



BRUHAT BENGALURU MAHANAGARA PALIKE, BANGALORE

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INDEX

1. THE HINDU
2. DECCAN HERALD
3. TIMES OF INDIA
4. BANGALORE MIRROR
5. THE NEW INDIAN EXPRESS
6. THE ECONOMIC TIMES

'BBMP marshal' caught

SPECIAL CORRESPONDENT
BENGALURU

The Bruhat Bengaluru Mahanagara Palike (BBMP) has appointed marshals to levy fines on those found to be not just littering, but also not wearing masks and not maintaining social distancing.

Recently, a man claiming to be marshal was found collecting fines from citizens in Jayanagar. He was allegedly in possession of a wireless instrument and a file said to be of BBMP. Suspicious citizens reported this to the BBMP. The person has been identified as Kiran, 19, who was handed over to the Tilak Nagar police.

The BBMP is said to have filed an FIR.

U.K. scientists explore drug for COVID-19

PRESS TRUST OF INDIA
LONDON

Scientists in the U.K. have begun trials of innovative antibody drug treatments that they hope could provide instant protection against COVID-19.

The University College London Hospitals NHS Trust (UCLH) said that the researchers in the Storm Chase study believe a Long Acting AntiBody (LAAB) known as AZD7442, developed by AstraZeneca, may offer immediate and long-term protection to people who have been recently exposed to the SARS-CoV-2 and prevent them from developing COVID-19.

The study, led by Dr Catherine Houlihan, recruited the first participant in the world to the study earlier this month and has recruited 10 participants since then.

UCLH said its new vaccine research centre is running two clinical trials to protect against COVID-19.

Bust of actor vandalised

“There had been pressure on us to relocate the bust to a nearby place and we had agreed to it as well.

“But vandalising the bust like this is extremely sad. The police should arrest those behind this,” Mr. Puttaraju said.

The city’s civic body had recently agreed to name Magadi Road-Chord Road junction as Balagangadhara-natha Swamy Circle and in that light, devotees of Adichunchanagiri Mutt, located nearby, wanted a statue of the late seer installed at the circle.

However, a few people overnight installed the bust of Vishnuvardhan without any authorisation, leading to confusion.

Even those from the mutt had mediated and the fans had agreed to relocate the actor’s bust, a senior police



The incident triggered protests by fans of actor late Vishnuvardhan in Bengaluru on Saturday. ■ SUDHAKARA JAIN

officer said.

Mr. Somanna condemned the incident and said that given the actor’s fans were willing to relocate the bust, vandalising it in the mid-night was uncalled for. “Vishnuvardhan and Balagangadharanatha Swamy have contributed immensely

to the State. We will talk to all sides and peacefully resolve the issue and install the actor’s bust at another location soon,” he said. The police have now launched a probe and are examining footage from CCTV cameras from the area to identify the vandals.

Lack of volunteers slows down phase-3 Covaxin trials at city hospital

Elected representatives, bureaucrats and a few celebrities have come forward

AFSHAN YASMEEN
BENGALURU

A less than enthusiastic participation by volunteers has slowed down phase-3 clinical trials of the country's indigenous COVID-19 vaccine (Covaxin) at Vydehi Institute of Medical Sciences and Research Centre in Bengaluru. This is even as Hyderabad-based Bharat Biotech, which is developing Covaxin, applied to the Drug Controller General of India (DGCI) again for emergency use authorisation on December 23.

When the trials started on December 2, the hospital had aimed to administer the first dose of vaccine to 1,000 volunteers in a week. However, as of December 26, only 480 people had received the dose.

While there has been a



While the plan was to cover 1,000 volunteers in a week, only 480 have taken the shot since December 2.

lack of enthusiasm in the general public, the State's elected representatives and IAS/IPS officials, apart from celebrities, have voluntarily participated in the trials and taken the first dose. Over 65 volunteers are senior citizens too. The hospital has roped in Clintrac Interna-

tional Ltd., an autonomous research institute for the trials.

'Vaccine is safe'

Chaitanya Adikeshavlu, one of the directors of Clintrac, told *The Hindu* on Saturday that about 120 of the 480 volunteers are politicians, IAS, IPS officials, and some other celebrities. "There is some hesitation among people to participate in the trial as they may be worried about side effects. But, the vaccine is completely safe. Several doctors from Vydehi, including me and my family, have taken the dose and none of us have had any problem," she said.

"The plan is to roll out the vaccine by the second week of January for the priority group of healthcare workers. And for this, we have to com-

plete the phase-3 trials by the year-end. We need 520 more volunteers and appeal to people to come forward and participate in the trials," she said. The hospital has now offered travel arrangements for volunteer groups from residents' welfare associations and apartments who want to be part of the trial.

Covaxin clinical trials are based on a two-dose schedule, given 28 days apart. The vaccine efficacy will be determined 14 days post the second dose. It is the largest phase-3 clinical trial conducted in India. It is also the only efficacy trial being conducted in India for COVID-19 vaccine, to determine its suitability for the diverse Indian population.

CONTINUED ON PAGE 3

Lack of volunteers slows down Covaxin trials

D.V. Chalapathy, co-investigator of the trials, said anyone aged above 18 can participate. "As the vaccine candidate is preventive and curative, it will be given to those who test negative and are asymptomatic. Anyone who wants to volunteer can walk into our institute and enroll. Interested people can also call 97394 19272 and ask to be connected to the Covaxin clinical trial room," he said.

C N. Manjunath, nodal officer for labs and testing in the State's COVID-19 task

force, attributed the vaccine hesitancy to fear factor. No major side effects have been observed so far, he said.

"People are worried about adverse effects. It is likely that vaccination will be associated with mild adverse events such as soreness at the injection site, fever, fatigue, and myalgias. These are universal side effects with any vaccination. Efforts should be made to propagate the message that vaccination is safe in society. Awareness drives should be conducted

to boost the confidence of people," he said.

V. Ravi, former professor and head of the department of Neurovirology at NIMHANS, who is part of the State's Technical Advisory Committee, said champion advocacy is the need of the hour. "More celebrities and eminent personalities should participate in the trials and publicise their participation. Vaccine reluctance is natural in the beginning but this can be turned into acceptance with awareness," he said.

Shashi Bhushan B.L., professor and head of the department of Pulmonary Medicine at Victoria Hospital, Bangalore Medical College and Research Institute, said no vaccine would be 100% effective. "A vaccine that protects against developing clinical illness may not prevent transmission to others. Also, the duration of naturally occurring immunity to infection with severe SARS-CoV-2 is unknown and may wane with time. More awareness should be created," he said.

Is the first wave coming to an end in India?

There is no spike nationally despite the festival season, winter and large gatherings without masks, physical distancing

R. PRASAD

Though the total number of coronavirus cases in India has crossed 10.1 million, the number of daily fresh cases has been steadily dropping from a peak of nearly 98,000 cases on September 16 to below 25,000 daily cases in the last few days; December 25 recorded 22,350 fresh cases. The steady drop in cases has been seen nationally without much of a spike since mid-September notwithstanding the festival season, winter and large gatherings, whether political or otherwise. The absence of a spike is all the more surprising as strict adherence to non-pharmaceutical interventions (NPIs) has been far from good. Does the steadily declining trend in daily cases and absence of a spike nationally then suggest that the first wave is slowly coming to an end in India?

"It would be inaccurate to infer at the national level while some of the north-eastern States have a cumulative test positivity rate above 8%. Even at national level, the cumulative test positivity rate is 6.1% as on December 23, which suggests we aren't near the end immediately," Dr. Giridhara Babu, Professor of Epidemiology at the Public Health Foundation of

India, Bengaluru, and a member of the Karnataka COVID-19 Technical Advisory Committee says in an email.

The cumulative test positivity rate should be less than 5% to say that transmission has been contained. The reason: the seven day or monthly positivity rate only indicates active surge in cases as seen now in some north-east States, while the cumulative test positivity rate reflects the overall containment in transmission.

Note of caution

Gautam Menon, Professor of Physics and Biology at Ashoka University and co-author of COVID-19 modelling studies cautions in an email that test positivity is large in a number of States, including Kerala and Maharashtra, which were hard hit earlier as well. "This suggests that the disease is still spreading, although more slowly. I think this is mainly evidence that COVID-19 is no longer primarily spreading in more urban areas, so this should be expected to mark a qualitative change. In that sense, it can be thought of as an end to the 'first wave'," he says.

"The decline has been steady and prolonged, with the fall somewhat slower than the rise. Within this fall



Hopeful decline: The only reasonable explanation is that besides other factors, the threshold for population immunity has been reached, inefficient testing strategy, better compliance to regulations or a combination of these. •GETTY IMAGES

in national figures there are small regional spikes and that will continue to happen in the days to come," says virologist Dr. Shahid Jameel, Director of the Trivedi School of Biosciences at Ashoka University.

Explaining that natural infection (both detected and undetected) has not reached the level to confer herd immunity and cause a slow-down in daily cases, Dr. Menon says: "My own guess

would be that about 40-50% of urban India, in particular tier-1 and tier-2 cities has been infected at this point, while an India-wide number is more likely in the range of 30-40%. This is still below what might be a herd immunity threshold, although it would be consistent with a decrease in the number of daily cases, as is being seen."

Dr. Jameel too feels only about 30% of people across India have been infected

while positivity is somewhere in the range of 50% in large dense cities. "It is hard to say [if natural infection has come close to providing herd immunity] unless another more representative serosurvey is carried out," Dr. Jameel says.

Reasonable explanation

The only reasonable explanation for a drop in daily cases without any spike even after Durga puja and Diwali is

that besides other factors, the threshold for population immunity attributed to has been reached, inefficient testing strategy, better compliance to regulations or a combination of these, feels Dr. Babu.

Sufficient adherence

"My only guess is that adherence to NPIs, although not ideal, was sufficient to slow down the spread and state governments did institute some reasonable measures to curb spread during festivals. Certainly, anecdotal evidence suggests that although crowds did build up in festival season, mask wearing was reasonably common," says Dr. Menon. "The other possibility is that in regions which saw the largest crowds, as for example Kolkata's Durga Puja pandals, this was in the background of a large fraction of people with prior infections already, so this would have also hampered unrestricted spread."

Explaining why daily cases in Kerala are still high while other States including Maharashtra, Tamil Nadu, Andhra Pradesh and Karnataka that had earlier reported high number of cases have seen a sharp drop, Dr. Menon says: "I would attribute this to the fact that the

spread in Kerala started somewhat later than other regions and the fact that Kerala is fairly urbanised in comparison to most other states."

Dr. Babu feels the sharp drop in Maharashtra and the three southern States is mostly because a reasonable proportion of people living in urban areas have been infected. He attributes the relatively high daily cases in Kerala to effective control of virus spread from the beginning. "This meant that a large proportion of people in Kerala remained uninfected in the initial stages. It is supported by the seroprevalence rate of 0.8% which is much lower than other States. It meant getting infected at some point," Dr. Babu explains. "The tests done in Kerala are 2,08,100 per million, and is among the States with the best rates. It is because of this that the State is detecting more cases. Reporting more cases should not be seen as a problem."

Though the number of cases appear to be dropping in the three southern States, the test positivity rate is still above 5%. As on December 23 the cumulative test positivity rates in Karnataka, Tamil Nadu and Andhra Pradesh were 7%, 5.78% and 8%, respectively.

COVID-19 update

Number of positive cases reported in Bengaluru Urban on December 26 **471**

Total cases **3,86,057**

Active cases **8,795**

Discharged **3,72,970**

Deaths **4,291+1***

* One person died of other causes

Source: Department of Health and Family Welfare

How coronavirus interacts with human cell proteins

PRESS TRUST OF INDIA

Scientists have charted the first atlas showing how the genetic material of the novel coronavirus interacts with the proteins in human cells, which may provide a starting point for the development of new treatments against COVID-19.

According to the researchers, one of the most urgent tasks is to understand all the molecular interactions between the virus and the cells it infects.

They explained that a detailed understanding of these interactions will help identify the processes in host cells which favour the multiplication of the virus, and the ones which activate the host immune system.

While the SARS-CoV-2 virus uses host proteins to replicate, the scientists said until now, there has been no detailed understanding of all the proteins occurring in human cells which interact with the viral genetic material - its RNA.

In the research, published in the journal *Nature Micro-*

biology, the scientists created the first global atlas of direct interactions between the SARS-CoV-2 RNA and the proteins present in human cells.

Based on the findings, the researchers also identified important regulators of viral replication.

The scientists said the atlas of RNA-protein interactions offers unique insights into SARS-CoV-2 infections, enabling the systematic breakdown of factors influencing the replication of the virus, and host defense strategies - a crucial prerequisite for the development of new therapeutics.

From the results, the scientists identified 18 host proteins that play an important role during SARS-CoV-2 infection, and found 20 small molecules that may inhibit these proteins.

They believe the two proteins CNBP and LARP1 are particularly interesting.

The researchers also identified target sites in these proteins that could be used to inhibit its replication.



Nine more U.K. returnees test positive

SPECIAL CORRESPONDENT
BENGALURU

With nine more U.K. returnees testing positive on Saturday, a total of 23 samples are now lined up for genome sequencing at NIMHANS. Of the 2,127 persons who returned to Karnataka from the U.K. from December 1 till December 22, as many as 1,434 have been tested for COVID-19 so far.

Health and Medical Education Minister K. Sudhakar said the genome sequencing reports that are likely to be ready in another 48 hours will be sent to the Union Health Ministry. "About 38,500 people have returned from the U.K. to India. The Indian Council of Medical Research will collate reports from all States and then come up with consolidated data," he said.

"All necessary precautions are being taken at airports. We have also made arrangements to test people who do not have a negative COVID-19 report at airports itself," he pointed out.

Mr. Sudhakar said his department will soon come up with guidelines on prevention and containment of the new variant of SARS-CoV-2 after discussing with the Union Home Ministry. "We will also issue guidelines for New Year celebrations. I will hold a meeting with the Home Department soon," he added.

Meanwhile, the State on Saturday reported 857 new cases of COVID-19, taking the total number of cases to 9,15,345. With seven deaths, the toll rose to 12,051. This is apart from 19 deaths of patients due to non-COVID-19 reasons.

As many as 964 persons were discharged on Saturday, taking the total number of recoveries to 8,89,881. Of the remaining 13,394 active patients, 205 were being monitored in the ICU. While the positivity rate for the day stood at 0.89%, the Case Fatality Rate (CFR) touched 0.81%.

Virus variant: advanced test on 5% positive samples

SPECIAL CORRESPONDENT
NEW DELHI

A meeting of the National Task Force (NTF) on COVID-19, convened by the Indian Council of Medical Research, has concluded that while there was no need to change the existing treatment protocol in view of the mutations emerging in the SARS-CoV-2 strain, 5% of the positive cases from all the States and Union Territories would now be sent for whole genome sequencing (WGS).

"This is in addition to the more than 50 samples of U.K. returnees which are currently under sequencing at the designated laboratories," the NTF said.

Various strains

The NTF also recommended the setting up of a 'Genomic Surveillance Consortium' (INSACOG) to map the various strains circulating in India.

As per the earlier direction of the Union Health Ministry, all passengers who arrived from the U.K. between December 21 and 23 were tested at the airports. Only those testing negative in the RT-PCR test are permitted to exit the airports.

As new virus strain spreads, EU begins vaccine rollout

Hungary starts vaccination ahead of the bloc's schedule

ASSOCIATED PRESS
PARIS

Hungary started vaccinating healthcare workers against the coronavirus with the Pfizer-BioNTech COVID-19 vaccine on Saturday, upsetting the European Union's plans for a coordinated rollout of the first shots across the 27-nation bloc on Sunday.

The first shipments of the vaccine arrived at hospitals across the EU in super-cold containers late Friday and early Saturday after being sent from a manufacturing center in Belgium before Christmas.

It was not immediately clear why Hungarian authorities began their vaccinations a day early. Authorities in Slovakia also announced that they planned to begin administering their first doses on Saturday evening.

European Commission President Ursula von der Leyen released a video celebrating the vaccine rollout, calling it "a touching moment of unity."

Today, we start turning the page on a difficult year. The COVID-19 vaccine has been delivered to all EU countries. Vaccination will begin tomorrow across the EU," she said.

Coordinated effort

The rollout marks a moment of hope for a region that includes some of the world's earliest and worst-hit virus hotspots, including Italy and Spain, and others, like the Czech Republic, that were spared the worst early on only to see their health care systems near their breaking points in the fall.

Altogether, the 27 EU member States have seen at least 16 million cases of the coronavirus and more than



Life-saving mission: Hungarian soldiers helping in the transportation of Pfizer-BioNTech vaccine in Budapest. • AFP

3,36,000 deaths.

The vaccine rollout will help the bloc project a sense of unity in a complex mission after it faced a year of difficulties in negotiating a post-Brexit trade deal with Britain.

It also brings a sigh of relief for EU politicians who were frustrated after Britain, Canada and the U.S. began their vaccination programmes earlier this month.

Priority for elderly

The first doses, however, are limited just under 10,000 doses in most countries, with the mass vaccination programmes expected to begin only in January.

Each country is deciding on its own who will get the first shots – but they are all putting the most vulnerable first.

French authorities said they will prioritise the elderly, based on the high impact on older populations in previous virus surges in France. The French medical safety agency will monitor for eventual problems.

Germany, where the pandemic has cost more than 30,000 lives, will begin with those over 80 and people who take care of vulnerable groups.

Spanish authorities said that the first batch of the coronavirus vaccine to reach the country had arrived in the central city of Guadalajara – where the first shots will be administered on Sunday morning at a nursing home.

In Italy, which has Europe's worst virus death toll at over 71,000 people, a nurse in Rome at Spallanzani Hospital, the main infectious diseases facility in the capital, will be the first in the country to receive the vaccine, followed by other health personnel.

In Poland, the first two people to be vaccinated on Sunday will be a nurse and a doctor at the Interior Ministry hospital in Warsaw, followed by medical personnel in dozens of other hospitals.

In Bulgaria, where suspicions also run high, the first person to get the shot will be Health Minister Kostadin Angelov, who has promised an aggressive campaign to promote the benefits of the shots.

In Croatia, where the first batch of 9,750 vaccines arrived on Saturday, a care home resident in Zagreb, the capital, will be the first to receive the vaccine on Sunday morning, according to state HRT TV.

150 soldiers test positive for COVID-19

They came to Delhi for R-Day parade

SPECIAL CORRESPONDENT

NEW DELHI

Around 150 soldiers who travelled to Delhi to take part in Republic Day and Army Day parades have tested positive for COVID-19, according to an Army source.

“The soldiers who arrived to participate in various parades were tested before putting them into a safe bubble. Some of them tested positive. Almost all are asymptomatic,” the source said. They are among the few thousand soldiers who have been tested.

The soldiers have been quarantined at Delhi Cantonment.

Protocols have been put in place for conducting the parade safely, a second source said.

Thousands of soldiers travel to the national capital every year to take part in the annual Republic Day as well as Army Day parades.

Plans to hold the parade at Rajpath on January 26 this year are on despite the pandemic. India has invited U.K. Prime Minister Boris Johnson as the chief guest.

The Ministry of External Affairs has already clarified that the British Prime Minister will be visiting despite the scare of the new virus strain in U.K.

Work with us for a cleaner Bengaluru, BBMP administrator tells citizens

BENGALURU, DHNS: BBMP administrator Gaurav Gupta on Saturday asked citizens and RWAs to collaborate with civic officials to help realise Swachha Bengaluru under the recently announced Bengaluru Mission-2020.

At a virtual programme, he said citizens must help for a better waste disposal management in Bengaluru.

Asking the officials to involve citizens to strengthen the Shuchi Mitra programme, Gupta said, “We can achieve 100% waste segregation if we all work together with the motto ‘My Garbage My Responsibility’.”

He also spoke about setting up compost making centres, on the lines of the one in HSR Layout, in all BBMP zones. The BBMP has formed 4,200 blocks in all 198 wards by implementing the new segregation and collection system. Each block will cater to 750-1,000 houses.

“We need to identify ‘Shuchi Mitras’ in every block and reach out to the public through link workers,” Gupta said. “We must also identify a master trainer in every constituency to train the public in converting waste into compost.”

Cops planning to impose Section 144 to regulate New Year celebrations

HM CHAITANYA SWAMY
BENGALURU, DHNS

Bengaluru city police are considering clamping Section 144 during New Year’s eve across Bengaluru to prevent public revelry and, with it, the threat of a possible second wave of Covid-19, particularly in the wake of the emergence of the new strain of the virus.

Senior officials in the Bengaluru city police confirmed to *DH* that prohibitory orders will be imposed all over the city starting December 30 evening till the early hours of



City police chief Kamal Pant.

January 1, 2021.

On the imposition of Section 144, city police commissioner Kamal Pant is expected to hold a meeting on Monday with officers of the rank of

deputy commissioners of police (DCP) and above and likely issue an order on Tuesday.

Home Minister Basavaraj Bommai had also stated on Friday that he has directed the city police commissioner to issue strict New Year guidelines.

The prohibitory orders will prevent the congregation of more than three people besides banning gatherings in public places and partying till late night on the city’s roads. The state government had earlier banned all DJ events, dance parties and other public celebrations.

World Economic Forum acknowledges BBMP Covid war room's tech use

BENGALURU, DHNS

The Bruhat Bengaluru Mahanagara Palike's Covid-19 war room has earned plaudits from the World Economic Forum (WEF) for its leverage of technology to fight Covid-19.

The acknowledgment was made in a broad report released by the WEF titled 'Technology and Data Governance in Cities: Indian Cities at the Forefront of the Fight Against Covid-19', covering six municipalities: Bengaluru Urban, Surat, Pimpri-Chinchwad, Tel Aviv, Lisbon and New York city.

The report acknowledges the BBMP's Covid war room's dashboard, which was created with help from scientists of the Indian Institute of Science (IISc), plus tele-care facilities, containment zone monitors and mobile helps which managed patient data, helped to coordinate volunteers and helped residents in containment zones to file complaints.

The report touches on how the city was unprepared for the sudden growth of Covid-19 cases and had to rapidly scale up to match the challenge. BHA Nil Kumar, the former BBMP commissioner who helped set up the war room, told *DH* that when the outbreak started to gain momentum at the tail end of March, that the Palike did not have suitable infrastructure to track the pandemic.

Only last-minute supplies of hardware from a firm, Pro Digital, allowed the war room to get set up within 24 hours on March 23, two days before the lockdown.

"The war room was a tool which allowed us, for example, to get 1,000 people into a



The BBMP Covid war room was set up on March 23. DH FILE PHOTO

conference call at once, which meant we could simultaneously engage with NGOs and RWAs. This was vital to quarantine enforcement," Kumar said.

He added that the war room also began collecting massive amounts of data which was then analysed. "An analysis meant we could execute strategies in the containment zones we were putting up," he said.

At its peak, the war room had a full-time staff numbering between 25 and 50, said Kumar, but these small numbers were said to be bolstered by a hidden army of IT professionals and experts working from home.

Hephsiba Korlapati, Special Commissioner, BBMP, described the war room as a "seamless coordination between government, academic and the private sector".

She added that Infosys, PWC, Quantella, ESRI India, CWC India and Microsoft gave critical support. "If we wanted an expert to work with us for a week — the

Tel Aviv stands out

Most of the six cities in the WEF report were shown to have adopted similar measures. However, Tel Aviv stands out for giving its citizens access to real-time Covid-19 data, including an updating map of hotspots.

"I think our daily bulletins had a lot of information which was of importance to policymakers. But Tel Aviv, which has a smaller population, is different. We had to decide how much data we wanted to make public," Korlapati said.

heads of the IT companies would deploy that expert with us. We also had KAS probationers, IISc data experts and Public Health experts from St. John's," she said.

14 ministers, several IPS officers got Covaxin shot

AKHIL KADIDAL
BENGALURU, DHNS

Bharat Biotech's Covaxin, which is currently under Phase 3 trials, has been administered to over 100 eminent personalities, according to an administrator connected to the trials being conducted at the Vydehi Institute of Medical Sciences and Research Centre (VIMSRC) in Bengaluru.

Chaitanya Adikesavalu of Clintrac International Private Limited, a research company monitoring the clinical trials, told the media on Saturday



that 14 ministers plus an unspecified number of IPS officers in Karnataka had been vaccinated.

Dr Rajesh Naidu, Managing Director of Clintrac, confirmed to *DH* that ministers had been vaccinated, but also clarified that homemakers, labourers, students, IT pro-

fessionals and others had received the shot.

“The Covaxin trial is India-wide and we need a large number of people to get involved,” Dr Naidu said, adding 800 people had registered to participate in the Vydehi trials.

Several insiders declined to comment on the ministers and IPS officers who got the shot.

Dr K M Srinivas Murthy, Director of VIMSRC, said that the trial is anonymised, which means that Vydehi does not have access to the volunteer list.

► **Vaccine, Page 6**

14 ministers, several IPS officers from state received Covaxin shot

Vaccine, from Page 1

“That information is held by ICMR. We do not know details about who is coming to be vaccinated,” he said.

Shortage of volunteers

Dr Naidu said the trial run seeks a total of 26,000 volunteers across 25 sites, as per a requirement set out by the Indian Council of Medical Research (ICMR). The trial's first dose of Phase III trials was administered on Dec 1 and the second one will be given on Dec 30. However, the trial run in Bengaluru has faced serious shortage of volunteers. “I expected about 1,500 volunteers to sign up for the trial in the first week considering that the city has a vibrant volunteer spirit, but was surprised by the limited turnout,” Dr Naidu said.

According to a researcher involved in the trials, only 262 volunteers have come forward so far.

Bengalurean, 103, conquers Covid

AKHIL KADIDAL
BENGALURU, DHNS

A symptomatic 103-year-old man with serious comorbidities has become one of the oldest persons in the city to catch Covid-19 and survive it.

The centenarian, Krishna (name changed), was discharged from Victoria Hospital on Friday, following a nine-day hospital stay. Krishna had likely caught the infection around December 9 and was admitted to hospital on December 16.

His niece, Saraswathi (name changed) (43), a resident of Magadi Road, told *DH* that three people in the household were infected with the disease, including herself, her husband and her uncle.

“We don’t know the source of the infection. But we all developed symptoms, including fever and cough. Because of my uncle’s advanced age, it was eventually decided to get him admitted to a hospital,” Saraswathi said.

Dr Smitha Segu, Covid-19 nodal officer at

the Bengaluru Medical College and Research Institute (BMCRI), said that at the time of admission Krishna had mild fever, a weak cough and slight breathlessness. His oxygen saturation level was 85%.

“He was moved to an ICU where he was given 15 litres of oxygen. He was doing well and did not require anything more than the usual range of medications,” Dr Smitha added.

The patient’s medical history showed that he also has Type 2 Diabetes Mellitus and hypertension. Saraswathi added that her uncle suffered from high blood pressure but had his sugar levels under control.

“He was robust and active, and his mind was sharp,” she said.

Dr Smitha said Krishna was initially taken out of the ICU within a few days because of his quick recovery but added that he was placed back in intensive care after loss of appetite.

The medications used included Remdesivir and Clexane.

New strain: Govt says no change in Covid treatment protocol

NEW DELHI, DHNS: The National Task Force (NTF) on Covid-19 on Saturday decided there would be no change in the treatment protocol for the infectious disease, but decided to step up genomic surveillance to detect the mutant virus, especially in passengers coming from the UK.

The NTF has also recommended whole genome

sequencing of 5% of the positive cases from all states and Union Territories to identify the mutant virus.

The Health Ministry said more than 50 samples of returnees from the UK were currently undergoing whole genome sequencing at designated laboratories across the country.

Details on Page 7

INDIA COVID CASES ON SATURDAY **18,389** **264** DEATHS

Friday's cases: **22,273**, Deaths: **251**

KARNATAKA CASES ON SATURDAY **857** **7** DEATHS

Friday's cases: **1,005**, Deaths: **5**

TILL 9.45 PM, SOURCE: DHNS/PTI



Nimhans to give virus genome sequencing results of UK returnees tomorrow

SURAKSHA P
BENGALURU, DHNS

The speculation over transmission of the new strain of Covid virus among the 13 returnees from the UK to Karnataka will be set at rest by Monday, according to experts at the National Institute of Mental Health and Neuro Sciences (Nimhans). Currently, the lab at Nimhans is processing 12 samples, while the doctors were awaiting another sample from Mysuru.

Dr V Ravi, Head of the Department, Neurovirology, Nimhans, told *DH* that the results of these samples will be out on Monday. "We have received 13 Covid samples including nine from Bengaluru, three from Shivamogga. One more sample from Mysuru is yet to reach us. Sequencing results of all these samples will be out on Monday." Even though the laboratory at Nimhans is sequencing the Covid samples for now, later on, the additional samples will be sent to the laboratory at National Centre for Biological Sciences (NCBS), according to Dr V Ravi.

"We can sequence 12 samples per run and it will take about 72 hours to sequence a sample.

While the run takes about 12 to 24 hours, the analysis alone will take about 48 hours. NCBS will help us in sequencing a few samples and we have requested access to their server," he said.

Prof Satyajit Mayor, Director, NCBS said, "At NCBS, we have large next-generation sequencing arrays - Illumina, but we are also trying to set up Nanopore technology which will sequence a small number of samples. We can run even one sequence in Illumina but the cost is prohibitive. But Nimhans has this technology and we can help with the analysis of the sequence."

He further clarified that the reference strain to confirm whether the sample has the UK strain of the virus - will be taken from an international repository of genome sequences: GISAID.

"We will be looking for a mutation in a single amino acid which is responsible for increased transmissibility. But there are nine mutants in the variant. To determine where the variant is coming from, we have to know the entire genome sequence." GISAID is a global science initiative and primary source that provides open-access to genomic data of influenza viruses and the novel coronavirus.

Nine more UK returnees test positive, 23 so far

BENGALURU, DHNS: Nine more returnees from UK tested positive on Saturday taking the total number to 23. The state government has so far tested 1,434 passengers out of whom reports of 503 are awaited and 908 have tested positive, as per the daily Covid bulletin.

However, as per Health Minister K Sudhakar, 1,638 have been tested out of 2,500 passengers who have returned to the state since November 25. Karnataka added 857 new Covid-19 cases and seven related fatalities, taking the infection

count to 9,15,345 and the toll to 12,051, on Saturday. The day also saw 964 patients getting discharged and there are now 13,394 active cases in the state.

As many as 471 fresh cases were from Bengaluru Urban district, which also accounted for four deaths. Mysuru was second in the number of cases with 62 cases reported, Dakshina Kan-nada 34, Tumakuru 32, and Shivamogga 31, followed by others. A total of 95,552 were tests were conducted on Saturday.

US government shutdown nears amid pandemic

PALM BEACH (US), REUTERS: President Donald Trump spent Christmas Day golfing at his West Palm Beach club while millions of Americans faced the risk of losing jobless benefits on Saturday and the threat of a partial government shutdown next week if he refuses to sign a \$2.3 trillion coronavirus aid and spending package.

Trump stunned members of both parties when he unexpectedly announced this week his dislike of the \$2.3 trillion spending bill, a package that had taken members of Congress months to negotiate.

Trump, who was represented in the negotiations with lawmakers by Treasury Secretary Steven Mnuchin and had not objected to the terms prior to the votes in the House of Representatives and Senate, complained that the package was too full of money for special interests and foreign aid, and said the \$600 in direct payments to most Americans was too small, demanding instead that the amount be increased to \$2,000.

EU readies vaccine rollout as Covid-19 strain spreads

Vaccinations in all 27 European Union countries will begin today

PARIS, AFP

The European Union teed up a vaccine rollout on Saturday, even as countries in the bloc were forced back into lockdown by a new strain of the virus, believed to be more infectious, that has spread from Britain to France and Spain and even as far as Japan.

The pandemic has claimed more than 1.7 million lives and is still running rampant in much of the world, but the recent launching of inoculation campaigns has boosted hopes that 2021 could bring a respite.

First doses of the Pfizer-BioNTech vaccine arrived in hard-hit Italy, Spain and France on Saturday morning ready for distribution to elderly care facilities and hospital staff.

“We’ll get our freedom back, we’ll be able to embrace again,” Italian Foreign Minister Luigi Di Maio said as he urged Ital-

COVID-19 Tracker			
COUNTRIES	INFECTED	ACTIVE	DEATHS
United States	1,87,65,469	76,13,538	3,30,302
India	1,01,88,220	2,77,752	1,47,605
Brazil	74,48,560	7,98,710	1,90,488
Russia	29,92,123	5,41,299	53,539
France	26,04,595	22,95,899	62,548
United Kingdom	22,28,021	21,52,823	70,302
Turkey	21,18,255	1,28,081	19,371
Italy	20,28,354	5,79,886	71,359
Spain	18,54,951	16,54,751	49,824
Germany	16,40,782	3,81,485	29,601

*Top 10 countries ranked in terms of infections



ians to get the shot. Vaccinations in all 27 European Union countries will begin on Sunday, after regulators approved the Pfizer-BioNTech vaccine on December 21.

Several countries including France, Spain, Japan, Denmark, Lebanon, Germany, Australia and the Netherlands have reported cases of the new strain, which has sent jitters through already overstretched health services.

More than 25 million total infections have been recorded in Europe, according to an AFP

tally on Friday, and Russia on Saturday said it had topped three million.

The UK itself passed 70,000 coronavirus deaths on Friday and is confronted with surging infections from the new strain.

Six million people in the south and east were locked down from Saturday, making for a total of 24 million nationwide.

December 26 also brought a third national lockdown in Austria, with all non-essential stores shut — but ski stations remaining open.

VACCINE BUSINESS

Wealthy nations snatch major share of Covid-19 vaccines

India is the top buyer in terms of country wise prepaid purchase of vaccines with 1.5 billion doses

As nations around the world grappled with the hardship caused by Covid-19 pandemic since March 2020, scientists and researchers who were assigned the task of finding a solution to fight the infectious disease finally declared in November 2020 that the first vaccines were ready for a roll-out.

By the third week of December, almost 7.25 billion Covid-19 doses were manufactured by various pharmaceutical companies. Soon enough, countries and several groups immediately lined-up to acquire the much-sought after vaccines. Billions of doses were immediately pre-purchased by wealthy countries along with some developing countries.

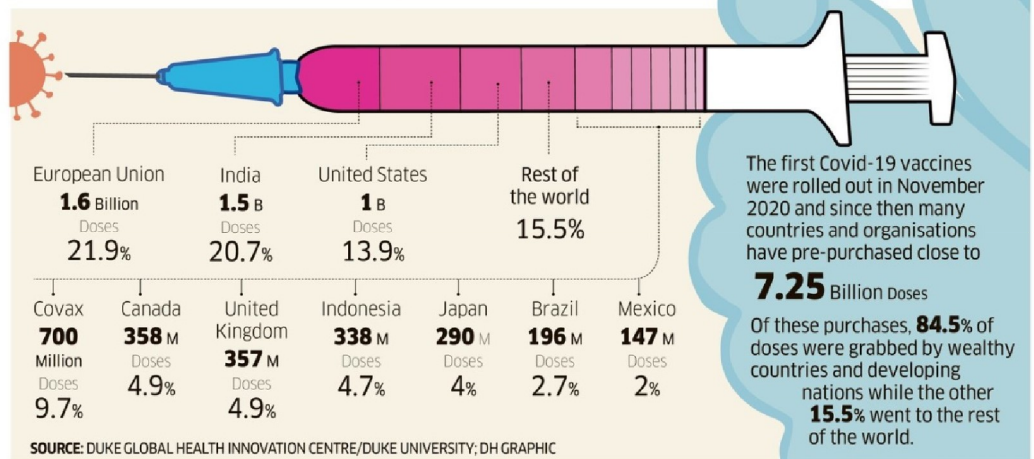
As per the data released by the Duke Global Health Innovation Center/Duke University in support with the Bill & Melinda Gates Foundation, the richest nations of the planet acquired the majority of the doses.

In terms of individual countries, India has ordered as many as 1.5 billion doses of Covid-19 vaccines — for its 1.3 billion citizens — becoming the top in country wise purchaser. The US, which is the worst hit, has multiple vaccine deals which run into as many as 1.01 billion doses for its 330 million plus citizens.

Meanwhile, some poor and middle income countries like Peru and India use leverage like hosting of clinical trials and manufacturing deals with pharmaceutical companies to get their share of the vaccines.

Pre-purchase data also shows that as many as 84.5% of the doses were grabbed by wealthy countries and a few developing nations, while 15.5% went to the rest of the world.

Covid-19 Vaccine Purchases



The first Covid-19 vaccines were rolled out in November 2020 and since then many countries and organisations have pre-purchased close to

7.25 Billion Doses

Of these purchases, **84.5%** of doses were grabbed by wealthy countries and developing nations while the other **15.5%** went to the rest of the world.

Numerous candidates

As of today, there are over 200 Covid-19 vaccine candidates which are being developed and tested at whirlwind speed. While not all the vaccines will pass the critical approval stage, the huge interest taken by major pharmaceutical companies shows that there is a huge demand worthy of an investment in scientific research.

The Oxford University/AstraZeneca vaccine by far is the most popular among prepaid vaccine buyers. As many as 2.5 billion doses have been sold to countries like India and the US. India and the US have acquired 500 million doses each from the Oxford University/AstraZeneca stable.

Europe, which is one of the worst affected hit regions of the world, has a standing order for 400 million doses. American pharmaceutical major Novavax's Covid vaccine is the second

bestseller with a prepaid order of 1.3 billion doses. Meanwhile, the vaccines of Pfizer-BioNTech and Moderna — which were recently approved in the US, UK and European countries — have already sold 10% and 6% of their inventory respectively.

In terms of pricing, Pfizer is selling its vaccine at \$20 a dose. If it continues to sale at this rate, the company will rake in a cool \$30 billion within the first quarter of 2021. On the other hand, Moderna says its vaccine will cost \$10 to \$50 per dose. AstraZeneca which is a member of Covax, a global initiative, aims to bring 2 billion doses to 92 low- and middle-income countries at no more than \$3 a dose. Pfizer and Moderna are not a party to this initiative.

Future of Covid-19 Vaccine

Like any vaccination process for other communicable disease, the Covid-19 vaccines will

play a crucial role in fighting or eventually eradicating the contagious virus. However, in the present situation and in the near future, ensuring safe social distancing rules and isolation norms will still play a big part in the fight against the invisible enemy.

The World Health Organisation is also trying to ensure that the vaccination process is executed in the most-effective manner. It has identified which group of people should be administered the vaccine first and prioritised. The UN health agency wants frontline healthcare workers and the elderly to be vaccinated first.

With vaccines being tested, approved and administered in several countries, normal life could be restored in the near future. However, based on the purchase data of Covid-19 vaccines, poor countries may take more time to get life back to normalcy.

DH News Service

India to step up genome surveillance to look for Covid strain

SAGAR KULKARNI
NEW DELHI, DHNS

The National Task Force on Covid-19 on Saturday decided that there would be no change in the treatment protocol for the infectious disease, but will step up genomic surveillance to detect the mutant virus, especially in passengers coming from the UK.

The National Task Force (NTF) has also recommended the whole genome sequencing of 5% of the positive cases from all states and Union Territories to identify the mutant virus that has been reported in the UK.

“A genomic surveillance consortium, INSACOG, has been formed under the leadership of National Centre for Disease Control (NCDC), New Delhi, for laboratory and epidemiological surveillance of circulating strains of SARS-CoV-2 in the country,” an official statement said.

The health ministry said more than 50 samples of returnees from the UK were currently undergoing whole genome sequencing at designated laboratories across the country.

The genome sequencing

would determine if the Covid-19 positive patients were carrying the existing strain of SARS-CoV-2 or the mutant strain discovered in the UK.

The Centre has also stepped up community surveillance by tracking all the passengers who have arrived from the UK between November 25 and December 20 with directions to send all positive samples for whole-genome sequencing.

“List of all UK arrivals during the past 28 days has been shared by the Bureau of Immigration with the states concerned,” it said.

However, it said like all RNA viruses, the SARS-CoV-2 would continue to mutate and the new variant can be contained by measures such as social distancing, hand hygiene, wearing masks and also by an effective vaccine, as and when available.

The NTF also concluded that there was no need to change the existing treatment protocol in view of the mutations emerging in the strain.

Since the ICMR has always advocated the use of two or more gene assays for testing SARS-CoV-2, it is unlikely to miss infected cases using the current testing strategy, the ministry said.

COVID-19 Tracker

States/UT	Active	Infected	Death	Daily cases	Daily Death
Kerala	63,927	7,35,612	2,952	3,528	21
Maharashtra	58,091	19,16,236	49,189	2,854	60
Uttar Pradesh	15,875	5,81,080	8,293	1,098	14
West Bengal	14,108	5,46,008	9,569	1,253	33
Chhattisgarh	14,028	2,74,324	3,275	1,045	12
Karnataka	13,394	9,15,345	12,051	857	7
Haryana	11,488	2,60,545	2,865	392	7
Gujarat	10,412	2,40,995	4,275	890	7
Madhya Pradesh	10,329	2,37,406	3,545	1,006	9
Tamil Nadu	9,039	8,13,161	12,059	1,019	11
Others	43,531	27,61,023	27,567	3,475	59

2,77,752
TOTAL ACTIVE CASES

97,61,659
TOTAL RECOVERED

1,01,88,220
TOTAL INFECTED

1,47,605
TOTAL COVID DEATHS

1,383
NON-COVID DEATHS*

DHNS/PTI (10 PM, December 26)
*Patients dead due to non-Covid reasons

K'taka Covid cases in ICU fell 78% to 208 in 2 months

Sunitha.Rao@timesgroup.com

In a telling sign of Covid cases waning in Karnataka, the number of infected patients in the state's intensive care units has fallen to less than a quarter of what it was two months ago.

From 939 admissions on October 25, Covid cases in the state's ICUs shrank 78% to 208 patients on December 25. By November 25, the cases had already fallen to 405. "As infections have come down, naturally the number of ICU cases has reduced and so has the severity," said geriatrician Dr Anoop Amarnath, who is a member of the state Critical Care Support Team for Covid-19 management.

"When patients admitted to private hospitals can't afford ICU care, they are sent to government hospitals," said Dr Smitha Segu, the nodal officer for Covid-19 management at Bangalore Medical College and Research Institute. **P 4**

3rd serosurvey to study health staff

A third Covid-19 serosurvey by the Indian Council of Medical Research (ICMR) is set to assess the infection's spread among health workers in the country. The survey, which began on Thursday, is expected to conclude by January-end. It will test 29,000 people and health staff across 70 districts in the country. **P 11**

Genome sequencing to check 'UK strain'

At least 5% of positive cases from all states and UTs should be tested for whole genome sequencing to check for the presence of the "UK strain" as part of "prospective surveillance", the National Task Force for Covid-19 has suggested. The task force said it is critical to conduct genomic surveillance for SARS-CoV-2 for fliers from UK. **P 11**

ICU cases in K'taka fall by 78% in two months

Sunitha.Rao@timesgroup.com

Bengaluru: The number of Covid-19 patients who require intensive care has decreased by nearly 78 per cent in the past two months as Karnataka's overall caseload continues to ease. On October 25, 939 patients with severe infection were being treated in intensive care units (ICUs) across the state. A month later, this figure stood at 405 before falling to 208 on December 25.

Early detection, aggressive treatment in the initial stages and timely use of antiviral drug remdesivir in moderate to serious cases have helped keep patients out of ICUs, said a member of the state technical advisory committee on Covid-19.

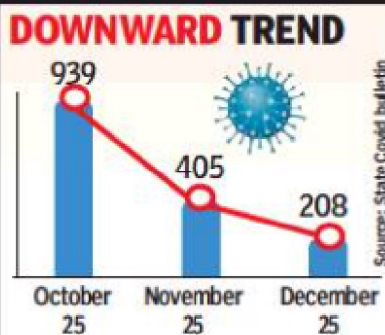
Most of the current ICU cases are in government hospitals. As on December 25, Bengaluru Urban had 99 patients in ICUs, the highest among all districts. Kalaburagi had 11 and Tumakuru nine. Yadgir, Ramangara, Chitradurga and Chikkaballapura districts had no such cases.

On any given day, the Bangalore Medical College and Research Institute (BMCRI) has more than 100 Covid-19 patients. Of these, 25 to 30 need intensive care. "The majority of these cases are referred from private hospitals. When patients admitted to private hospitals can't afford ICU treatment there, they are sent to government hospitals," said Dr Smitha Segu, the nodal officer for Covid-19 management at BMCRI.

With coronavirus infections declining, health officials have stopped referring patients to pri-



POSITIVE SIGNS The state's overall Covid-19 caseload has decreased drastically in the past few months



WHAT IS WORKING

1. Early detection of coronavirus infection and patients who need hospital care
2. Aggressive treatment in initial stages
3. Early use of antiviral drug remdesivir in moderate to serious cases

vate hospitals for free treatment. Most are sent to government facilities, which have adequate bed capacity at the moment.

According to Dr Segu, three to four ICU patients are from other districts and states. "As the number of cases is low currently, we are able to manage. Those who are admitted are mostly severe patients who need high-flow nasal oxygen, non-invasive ventilator support or ICU treatment," she said.

Geriatrician Dr Anoop Amarnath, who is a member of the state Critical Care Support Team for Covid-19 management, said that factors such as caseload, severity and mortality were interlinked. "As infections have come down, naturally the number of ICU cases has reduced, and so has the severity," he said.

Dr Amarnath and other experts on the team monitor Covid-19 patients in ICUs across the state through e-rounds. The team was set up in Bengaluru in May to standardise critical care in the state.

Guidelines for NY celebrations soon: Min

TIMES NEWS NETWORK

Chethan Shivakumar

Bengaluru: Health minister K Sudhakar said on Saturday that the state government would soon announce new health-safety guidelines for New Year celebrations. The list of dos and don'ts is likely to be issued on Monday.

Sudhakar said that the health department would also hold a meeting with the home department and frame guidelines for prevention and containment of the new variant of coronavirus. The variant is blamed for a surge in Covid-19 cases in the UK, and it has also been detected in some other European countries.

Earlier this month, the government had announced a ban on public celebrations on MG Road and surrounding areas. Every



CROWD CONTROL: Earlier this month, officials banned public NY events

year, thousands of revellers gather in the area to welcome the New Year, something that authorities cannot allow this time because of the pandemic.

Meanwhile, responding to questions on vaccine studies, Sudhakar said that third-stage trials were underway in Karnata

and other states. "Anyone can volunteer to take the vaccine at this (trial) stage. I have personally appealed to many frontline warriors, especially medical students, to volunteer for the trials," he added. On the health status of people who have returned from the UK, he said that 14 positive

cases had been detected and further tests were being conducted to identify the virus strain. About 2,500 people have arrived in Karnataka from Britain. Of these, 1,638 have been tested.

The swab samples of the 14 positive cases have been sent to Nimhans for gene sequencing, which will help identify the strain.

"This process needs 48 hours. Once we get the reports, it will be sent to the central government. About 38,500 people have returned to India from the UK. The ICMR will collate information from all states and draft a report," he explained. "All necessary precautions are being taken at airports. We have also made arrangements to test people, who don't have a negative report, at the airport itself."

Vaccine: Survey of vulnerable categories will begin soon

B.Kishansingh
@timesgroup.com

Hubballi: The district administration is all set to launch a survey of vulnerable groups of people who need vaccine shots in the third phase of inoculation.

District DCH Officer Dr SM Honakeri told STOI: "We're awaiting guidelines to start a survey of vulnerable people who are at high risk of contracting the Covid-19 infection. The administration may rope in ASHA and anganwadi workers for the survey."

Dr Honakeri added that the government intends to administer the vaccine to people in the age group of 22 and 50 having comorbidities and people who are above 50 years.

"We have a rough estimate that there may be around 6.5 lakh people in this group. The exact figures will emerge only after the survey. If required, we could



TIMELY JAB: Districts are gearing up to store & distribute shots

rope in staff of other departments to quickly finish the survey," he added.

Officials believe that the vaccines are likely to be available for the public in the last week of January. Since three or four manufacturers have developed vaccines, and it needs to be given twice at an interval, they may have to be given the shot developed by a single manufacturer. "The district will be provided a vaccine developed by a single company," he said.

In the first phase, doc-

tors, nurses and paramedical staff working in both government and private hospitals would be vaccinated, while employees of municipal corporations and police personnel will be inoculated in the second phase.

"The administration has identified warehouses to store the vaccine boxes, and ice-lined refrigerators will be used to store it at the correct temperature. The state government is providing 31 ice-lined refrigerators," officials said.

T'gana: 279 UK returnees untraceable

TIMES NEWS NETWORK

Two hundred and seventy-nine passengers recently returned from the UK to Telangana are untraceable, state health officials said on Saturday, while the number of newly caught infections in passengers back from Britain rose to 119 nationwide since last Sunday with 51 new cases recorded on Saturday.

Samples taken from all the virus-positive passengers have been sent to labs for sequencing and by Monday it is likely to be known whether they are carrying the more transmissible variant currently ravaging the UK.

There were three new cases in Telangana, taking the state's UK infected number to 21. Goa reported 16 Covid-positive cases among passengers from the UK, while there were 14 new cases from Maharashtra (total 17). One more passenger tested positive in Nashik.

► Wrong addresses, P 11

'184 returnees gave wrong addresses'

► Continued from page 1

But it was unclear if he had contracted the novel coronavirus in the UK, because he had tested negative at Mumbai airport on returning on December 13. Kerala reported three new infected passengers, taking the total to eight, and Uttar Pradesh saw eight UK returnees test positive. One passenger from Mysuru was found to have the virus, while Andhra Pradesh reported six virus-positive cases.

Telangana officials said 92 of the untraceable returnees are from the neighbouring states of Andhra Pradesh, Kerala and Karnataka, and 184 had furnished

wrong phone numbers and addresses. "We have forwarded their details to their respective state governments so that they can help trace these returnees. A search is on to find the rest," said Dr G Srinivasa Rao, Telangana's director for public health. "People with the new type of virus need not worry. They only need be vigilant, use the mask properly, follow physical distancing and wash their hands regularly," Dr Rao said.

UP additional chief secretary (health and family welfare) Amit Mohan Prasad said the Central government had provided a list of 1,655 persons who had returned from or via the UK to the state.

New Covid variant spreads in Europe amid vaccine rollout

Hungary Starts Vaccinations; France, Spain See 1st Mutant Virus Cases

Hungary stole a march on its fellow EU nations as it began vaccinating its people against Covid-19 on Saturday, a day ahead of rollouts in several other countries, including France, Germany and Spain, as the pandemic surges across the continent. Mass vaccination across the European Union, home to almost 450 million people, would be a crucial step towards ending a pandemic that has killed more than 1.7 million around the world, crippled economies and destroyed businesses and jobs.

Hungary administered the vaccine by Pfizer and BioNTech to frontline workers at hospitals in the capital Budapest after receiving its first shipment of enough doses to inoculate 4,875 people. The first worker to receive the shot was Adrienne Kertesz, a doctor at Del-Pest Central Hospital. Hungary has reported 315,362 cases with 8,951 deaths so far. The Hungarian rollout came a day before countries including France, Germany, Italy, Austria, Portugal and Spain are planning to begin mass vaccinations, starting with health workers.

France, which received its first shipment of the two-dose Pfizer-BioNTech vaccine on Saturday, will start administering it on Sunday in the greater Paris area and in the Burgundy-Franche-Comte region. The French government is hoping to get around one million people vaccinated in nursing homes during January and February, and then a further 14-15 million in the wider population between March and June. The Pfizer-



People in Beijing celebrate Christmas. Chinese Communist Party's Politburo late on Friday congratulated itself for its 'extremely extraordinary' success in handling the Covid-19 outbreak domestically, days before a WHO international team is expected to arrive in China

Britain's Queen talks of diversity in Xmas speech, refers to Diwali, Baisakhi and Eid

Britain's Queen Elizabeth II chose a theme of diversity and hope as she referenced all major festivals spent in lockdown this year as part of her traditional Christmas Day speech. The 94-year-old monarch called for tolerance and mutual respect and reminded people of the contribution made to national life by people of many faiths and backgrounds. "For Christians, Jesus' birth today in quite the usual way. People of all faiths have been unable to gather as they would wish for their festivals, such as Passover, Easter, Eid and Baisakhi. But we need life to go on," said the Queen. "Last month, fireworks lit up the sky as Hindus, Sikhs and Jains celebrated Diwali, the festival of lights, providing joyous moments of hope and unity, despite social distancing," she said.

BioNTech vaccine was approved by the French medical regulator on Thursday.

France reported more than 20,000 new infections on Friday for the second day running, something not seen since November 20. The seven-day moving average of daily new cases, which evens out reporting irregularities, is at a one-month high of 14,969. In a concerning development, the health ministry said on Friday that a man who recently arrived from London had

tested positive for a new variant of the virus that has been spreading rapidly in southern England and is thought to be more infectious. In Spain, four cases were confirmed in Madrid on Saturday. The patients were "not seriously ill", the Madrid regional government's deputy health chief, adding that "there is no need for alarm". Japan, Denmark, Lebanon, Germany, Australia and the Netherlands, have reported cases of the new UK strain. AGENCIES

US doc develops serious allergic reaction after Moderna shot

A Boston physician said he developed a severe allergic reaction minutes after receiving Moderna's coronavirus vaccine on Thursday. In the first week of the nationwide rollout for the company's shots. The case was the first of its kind reported to be linked to Moderna's vaccine. US agencies are investigating at least six cases involving people who suffered anaphylaxis after receiving the Pfizer vaccine, which contains similar ingredients.

The incident on Thursday involved Dr. Hossein Sadrzadeh, a geriatric oncologist at Boston Medical Center, who has a severe shellfish allergy. Sadrzadeh said he experienced a severe reaction almost immediately after he was inoculated, feeling dizzy and with his heart racing.

David Kibbe, a spokesperson for Boston Medical Center, said that Sadrzadeh "was allowed to self-administer his personal EpiPen. He was taken to the Emergency Department, evaluated, treated, observed and discharged. He is doing well today." Ray Jordan, a spokesperson for Moderna, said its medical safety team would look into the matter. The FDA did not comment. A spokesperson for the CDC said that information on reactions to the new vaccines would be posted to the agency's website starting next week.

Careful, there's a fungal danger as well

City docs advise caution after cases of some covid patients developing a fungal infection emerge

Sridhar.Vivan@timesgroup.com

TWEETS @sridharVMIRROR

Wish Covid would just stop throwing up new surprises. It hasn't stopped doing so though, with doctors in the city now seeing a worrying trend where patients recovering from covid are returning to hospitals with a 'deadly' fungal infection.

Experts say that the mortality rate among such cases can be high.

"The fungal infections among Covid-recovered patients are worrying. Many patients tend to become casual as they recover under the false belief that they have acquired immunity. But, these fungal infections can be fatal so one needs to on the look-out for symptoms after recovery," said a city-based doctor.

Most doctors reported swelling in the face as a symptom of the fungal infection.

Dr Subramanya Rao (ENT, head and neck surgeon from Prakriya hospital) told Bangalore Mirror that his 52-year-old woman patient who had recovered from Covid 45 days ago, visited the hospital with complaints of swelling and pain in the left side of face which she developed a month ago. The woman is currently in the ICU and being treated. The fungal culture of tissue bits sent from the affected area showed that it was a case of Mucormycosis.

Dr Neha Mishra (consultant- infectious disease) said they have received around 10

CONTINUED ON PAGE 4 »

Watch out for post-covid fungal infection

CONTINUED FROM PAGE 1

patients so far with this ailment. "A male patient man in his late thirties came to us with facial pain and swelling over the cheek. Repeated surgeries were required to clean the fungus from the sinuses," Dr Mishra said.

Dr Suchismita (Consultant internal medicine, Manipal hospitals, Whitefield) spoke about a woman patient in her thirties, with no pre-existing comorbidities, who had nasal stuffiness and swelling around the eyes. Tissue biopsy from the nose revealed the presence of Mucormycosis. "In another case, a 70-year-old man with diabetes and heart disease had bulging of the eye-

balls. Though he recovered initially, he developed a stroke a week later and passed away due to cardiac complications." She said that covid-19 was associated with a significant incidence of secondary infections, both bacterial and fungal probably due to immune dysregulation. "Additionally, the widespread use of steroids/monoclonal antibodies/broad-spectrum antibiotics as part of the treatment against covid-19 may lead to the development/exacerbation of preex-

Doctors urge people not to treat infection symptoms lightly as it can prove dangerous

What is Mucormycosis

Mucormycosis is a fungal infection, manifested by a variety of syndromes, particularly in immunocompromised and diabetic patients. Organisms in the order Mucorales can be found on decaying vegetation and in the soil. The most commonly found in human infections are Rhizopus, Mucor, and Rhizomucor. Mucormycosis is characterised by infarction (loss of blood supply) and necrosis of host tissues. The most common clinical presentation of mucormycosis is rhino-orbital-cerebral infection, which is presumed

to start with inhalation of the fungal spores into the paranasal sinuses of a susceptible host. Dr Suchismita said that patients who get infected with covid, who have underlying risk factors, like uncontrolled diabetes, chronic kidney disease are at higher risk to develop Mucormycosis. Even patients who have received steroids and other immunosuppressive medication for some other illnesses can also get this fungal infection. The early symptoms can be as simple as headache, facial pain and pain in the eye with/without swelling.

isting fungal diseases. Secondly, the immune dysregulation associated with COVID-19, with reduced numbers of T lymphocytes, CD4+T, and CD8+T cells, may alter innate immunity," she said.

In Gujarat, the health department has already issued an advisory saying that the mortality rate in the fungal infection can be up to 50 per cent. In Mumbai, six patients who had 'successfully' battled Covid lost their lives to fungal infections while more than 25 such cases had been reported in the city so far.

Symptoms

Headache, facial pain, dental pain and nose block.

The hot shots

A few ex-ministers, MLAs, MLCs, SPs, bizmen have taken a trial shot of Covaxin; no current minister could make it



Foreign envoys take a tour of Bharat Biotech facility where India's covid vaccine is being developed

| Sridhar.Vivan
@timesgroup.com

TWEETS @sridharVMIRROR

Worried about getting vaccinated? Don't be, for our VVIPs are showing the way. Some have already taken the trial jab of Covaxin. The list includes ex-ministers, MLAs, MLCs, SPs, DySPs and businessmen etc.

Amit S Bhate, director of Jeevan Rekha (which is conducting the trials for the Covaxin in Karnataka at Belagavi) told Bangalore Mirror that they faced a initial hesitancy among people to take the shot. However, later many came forward if they fit the bill of being the eligible candidates for inoculation. When asked if any current ministers also took the jab, Bhate told Mirror, "We are not supposed to reveal the names of anyone. All I can say is that no current minister has taken the jab. Though many were willing to, they couldn't due to their busy schedule."

Bhate dispelled doubts about the efficacy of the vaccine in the face of the new strain of virus in the UK.

He said that only a few proteins had mutated and not the entire virus so the vaccine would remain effective. "At present, the government is trying to control the new strain from spreading through several measures which should be effective," he said. He said that in the first phase of the trial, only four volunteers had taken the jab while 50 took part in the second round and 1,200 in the third phase of trials. "We are still monitoring the patients who had taken jabs in the first and second trials and so far, we have not seen any adverse reaction in any of the 25 vaccine trial centres in the country. We collect blood samples on the day zero and again after the second inoculation on the 28th day. We have seen that there is development of certain antibodies after the first dose and some more after the second dose. However, after a fortnight of taking the two doses, we see complete development of antibodies in the person," he said.

As per the protocol, the person who has taken the first dose must return on the 28th day for taking the second dose. So, what happens if someone misses it? Bhate said that



So far, we have not seen any adverse reaction in any of the 25 vaccine trial centres in the country

—Amit Bhate, Jeevan Rekha

there is a grace period of plus or minus five days. On vaccine hesitancy, he said that many were not willing in Phase one but as the days progressed, many came forward and brought their friends and relatives to take the doses voluntarily. After the third phase is concluded, the data will be sent to ICMR and Bharat Biotech and it may take two to three months before the vaccine is available for the public.

Meanwhile, Health Minister Dr Sudhakar said that third stage trials are being conducted across the country and also in our state. "Anyone can volunteer to take the vaccine at this stage. I have personally appealed to many frontline warriors, especially medical students to volunteer for trials," he said.

Looking for the 151 untraceable UK returnees

BBMP has tall task of tracing those whose mobile phones have gone off the radar

| Sridhar.Vivan@timesgroup.com

TWEETS @sridharVMIRROR

Just as the Bruhat Bengaluru Mahanagara Palike (BBMP) would have thought of taking a breather from all the heavy-duty contact tracing they had to do, here comes the big task: To trace 151 returnees to the city from the UK since December 7, who have gone 'missing'.

BBMP's chief medical officer Dr Vijayendra told Bangalore Mirror, "These 151 people are yet to be traced as their phone numbers are either switched off or not traceable. However, by Sunday, we will get a clear picture and we can come to the conclusion as to how many UK returnees to Bengaluru have actually been traced."

Ever since the news of the outbreak of a new strain of coronavirus was reported in the UK, we have been on the lookout for UK returnees. The Centre subsequently banned flights to and from the UK from December 22 midnight till December 31.

The Karnataka Government had decided to trace all the passengers who had arrived in Bengaluru and Mangaluru airports from the UK from December 7. The district surveillance officers have been asked to trace, test and place such people under home quarantine. Those who test positive in the RT-PCR test are to be placed under hospital isolation. The positive samples have been sent for molecular testing and the results are expected to be out either on Sunday or Monday.

As per statistics from BBMP, around 1,512 people had returned from the UK to the city. Out of them, 542 have been tested of which 11 have tested positive. Around 47 have travelled from Bengaluru to other districts of the



By Sunday, we can get a clear picture of how many UK returnees to Bengaluru have been traced —Dr Vijayendra,

BBMP chief medical officer

state where they have been tested. However, around 151 people are yet to be traced so that they can be subjected to testing and the results of the rest of returnees are awaited. Among various zones in the city, Mahadevapura had 45 returnees, followed by East zone: 44, RR Nagar: 22, South: 14, West:11, Yelahanka: 6, Dasarahalli: 5 and Bommanahalli: 4 are yet to be traced.

Health minister Dr K Sudhakar said his department was coordinating with the union home ministry regarding prevention and containment of the new variant and will soon come up with guidelines. He told reporters on Saturday that there will be new guidelines for new year celebrations and he will conduct a meeting with the Home Department regarding this soon.

In Karnataka, 1,434 passengers have been tested and 23 have tested positive while 908 have tested negative and results of 503 are awaited. "The positive samples have been sent to NIMHANS for gene sequencing to find out whether it is the new strain. This process needs 48 hours. Once we get the reports it will be sent to the central government," Dr Sudhakar explained.



Tension erupts after miscreants vandalise Vishnuvardhan's bust

ENS @ Bengaluru

Tension gripped Magadi Road toll gate area after late actor Vishnuvardhan's statue was found vandalised by miscreants on Saturday. Fans and followers of the actor blocked the road and policemen were deployed at the spot to control the situation. Minister V Somanna intervened and convinced the protesters that the

BBMP has decided to name the junction after late Balagangadharanatha Swamiji of Adichunchanagiri Mutt. Many Sandalwood actors have condemned the incident and demanded strict action against those responsible. Vishnuvardhan's son-in-law Anirudh told the media that there was no information about installation of the Swamiji's statue instead of Vishnuvardhan's.

EARLY WARNING

EXPECT COVID-19 SURGE IN THE COMING WEEKS, SAYS TASK FORCE

CHETANA BELAGERE @Bengaluru

KARNATAKA may be witnessing a marked decline in the number of new Covid cases and deaths presently, but Dr C N Manjunath, State Covid Task Force member and Director, Sri Jayadeva Institute of Cardiovascular Sciences and Research, says the panel expects a surge in numbers in the next few weeks, probably by January-end.

In an exclusive interview to *TNSE*, Dr Manjunath explained, "If you look at the pattern in European countries, the number of cases started going up again

nearly 6-8 weeks after there was a decline. We are predicting a similar trend in India and also in Karnataka. It has been six weeks since the numbers have begun falling, so we will have to wait for a few more weeks when we can expect a surge."

Warning against complacency, whether it is a new virus strain or the older one, he said, "People have to be very cautious and cooperate with the State Government. Otherwise, any sort of measures or enforcement will not work. It is in the hands of people to control and contain the second surge." **P5**

NEW STRAIN BEING STUDIED, FRESH GUIDELINES LIKELY



Amid concerns over the new Covid variant entering the state from the UK, Health

Minister Dr K Sudhakar said new Covid-19 guidelines will be announced soon. "A discussion is on with experts and the Union Health Ministry on the matter," he said. **P5**

COVID CASES AMONG UK RETURNEES TRIGGER CONCERN

Kerala government to undertake whole genome sequencing surveillance in 14 districts for three months to detect mutation of Covid-19 strain

DILEEP V KUMAR @TPuram

PUTTING the state on tenterhooks, eight persons who had returned from the UK - where a new Covid strain is fast spreading - have tested positive for Covid-19. Their samples have been sent to National Institute of Virology (NIV), Pune, for whole-genome sequencing.

According to health officials, the results from NIV Pune will determine whether the returnees are infected with the new strain (B117) of coronavirus.

Heightening the vigil, the state government has decided to undertake a whole-genome sequencing (WGS) surveillance in 14 districts for three months to detect mutation of Covid-19. "It will be too early to press the panic button. Let the report come from NIV Pune (to be sent to the health principal secretary). The surveillance measures are on at the state's airports and the district units of Integrated Disease Surveil-



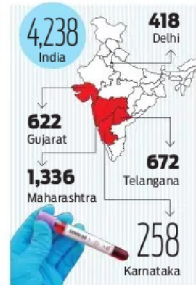
A health worker collects throat swabs for Covid-19 testing at the ENT Hospital in Visakhapatnam on Saturday | **6 SATYANARAYAN**

lance Programme have been asked to keep a close watch on the situation," said a health department official. "The National Task Force for Covid-19 has also recommended subjecting certain samples for WGS to detect the mutations," the official said. Earlier, some new variants of the novel coronavirus were identified in the state and returnees from abroad

and from within the country were found to be the driving factor for the same. The official said the health department can't rule out the theory of B117 strain making its way to the state given the flow of expatriates to the state. At the same time, the state has decided not to take any chance with the new strain, which is reportedly more infectious.

GISAID INITIATIVE DATABASE

2,92,709
SAMPLES SEQUENCED
WORLDWIDE



With low sequencing, India may miss out on identifying 'dangerous' mutant

EXPRESS NEWS SERVICE
@Hyderabad

INDIA has the world's second largest number of Covid-19 cases but when it comes to genome sequencing of the novel coronavirus, the country's performance is shocking.

Of the more than 1.01 crore cases reported in India, only 4,238 novel coronavirus samples or just about 0.04 per cent of all cases have been sequenced till now, as per the database of novel coronavirus genomes sequenced worldwide available with the GISAID Initiative.

Even this number is not evenly spread across the country's geography. While Andhra

Pradesh and Tamil Nadu have recorded third and fourth highest number of Covid-19 cases, a meager 3 and 36 virus samples have been sequenced from these states.

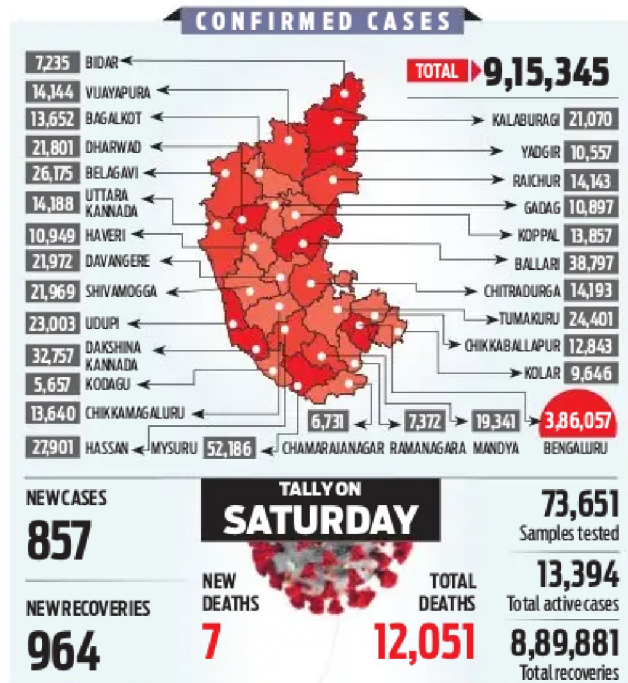
Speaking to *TNSE*, the Director of Hyderabad-based Center for Cellular and Molecular Biology, Dr Rakesh Mishra said, "UK could identify the more infectious mutated form of Covid-19 because it has been sequencing a large number of virus samples. We are also on high alert because of that."

As per the GISAID Initiative database, the UK has sequenced as many as 1,35,572 virus samples, a whopping 6.1 per cent of the total cases registered there

(22.2 lakhs as on Saturday).

Dr Mishra says that a major hurdle is the cost, not of the machines that are used for sequencing which are available with many institutions but the consumables used for Next Generation Sequencing, which are imported. Apart from the high cost of NGS consumables, another hurdle is lack of access to virus samples for institutions that can undertake genome sequencing, points out former CCMB Director, Dr Ch Mohan Rao.

Dr Mishra stresses that a strategy has to be put in place for taking up sequencing to ensure that while the numbers are not very big resulting in financial burden, enough sequencing is taken up to keep a tab on the mutations.



Health workers carry out random RT-PCR tests below the Yelchenahalli Metro Station in Bengaluru on Saturday | ASHISHKRISHNA HP

New Covid-19 rules to be in place shortly, says Health Minister

EXPRESS NEWS SERVICE
@Bengaluru

Genome sequencing reports to be sent to ICMR

AMID concerns over whether the new Covid-19 variant has entered the state from the United Kingdom, state Health and Medical Education Minister K Sudhakar on Saturday said that new Covid-19 guidelines will be announced soon. "A detailed discussion is happening with experts and the Union Health Ministry about the new strain and how to contain it. We will have to impose stricter and new Covid 19 guidelines based on the report from the Union ministry and task committee members here in the state," Dr Sudhakar said.

Sources from the health ministry said that as the state is expecting a second wave, it becomes important to also revisit the guidelines and ensure proper care is in place.

Dr Sudhakar said that 14 UK returnees have so far tested positive and their samples have been sent to NIMHANS for genome sequencing and the reports are awaited. The genetic sequencing test reports, as per the instructions of Prime Minister's Office, will be sent to the Indian Council of Medical Research, which is likely to share the information with the public in a day or two.

"ICMR will collate reports from all states and come up with a report," he explained.

He said that all necessary precautions are being taken at airports. "We have also made arrangements to test people who do not have negative reports on arrival at the airports," he added.

Ten labs in India for genome sequencing; two in B'luru

Dr Sudhakar said that the Central Government has notified ten designated labs in the country for genetic sequencing and of them, two are in Bengaluru – NIMHANS and National Centre for Biological Sciences (NCBS). "The 14 samples are undergoing genetic sequencing. The second variant of virus in the UK is said to have undergone 17 mutations. The genetic sequencing checks mutations too and it may require 48 hours. The reports will probably come tomorrow," he said.

No night curfew, but New Year restrictions to come

The State Government may have withdrawn the night curfew order, but has decided to bring out new guidelines on New Year's Eve celebrations. Dr K Sudhakar, in a press release, stated that the new guidelines will be released after a meeting with the Home Department on Monday. Meanwhile, Home Minister Basavaraj Bommai said, "The BBMP commissioner and police commissioner too will come out with detailed guidelines for celebrating New Year's Eve. We will have to enforce some rules and restrictions for the safety of people."



‘Sero-survey can help trace new strain’

Second survey planned in 30 districts and eight zones of Bengaluru too with 1.5K people

CHETANA BELAGERE @Bengaluru

WITH a new SARS-CoV2 virus strain being found in the UK, Dr C N Manjunath, member of the Technical Advisory Committee for Covid-19 and Director, Sri Jayadeva Institute of Cardiovascular Sciences and Research emphasises how it is important for state to conduct random tests and check if the strain is already present in the community. Excerpts from an interview:

The State Government withdrew the night curfew orders on the expert committee's suggestions. So, should people be really worried about the new Covid-19 strain or not?

The UK's new virus strain, according to information available, was seen in many European countries in September itself. Even the WHO also has made a statement that it must already be present in many countries. It has come to the limelight only recently, but it has been there for many months. We will know if it is present in India only when we do genome sequencing for this strain. The only way out of this situation is to not panic, but at the same time, not be complacent too.

The task force on Covid-19 has said we have to watch out for any kind of events in Karnataka where crowds are likely

to converge. What does that mean?

We have to be careful about any gathering of crowds. We have to carefully look at these segments like Gram Panchayat elections, Christmas, New Year celebrations, etc., to see what will be the prevalence of this disease in the next one or two weeks. Hopefully, it should not increase.

A sero-survey is being planned in the second week of January. What are some of the significant things to expect from this?

A second sero-survey is planned in all 30 districts of the state and eight zones in Bengaluru too. Roughly, 1,500 people will be randomly screened for antibodies

and that will give us an idea about the exposure of this virus. We will test them not only for antibodies (Elisa), which could include those who are already infected, and also simultaneously be doing RT-PCR tests. Then, we will know the disease burden. It may be a good idea to also look for random genome sequencing of non-UK returnees also. That will tell us whether the strain is already present in the community. If that is so, then we don't really have to worry much.

What about the infrastructure for the vaccine rollout. Are we ready? Which ones are we ex-

SUNDAY INTERVIEW



pecting here?

Yes, we are definitely ready. The Government of India, as per my knowledge, may go with Covaxin and Covishield. Both these vaccines don't require -70 degrees Celsius storage. In many places, blood banks have ice-lined refrigerators. Airports are getting ready with cold storage units. They have also collected a database of frontline workers and people with vulnerabilities who will be vaccinated in the first phase.

What are the fresh challenges we are facing?

The biggest challenge now is that we should soon focus our atten-

tion back to non-Covid care. We have focussed only on Covid care so far and there has been an increase in the number of non-Covid deaths. We can't afford to ignore that anymore. The maximum number of deaths are due to cardiovascular diseases, kidney and liver diseases, stroke, cancer, etc, because many of these hospitals, specially government hospitals, have been converted into Covid hospitals. Now that the cases have declined, we can keep one-fourth of beds for Covid patients and the rest have to be used for non-Covid cases. Whenever there is a need, we can switch back.

What are your hopes for 2021?

I want the Covid era to end and vaccines should be available for all. I feel that the mental health of people needs attention. I hope there is more focus on physical as well as mental health in 2021.

The Health minister is expecting a revolutionary budget this time. What are your suggestions?

In my opinion, the most important issue is strengthening existing hospitals, medical college hospitals, district hospitals or PHCs with necessary manpower. We need more doctors, nurses and technicians here. Three things one should focus on is monitoring, maintenance and management. This is the key.



Belagavi will be vaccine hub for eight N K'taka districts, facilities being set up

EXPRESS NEWS SERVICE @Belagavi

THE necessary infrastructure for storing the Covid-19 vaccine, to be distributed in the North Karnataka region, is being set up in Belagavi. The district health and family welfare department is working on having a walk-in cooler, walk-in freezer and other equipment. District Health officer Dr Shashikant Munyal said, "Special walk-in freezer boxes, to transport the vaccine shots in a dedicated vehicle, will be arranged. The distribution will begin without any delay once the vaccine is received."

The vaccine, sourced from Pune, Hyderabad and Chennai and stored in the Belagavi centre, will be sup-

plied to eight districts in north Karnataka including Vijayapura, Bagalkot, Dharwad, Haveri, Koppal, Uttara Kannada, Haveri and Gadag.

The officials have kept about 180 deep freezers and Ice Line Refrigerator (ILR) ready. These will be made available at the taluk hospitals and community health centres also in the district. The main storage of the vaccine will be at



Special walk-in freezer boxes, to transport the vaccine shots in a dedicated vehicle, will be arranged. The distribution will begin without any delay once the vaccine is received

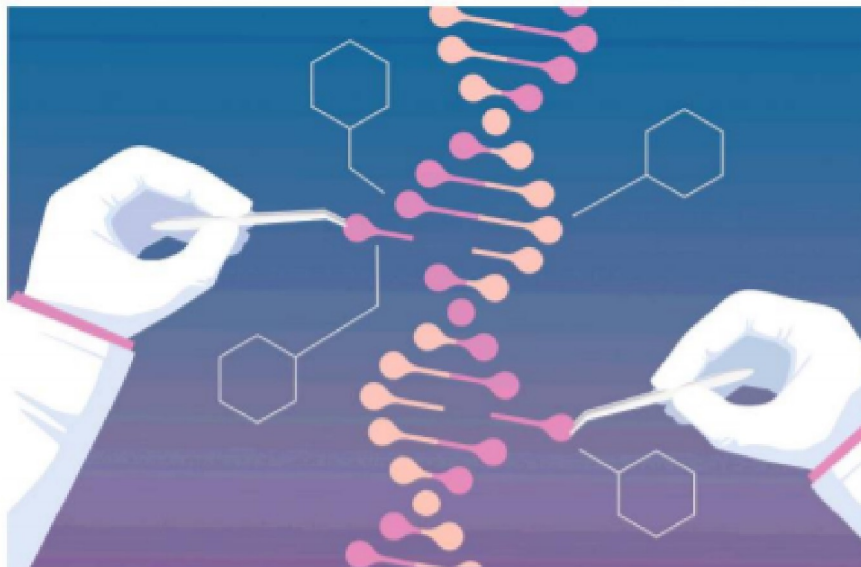
Dr Shashikant Munyal, District Health officer

the office of District Health Officer and will be distributed to all hospitals later. Room temperature of two to eight degrees Celsius will be maintained for the purpose.

In the first phase, the vaccine will be given to 28,195 health workers like doctors, nurses at 195 government hospitals and 1,521 private hospitals. In the second phase, 2.5 lakh people including policemen, Asha workers, sanitation workers and teachers will be vaccinated. In the third phase, those aged above 50 years will be given priority. The officials are hopeful that the vaccine will be made available in the second week of January. The department has a target to vaccinate 53 lakh health workers and others on priority.

Track the Mutant

The discovery of a virulent variant of the SARS-CoV-2 in the UK should jolt India into speeding up its genome sequencing



By Prerna Katiyar

Just as the world thought new vaccines would tame the SARS-CoV-2, a more virulent variant has been detected in the UK. According to initial analysis, the variant called VUI_202012/01 – short for Variant Under Investigation, year 2020, month 12, variant 01 – is believed to be 40-70% more infectious.

Variations in gene sequences will keep happening as the virus spreads across the globe, says principal scientific adviser K VijayRaghavan. About 5,879 variants of SARS-CoV-2 exist in India itself. “Most variations do not alter the properties of the virus. Every measure is being taken by researchers in India and abroad to test if any variant has new properties which could be of concern,” he says.

The “UK variant”, also called B.1.1.7, has had 14 mutations and three deletions in its genetic composition. Of these mutations, N501Y has made the virus more likely to bind with human receptors, making it more infectious. Apart from the UK, the variant has been traced in South Africa, Denmark, Australia, Iceland and the Netherlands.

“Mutations occur all the time. A vast majority of them do not change the behaviour of the virus. But some rare mu-

tations affect a virus’ ability to reproduce,” says Vinod Scarla, genomics scientist, Institute of Genomics and Integrative Biology (IGIB), New Delhi.

This new variant has been found in the UK because they have been looking for it – the Covid-19 Genomics UK (COG-UK) Consortium has been doing aggressive genome sequencing. The country

has sequenced 1.57 lakh positive samples – almost 7% of total positive samples in the country and almost half the world’s genetic sequencing of the coronavirus. Public Health Wales alone has sequenced some 4,000 samples in the past one week. “If you are going to find something anywhere, you are going to find it probably here (in the UK) first,” says Professor Sharan Peacock, head of COG-UK. While the index case has yet to

be found, the UK government says the new variant accounts for 60% of all new cases.

In contrast to the UK, India has sequenced only about 4,301 samples since the pandemic began – or about 0.05% of total positive samples. About 80% of these were done till September when Covid-19 in India peaked at around 90,000 cases per day. “The to-

tal samples we have sequenced were not done as one programme but by many institutes. More than 50% samples were done by CSIR labs. Most of the tests were done in July-September when India was seeing a steady rise in cases. Once the cases started coming down, we slowed down,” says Scarla.

India has to speed up the process. “Our criterion for sequencing has been a combination of random samples by geography and targeted collection based on requests from clinical partners,” says IGIB Director Anurag Agrawal. While the Kerala government was the first to collaborate with the IGIB for a pilot on genome sequencing in August, now many other states have made similar requests. “Now we have got similar expressions of interest from Uttar Pradesh, Punjab, Andhra Pradesh and a few others. We should be doing it more aggressively as part of a programme. We are in the process of devising a common strategy with the Department of Biotechnology, CSIR, National Centre for Disease Control and ICMR for increasing sequencing,” says CSIR Director General Shekhar Mande.

Experts feel India should be sequencing 5% of the samples – or 100 times the present rate. With a capacity to sequence 3,000 samples a day at IGIB alone, at a cost comparable to RT-PCR, there is no reason to not scale up the exercise. According to a senior scientist, “There is no dearth of capacity or infrastructure. But someone at the top needed to decide that we need a more exhaustive regular exercise.”

Even as India has ruled out the presence of the new variant – as it is not present in the small pool of samples sequenced – experts says one can’t dismiss the possibility of it circulating in the country, undetected, due to an inadequate surveillance mechanism.

“It is likely that the new variant may have come to India. You will find it only if you are looking for it. Unless you sequence at high density, you will not find it. This is why we need to scale up genomic sequencing,” says Shahid Jameel, virologist and director of Trivedi School of Biosciences at Ashoka University.

After the detection of the new variant, WHO has advised all countries to increase routine sequencing of SARS-CoV-2. India is also stepping up. “We will increase sequencing and target international travellers, to start with,” says Agrawal of IGIB.

The Centre has formed a consortium for the molecular surveillance, on a systematic and regular basis, of SARS-CoV-2 from samples testing positive for Covid-19 from all regions of the country, says Department of Biotechnology Secretary Renu Swarup.

Will existing vaccines work on the new variant? Investigations are still on to determine if this variant will have any effect on the severity of symptoms and antibody response or vaccine efficacy. “There is no evidence or reason yet for additional concerns, such as severity of disease. Vaccines which are approved and those in the pipeline will be able to protect against viruses carrying these changes,” says VijayRaghavan.

India needs an aggressive genome sequencing programme. We need to go beyond tracing VUI_202012/01 in international travellers flying to India and see if other worrying variants are circulating undetected in the country. ■

prerna.katiyar@timesgroup.com