc.; however, a more emphasis were required to be laid regarding solving the issue of shortage of health-care workers, and a regular assessment of beds needs to be conducted. Private, not-for profit international development agency like Agha Khan Foundation played an indispensable role in providing Water, Sanitation, and Hygiene (WASH) services in the state, equally important was the role of MNCs like Samsung and Water Supply and Sanitation Collaborative Council (WSSCC) in providing funds and spreading awareness about menstrual hygiene, respectively.

The police department played a great role in managing the law and order despite many of them got infected with COVID-19 and many of them lost their lives. "Antyodya" scheme implemented in the state and the door-to door service helped fed many people at the time of lockdown. All the departments ranging from transport, food, WASH, Health department to Labor department, etc., took measures to reduce the socioeconomic vulnerability. However, an efficient response to a public health emergency like COVID-19 demands a collaborative response of all the departments. The battle against this pandemic could be won only by the joint efforts of all the respective departments driven by implementable solutions and practical policies.

After analyzing the trend of recovery ratio, case fatality ratio (CFR), test positive ratio, number of deaths, confirmed cases, and comorbidity status in Uttar Pradesh, stark differences could be noticed at several intervals. The CFR reached the maximum (3.1%) by June 30, 2020, owing to the increasing influx of the migrants. The CFR now (October 31, 2020) stands at 1.5%. Still, early detection, case management along with hospital allocation, contact tracing, improvement in medical management of cases, and regular monitoring of the beds are some of the critical aspects of reducing the mortality. Recovery rate has also improved to a large extent. Cases with comorbidity status were found at a high risk of dying.

Despite some of the best practices undertaken by the state government of Uttar Pradesh, like categorization of L1, L2, and L3 facilities, and integrated command center, the state government has to suffice this gap of shortage of health workers and health infrastructure needs to be continuously improved. The idea of recovery has to be “forward-focused” with a goal to become resilient on all the aspects.

There are always vacant seats for doctors and need to have more of them with specialist doctors in different domain in the state. Government should provide more nurture harmony, facilities, and recognize their exclusive need to sustain better health facilities.

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