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THE HINDU

Molnupiravir kept out of revised clinical guidelines for management of adult COVID-19 patients

NEW DELHI, JANUARY 17, 2022 21:36 IST | Bindu Shajan Perappadan

High-risk for severe disease or mortality is among those over 60 years

The antiviral medication Molnupiravir has not been included in Central government's revised clinical guidance for management of COVID-19. | Photo Credit: AP

The Central government **hasn't included** antiviral drug Molnupiravir in its revised clinical guidance for management of adult COVID-19 patients, and specified that Remdesivir and Tocilizumab should be prescribed under certain conditions only.

It stated that high-risk for severe disease or mortality is among those over 60 years. Also people with cardiovascular disease,

The Indian EXPRESS

Of 11 lakh ILI, SARI patients screened last year, over 7,000 diagnosed with tuberculosis

From January till December 2021, more than 60,000 TB patients were tested for Covid.

Written by **Anuradha Mascarenhas** | Pune | Updated: January 26, 2022 7:32:58 am

Tuberculosis and Covid-19 are both infectious diseases that primarily attack the lungs. (Representative Image)

As many as 10.89 lakh persons with influenza-like illness (ILI) and severe acute respiratory infection (SARI) were screened for tuberculosis last year of which state health authorities were able to diagnose 7,365 new TB cases. Mumbai, Pune, Pimpri-Chinchwad, Ahmednagar and Sangli reported the highest number of TB cases that were diagnosed from among this group with ILI/SARI……

Continued in page No.21

hypertension, diabetes mellitus and other immunocompromised states (such as HIV), active tuberculosis, chronic lung/kidney/liver disease, cerebrovascular disease and obesity fall in this category.

The guidelines were revised by the All India Institute of Medical Science and Indian Council of Medical Research (ICMR)-COVID-19 National Task Force/ Joint Monitoring Group, under the Health Ministry

Molnupiravir had previously **received a thumbs down** from the ICMR even after it got approval for emergency use by the Drugs Controller General of India (DCGI). ICMR Director General Dr. Balram Bharagava had raised safety concerns about the drug.

New drugs

Meanwhile, the World Health Organisation on January 14 added new drugs Baricitinib and Sotrovimab for treatment of COVID-19 patients. It noted that Baricitinib is recommended for treating those suffering with severe or critical COVID-19 and Sotrovimab , a monoclonal antibody drug, is recommended for treating patients who have mild or moderate COVID-19.

Speaking about the use and availability of these drugs in India, Dr. Gopi Krishna Yedlapati, consultant interventional pulmonologist, Yashoda Hospitals, Hyderabad, said Sotrovimab, a synthetic antibody, was not available in the country. "The other drugs which we used are predominantly anti-inflammatory drugs such as steroids, Toclizumab, Baricitinib, etc., of which Baricitinib has proven its efficacy in controlling the disease effectively. But before initiating Baricitinib, we have to be careful that the patient doesn't have any other bacterial infection and should be necessarily on blood thinners," he stated, adding that Baricitinib had been used effectively in most of their patients.

Dr. Manoj Goel, director, Pulmonology, Fortis Memorial Research Institute, observed Baricitinib was being used in serious patients along with steroids. "Baricitinib is almost equally effective as the other comparator drug, Tocilizumab, with the added advantage of being more economical and orally available. Sotrovimab is another monoclonal cocktail therapy, which is effective against Omicron and recommended for high-risk patients to prevent serious disease. This drug is not yet available in India,'' he pointed out.

THE HINDU

CSIR-CCMB to collaborate with Institut Pasteur

HYDERABAD, JANUARY 25, 2022 19:54 IST

Reserach for precision and personalised medicines

Council of Scientific & Industrial Research (CSIR) through the Centre for Cellular & Molecular Biology (CCMB) will be collaborating with Institut Pasteur (France) in specific health research fields, including genomics of inherited diseases, which will lead to precision and personalised medicines.

A Memorandum of Understanding (MoU) was signed between CSIR Ddirector general Dr. Shekhar Mande and Institut Pasteur president Prof. Stewart Cole on Tuesday to take the initiative forward. The question of infectious diseases and their ability to re-emerge, better understanding of antimicrobial resistance and research in the development of new models for drug screening are the other areas of collaborative research being planned.

The pact is a follow up of Prof. Cole's visit to CSIR-CCMB in January 2020 here when scientists of both research institutes had decided to collaborate on the subjects mentioned above. This is also a jointeffort to tackle potential new

global health threats that could surface in future, said an official release.

The new collaboration perfectly fits with France Healthcare Innovation 2030 program whose overallambition is to make it a leading European nation in terms of healthcare innovation andsovereignty, particularly in terms of biomedical research, clinical trials and, more generally, disruptive innovations in the health sector.

This is through the development of biotherapy and support for specialisthealthcare start-ups in order to achieve "a medicine that is more predictive, more preventive and moreinnovative. Such an ambitious plan would not be realistically achieved without intense and fruitfulinternational research collaborations", said the release.

The hybrid event was witnessed by Ambassador Emmanuel Lenain and Director General for Research and Innovation at the Ministry ofHigher Education, Research and Innovation Claire Giry and others.

Institut Pasteur is a non-profit private foundation dedicated to the study of biology, micro-organisms, diseases, and vaccines. For over a century, it has been responsible for discoveries to control diseases such as diphtheria, tetanus, tuberculosis, poliomyelitis, influenza, etc. It is located in 25 countries.CSIR – CCMB has also demonstrated very important achievements, for instance a collaborationleading to a low cost vaccine against Hepatitis B, said the release.

THE HINDU

Cold, cough and fever? Many shunning COVID-19 tests

BENGALURU, JANUARY 31, 2022 01:37 IST
K V Aditya Bharadwaj

An increasing number of people experiencing flu-like symptoms are isolating themselves at home, distorting the actual rate of infection

Venkatesh Murthy, a college lecturer in the city, recently came down with a fever but refused to get tested for COVID-19. Instead, he took paracetamol and rested for four days. Once his fever subsided, he resumed work.

"In this wave, COVID-19 has become more like the flu. So even if I had contracted the virus, I'm fine now. The government has also prescribed only seven days of home isolation," he said, defending his decision not to get tested.

He isn't the only one choosing this route. A growing number of people coming down with fever and other symptoms similar to COVID-19 are opting out of getting tested.

Rashmi K., a software engineer and a resident of north Bengaluru, recently tested positive for COVID-19. Soon, her family members, including her three-year-old son and mother-in-law developed a sore throat, cold, cough, and fever. But none of them got tested. "We assumed it was COVID-19 and our family doctor put us on medication. We were in home isolation and came out of it after seven days," she said.

This trend is distorting the actual rate of infection, say civic officials who are also grappling with unreported positives among those using self-test kits at home. The mechanism put in place to track buyers does not appear to be in place.

"The sales of home test kits have skyrocketed in the last one month. We are selling hundreds of kits every day. The Government has asked us to take down the Aadhaar and phone numbers of buyers, but to date, nobody has asked us for this data," said a senior manager of a leading pharmacy store chain in the city.

As per the Government data, the daily caseload of COVID-19 in the city appears to be declining gradually. But it may not be a reflection of the real picture on the ground, civic administration now fears.

"We have observed that many of those who have symptoms are also not getting themselves tested. We would advise all symptomatic persons and primary contacts of positive patients to get themselves tested. The guidelines are very clear," said Bruhat Bengaluru Mahanagara Palike Chief Commissioner Gaurav Gupta, who had tested positive for the virus and went into home isolation on January 26.

A senior public health official said that while COVID-19 is easily manageable at home during the ongoing wave, it is still advisable for people to follow guidelines and not self-medicate.

"The severity of the disease is less with the Omicron strain and complications are very low. However, it is not that nobody is developing complications or even dying. Especially senior citizens and those with comorbidities need to be monitored as per the guidelines," said the public health official.

He added that the problem with people isolating themselves till they feel better or their fever and other symptoms subside is that it puts others at risk. "They may potentially be carriers and infect people they come in contact with," the official added.

THE HINDU

Sputnik Light seeks nod for use as booster

NEW DELHI, JANUARY 30, 2022 20:22 IST

Manufacturer wants to team up with govt. hospitals for greater participation in vaccine programme

Of the three COVID vaccines available to eligible Indian adult population Dr. Reddy's Laboratories' COVID vaccine Sputnik V has managed to contribute only a minuscule percentage to India's on-going COVID vaccination programme as per data on government's CoWin platform.

Now in what seems to be a bid to capture lost grounds Dr. Reddy's Laboratories, which in 2020 partnered with the Russian Direct Investment Fund (RDIF) to bring the Sputnik vaccines to India, has approached the Drugs Controller General (India) for approval of Sputnik Light as a precautionary dose (booster dose) to Sputnik V. Dr. Reddy's is the sole distributor of the Sputnik vaccines in India. The company has several manufacturing partners in India.

The Company has infact a series of proposals pending with the DCGI including – clearance for Sputnik Light as a stand alone vaccine and clearance for starting trials for its use as a mix-match booster dose. After having partnered with private hospital chains initially, Dr. Reddy's claims that it is now keen to work with the Government to enable greater participation in the vaccination programme.

Dr. Reddy's Laboratories confirmed the development stating that currently they have

sufficient stocks and supply of Sputnik V and continue to supply to partners. It also refuted any allegations of vaccine shortage.

For Sputnik Light, the Company said that Phase III clinical trial data of Sputnik Light has been submitted to the regulator, along with additional data from clinical trials for Sputnik Light from Russia and other countries.

Sputnik V was soft launched in India in May 2021 after receiving Emergency Use Authorisation (EUA) in April 2021.

Meanwhile, the two-dose Sputnik V vaccine was rolled out commercially from July 2021 onwards based on imported consignments from the RDIF.

"In the June-August period, there were challenges with regard to the supply of the second dose component as imports were affected by the surge of COVID-19 cases in Russia," explained the Company spokesperson in response to question about the low coverage of the vaccine in the on-going vaccination programme in India.

He added that in early September, with supply of the second dose component commencing from a partner in India, the market supply received fresh momentum. "We were able to supply equivalent quantities of the first and second dose components to partner hospitals. By September, in terms of the market situation, with heavy scale-up in overall vaccine production in India and free distribution through the Government, private market sales overall started to see a sharp dip and Sputnik V was solely private," he explained.

The Company added that Sputnik has demonstrated superior protection against the Omicron variant, with higher virus neutralising activity than the comparable vaccines in an independent comparative study conducted by the Spallanzani Institute in Italy. "Sputnik Light significantly increases virus neutralising activity against Omicron based on sera tested after revaccination with 100% of individuals revaccinated with Sputnik Light as a booster having developed neutralizing antibodies against this variant," said the Company.

THE HINDU

Two years on, vaccines and following protocols remain most effective weapons against COVID-19

NEW DELHI, JANUARY 30, 2022 15:34 IST

A health worker shows fresh vials of Covaxin in West Delhi. File | Photo Credit: Shiv Kumar Pushpakar

The country saw its first case of COVID-19 on January 30, 2020, when a third-year medical student from Wuhan University tested positive.

As India completed two years since the outbreak of COVID-19, vaccines and following COVID Appropriate Behaviour remain the most effective weapons against the deadly virus.

Though a number of drugs and other methods have been tried, no definitive treatment has emerged as yet.

The country saw its first case of COVID-19 on January 30, 2020, when a third-year medical

student from Wuhan University tested positive. She had returned home following semester holidays.

Since then, India has witnessed three waves of COVID-19, though the line of treatment has remained the same throughout.

Health Minister **Mansukh Mandaviya on Saturday said irrespective of the COVID-19 variants**, 'Test-Track-Treat-Vaccinate and Adherence to COVID Appropriate Behaviour' continue to remain the tested strategy for COVID-19 management.

Several medical treatments were also tried to tackle COVID-19 but no widely accepted treatment has been seen till now.

Recently, at a press briefing, NITI Aayog Member (Health) Dr V K Paul expressed concern over the "overuse and misuse" of drugs.

"The use of steroids can increase the chances of Mucormycosis (black fungus). Steroids are very potent life-saving drugs but they also have side effects and they disturb the immunological protection. They disturb many biochemical pathways. So, it was a very big lesson...we were learning at that time but now we know it," he had said.

"For fever, paracetamol is given, and for cough, AYUSH syrup can be used. This is what we have prescribed in the home care module too. If the cough continues for more than three days, there is an inhaler called Budesonide. These are the only three things that need to be done. Other than that, gargle and take rest. Do not overdo, it has a cost," he had warned.

The country tried treatments such as plasma therapy, Remdesivir, DRDO's anti-Covid drug 2-deoxy-D-glucose (2-DG) and most recently Molnupiravir, but there has been no definitive medicine to cure COVID-19 patients.

As attempts to tackle COVID-19 and its most recent variant Omicron continue, vaccines remain the most viable option for mitigating the disease.

Prime Minister Narendra Modi underlined the importance of vaccination and the need to further accelerate the 'Har Ghar Dastak' programme to achieve 100 per cent vaccination coverage.

AYUSH interventions and Yoga found a special place in the line of treatment.

Dr Shuchin Bajaj, Founder Director, Ujala Cygnus Group of Hospitals, said AYUSH has an important role in countering cold-related diseases and not just COVID-19.

"Yoga has many good asanas for increasing your lung capacity and increasing your strength. And also, meditation has a big role in calming your mind because we have seen that fear, anxiety and depression are some of the key things that come along with COVID-19," Bajaj said.

The Department of Science and Technology (DST) had funded a clinical trial at the All India Institute of Medical Sciences (AIIMS), Rishikesh, to determine if the chanting of the Gayatri Mantra and performing the Yoga practice of Pranayama can aid the quality of recovery as well as cure COVID-19.

Dr Rajeev Rajesh, Chief Yoga Officer, Jindal Naturecure Institute, said though the human body has a natural ability to preserve, self-regulate, repair and maintain its entity, it requires "something extra" to deal with the constant challenges.

"That is where the ancient practice of yoga comes into play. To stay healthy and fit physically and mentally, you need to sustain your vital energy, nourish your body, boost immunity and

support your mental health. That's what yoga brings to you," he told *PTI*.

"From stretching the muscles to flexing the joints to improving blood flow, asanas shower us with a myriad of benefits that in turn, boost the immunity power of the body," he added.

THE HINDU

U.K. expands COVID vaccines to at-risk 5 to 11-year-old kids

LONDON, JANUARY 30, 2022 17:38 ISI

FILE PHOTO: A medical worker prepares a dose of Pfizer-BioNTech COVID-19 vaccine at a coronavirus disease (COVID-19) vaccination center. | Photo Credit: REUTERS

Nearly 500,000 eligible children in England are set to receive their first dose of a COVID vaccine in line with advice set out by the Joint Committee on Vaccination and Immunisation, says National Health Service

The U.K.'s National Health Service (NHS) on Sunday expanded its COVID-19 vaccination programme to cover vulnerable children aged five to 11 years. Eligible children include those with diabetes, immunosuppression, learning disabilities, and other serious conditions that place them at a high risk from COVID-19. NHS England said nearly 500,000 eligible children in England are set to receive their first dose of a COVID vaccine in line with advice set out by the Joint Committee on Vaccination and Immunisation (JCVI).

"We know vaccines give significant protection against severe illness from COVID – including the Omicron variant, so it is important that our youngest and most at-risk get protected," said Dr. Nikki Kanani, an Indian-origin GP and deputy lead for NHS vaccination programme.

"The NHS is now vaccinating the most at risk 5–11-year-olds ensuring they get their vital dose of protection. Thousands of young people are still getting protected every day with millions vaccinated so far and we are asking parents not to delay coming forward – as soon as the NHS contacts you, please come forward so the NHS can protect their youngest against the virus," she said.

The NHS had earlier opened up vaccines for the over 12 age group and said it has delivered over 3.5 million vaccinations to people aged 12-17, including over 2.4 million first doses.

U.K. Vaccines Minister Maggie Throup said: "I would like parents and guardians to be reassured that no new vaccine for children would have been approved unless the expected standards of safety, quality and effectiveness had been met.

"I encourage as many as possible to make sure they get their child the jab when contacted - the paediatric vaccine will offer the best possible protection for your child." In line with procedures, patient information is sent out to parents and guardians with information on the COVID-19 vaccination. Parents and guardians are asked to attend with their children and are asked to read the patient information in advance of arriving for their appointment.

Eligible children in the youngest cohort will get a second dose eight weeks after their first dose

and can't receive any vaccination until four weeks after a positive test for coronavirus.

Last month, the JCVI also issued updated guidance recommending all 16 and 17 year olds get a Pfizer/BioNtech booster from three months (91 days) after their second dose. Following the expansion of a third booster vaccine for all 16 and 17 year olds, over half of eligible young people in this age group have already received their top-up protection.

THE HINDU

Curfew at best can delay spread of Omicron: study

BENGALURU, JANUARY 29, 2022 17:46 IST


A file photo of swab samples for COVID-19 test. | Photo Credit: PTI

Simulation models suggest that virus will affect nearly as much of population as it would have without curfew

How effective was this round of weekend and weeknight curfews in slowing down the spread of COVID-19 during the third wave? Will further restrictions reduce hospitalisations and help ease the burden on Bengaluru's healthcare infrastructure?

Simulation models suggest that Omicron eventually spreads and will affect nearly as much of the population as it would have without curfew.

These were some of the findings submitted by researchers from the Indian Statistical Institute, Bangalore Centre, and Indian Institute of Science, who collaborated with Biocomplexity Institute, University of Virginia. They found that the pattern of weeknight and weekend curfew, followed by relaxations during the weekday, seems, at best, to slow and delay the spread.

Their projections found that if Karnataka's case trajectory follows the trend of the South African Omicron wave, and hospitalisation is similar to that observed in well-vaccinated countries (2% of confirmed cases), then the healthcare requirement is likely within the capacity of Bengaluru Urban when the caseload peaks — with or without the mobility restrictions.

"On the other hand, if Karnataka's case trajectory follows both the South African Omicron wave trend and the hospitalisation requirement observed there (6.9%), then the healthcare capacity may be exceeded at peak, with or without the mobility restrictions," said the authors in a paper, that has yet to be peer reviewed. It was published in medRxiv, which distributes unpublished pre-prints.

The goal of the modelling study, state the authors, was to quantify the public health benefit of intermittent curfews. When cases started to peak towards the end of December 2021, the Karnataka Government imposed restrictions from January 7. Based on Google's Community Mobility Report 2022, the authors assumed a 20% reduction in mobility for the models, as well as estimates for the assumption of 5%, 10%, and 15% reduction in mobility as well.

When they ran their models, they found that the reduction in the number of cases due to the mobility restrictions were substantial at the end of January. In the projections where mobility restrictions are in force till March-end, the reduction in peak cases is 9,399 at 30% susceptibility to COVID and 18,326 at 60% susceptibility. "However, the smaller reductions at the end of February 2022 and at the end of March 2022 indicate that the infections eventually rise and come close to the level of when there are no mobility restrictions," they noted.

With no mobility restrictions, the cumulative cases (30% susceptibility) in January 31 is 8.06 lakh, but with 80% mobility, it is noticeably low at 6.84 lakh. The difference is 1.22 lakh. But as the months progress, the difference reduces, and by March 31, it is barely 10,113. A similar trend is seen in projections at 60% susceptibility.

Bed availability

To look at whether hospital resources would be stretched, they considered peak cases for various scenarios. For this, the authors took bed availability on January 19 as per Bruhat Bengaluru Mahanagara Palike records: 7,917 hospital beds and 450 ICU beds with ventilators.

If susceptibility is at 30%, and the rate of hospitalisation is 2% as seen in the U.K., the required number of hospital beds when the caseload peaks is 7,328 without mobility restrictions. However, at 60% susceptibility, when hospitalisation remain 2%, the city's hospital bed capacity is exceeded at peak even with the mobility restrictions.

The same holds true if Karnataka follows South Africa's trajectory where 6.9% of people with COVID–19 will need hospital beds – either 30% or 60% susceptibility assumptions.

The Indian EXPRESS

Of 11 lakh ILI, SARI patients screened last year, over 7,000 diagnosed with tuberculosis

From January till December 2021, more than 60,000 TB patients were tested for Covid.

Written by **Anuradha Mascarenhas** | Pune |
Updated: January 26, 2022 7:32:58 am

As many as 10.89 lakh persons with influenza-like illness (ILI) and severe acute respiratory infection (SARI) were screened for tuberculosis last year of which state health authorities were able to diagnose 7,365 new TB cases. Mumbai, Pune, Pimpri-Chinchwad, Ahmednagar and Sangli reported the highest number of TB cases that were diagnosed from among this group with ILI/SARI.

From January till December 2021, more than 60,000 TB patients were tested for Covid. State TB department data also showed that as part of the bi-directional TB-Covid screening, around 1,205 persons were diagnosed with the twin co-infection of TB and Covid-19 last year.

Tuberculosis and Covid-19 are both infectious diseases that primarily attack the lungs. They present themselves with similar symptoms — of cough, fever and difficulty in breathing. Although, TB has a longer incubation period and a slower onset of disease.

From January till December last year, around 1.2 lakh persons with ILI/SARI were screened in Mumbai of which 761 were detected with TB while in Pune Municipal Corporation area, at least 85,048 persons with ILI and SARI were screened for TB. "We were able to detect 402 patients with TB," Dr R S Adkekar, state TB officer, told The Indian Express.

In Pimpri-Chinchwad, of the 4,309 persons with ILI/SARI screened, authorities were able to diagnose 1,232 TB cases. Ahmednagar also showed a large number of newly diagnosed TB cases from among persons with ILI/SARI. Of the 62,442 ILI/SARI cases, a total of 768 persons with TB were diagnosed. In Sangli, of the 91,455 persons with ILI/SARI, a total of 335 were diagnosed with TB.

TB notifications (process of reporting diagnosed TB cases to relevant health authorities who, in turn, report them to the World Health Organisation through national TB programmes) have picked up in 2021 in Maharashtra. From January to December last year, nearly two lakh new cases of TB were identified as against 1.59 lakh in 2020. Meanwhile, 5,668 patients with TB died during the same time period.

Recently, the Union health ministry advised Covid-19 patients to undergo tests for TB if cough persists for more than two to three weeks.

The Indian EXPRESS

More women than men had TB amid pandemic in Mumbai

During pre-pandemic years, more men contracted TB than women, as per the data. In 2018, of the total diagnosed 57,031 TB patients, 29,371 were men and 27,448 women. Next year, of the 60,597 TB patients, 31,160 were men and 29,214 women.

Written by **Rupsa Chakraborty** | Mumbai |
Updated: January 30, 2022 7:22:45 am

Tuberculosis (TB) has taken a toll on women amid the Covid-19 pandemic in Mumbai. Data from BMC shows that compared to pre-pandemic times, more women are contracting tuberculosis than men at present. While the TB infection rate among women increased by 12 per cent between 2020 and 2021, the infection rate among men dropped by 7 per cent.

Due to the delay in diagnosis, many women are being diagnosed with advanced stages of the infection.

During pre-pandemic years, more men contracted TB than women, as per the data. In 2018, of the total diagnosed 57,031 TB patients, 29,371 were men and 27,448 women. Next year, of the 60,597 TB patients, 31,160 were men and 29,214 women.

However, when the pandemic started in 2020, the infection rate among women increased gradually. In 2020, 43,464 patients were diagnosed with TB, of which 21,162 were men and 22,053 women. The infection rate among women increased further in 2021, when 31,237 women contracted TB against 27,375 men among the 58,642 diagnosed TB patients in Mumbai.

This sudden change in gender-wise infection rate has also surprised public health officials. During lockdown, due to restrictions on movement, family members had to spend their days in congested rooms along with TB patients. Many women facing low immunity due to anemia, repeated deliveries or undernourishment, contracted TB from the infected patients.

Chest physician Dr Vikas Oswal, who practises in the M-East ward that covers Govandi, and is also attached to the civic-run Shatabdi Hospital, has

seen a 20 per cent surge in TB infection among women last year.

"During the lockdown, families were financially struggling… the in-take of nutritious food decreased especially among women. Many women already suffer from anemia, which further weakens their immunity. This made them easy targets of TB bacteria in congested chawls," said Oswal. "Generally, we get more number of male patients. This is a new trend that we are witnessing now," he added.

Due to the delay in diagnosis, many women are being diagnosed with advanced stages of the infection. "With the relaxation of Covid-19 restrictions, we are getting a large number of female patients with severe TB infection, leading to health complications," said Oswal.

The BMC health officials, who are studying the reason for the change in infection pattern, said that due to the fear of contracting Covid-19, TB patients avoided visiting hospitals and the women in the households became the primary caregivers. "As per our observations, most of the women infected with TB recently were taking care of active patients in their houses and ended up infecting themselves," said Dr Pranita Tipre, in charge of TB department of the BMC.

Doctors have raised the need for a clinical study that will be essential to establish the concrete causes behind this trend.

Additional stress caused by emotional and financial burden, long working hours and undetected Covid-19 infection is also likely to have suppressed the immunity of women, believe doctors. "TB is known to stay dormant and spread vigorously when immunity is compromised. Prima facie, these factors may have collectively caused infections among women, as compared to men," said Dr Hemlata Arora, Senior Consultant, Infectious Diseases, Nanavati Hospital.

The Indian EXPRESS

Is back pain a symptom of Covid-19? Here's what an expert says

Lower back pain can persist for up to six to nine months after Covid-19 recovery, said Dr Charu Dutt Arora

By: Lifestyle Desk | New Delhi | January 31, 2022 9:10:00 am

Covid-19 is a respiratory infection that typically results in symptoms like fever, cold, cough and fatigue. However, an increasing number of people are also complaining of body aches like headaches and lower **back pains** after getting infected by the virus.

According to Dr Charu Dutt Arora, Consultant-Home Care, Covid expert and Medical services, Asian Institute of Medical Sciences, Faridabad, back pain is one of the most common **symptoms of Covid-19**. "Although people believe that Covid-19 is mainly a respiratory virus and causes only infection of the lungs, there have been multiple studies in the West which have shown that 63 per cent of the patients infected by the Delta variant and 42 per cent of the patients infected by the Omicron variant have reported back pain as one of the major symptoms," he said.

The three major areas of the body where people have experienced pain during the infection, are the head, lower back and muscles. "The muscle pain is mainly around the knee area," Dr Arora explained.

Covid-19 infection stimulates the release of a hormone called **cytokines**, which is pro-inflammatory in nature, Dr Arora said. "Cytokines leads to the formation of a prostaglandin known

as E2, which activates all the pain receptors in the body."

"This is like a signal pathway from the cytokines to the prostaglandin E2 which further activates the pain pathway. This is why these three areas hurt during **Covid-19**."

How long can it persist?

Headache and lower back pain are among the first few symptoms of the virus. "A patient experiences it in the first 4-5 days of getting infected," the expert said.

Calling it one of the most common symptoms of '**long Covid**', he highlighted that the back pain, however, can persist for even six to nine months after recovery. "It is mainly due to the inflammatory response caused by the Covid-19 virus," he said.

The persistence of the pain long after the recovery is the side-effect of the cytokines. "You can kill the virus in the body but the inflammatory response that has happened during the infection can persist depending on the immune response of the patient," he told *indianexpress.com*.

If the patient has **good immunity**, they can get relieved from the pain earlier and vice versa, the expert argued.

Here's what you need to do

Dr Arora asked patients to consult a doctor in case of persistent back pain during and after Covid-19. Additionally, he suggested staying away from physical or strenuous exercises and following the 'step-ladder pattern' after the recovery.

Explaining the method, he said, "It means increasing your **physical activities** by 30 per cent every two weeks. That means, if you were doing 100 steps before Covid, you should start with 30 steps. After two weeks, increase it to 60 and to 90 after another two weeks."

"Get your blood tests done every two to four weeks to check for any possible inflammation happening inside your body. **Deep breathing exercises** must be followed as they give a lot of tone to your back and abdominal muscles," he concluded.

The Indian EXPRESS

3 of 4 adults are now double-jabbed, 95% have got the first dose

A total 165.90 crore doses of Covid-19 vaccines had been administered until Sunday. An estimated 95% of the eligible adult population have received the first dose, and 75% have received both doses, the data show.

Written by **Kaunain Sheriff M** | New Delhi |
Updated: January 31, 2022 7:43:49 am

India started vaccinating on January 17 last year, beginning with healthcare workers and frontline workers, and the older population of the country.

A little over a year after India began its inoculation drive, three out of four eligible adults are fully vaccinated against the coronavirus, health ministry data show.

A total 165.90 crore doses of Covid-19 vaccines had been administered until Sunday. An estimated 95% of the eligible adult population have received the first dose, and 75% have received both doses, the data show.

India started vaccinating on January 17 last year, beginning with healthcare workers and frontline workers, and the older population of the country. Vaccination was subsequently expanded to cover everyone aged 18 years and older. Adolescents in the 15-18 age group were made eligible on January 3 this year.

A 75 per cent second-dose coverage has significant public health implications. The Health Ministry said that while over 500 districts continue to report a case positivity rate of more than 5 per cent due to the spread of the highly infectious Omicron variant, the broad vaccination coverage has ensured that hospitalisations and deaths have been fewer.

Four large states — Gujarat (96%), Madhya Pradesh (93%), Karnataka (91%), and Rajasthan (77%) — have a second-dose coverage well above the national average, official data show. Five other large states are, however, reporting second-dose coverage below the national average: Bihar and Andhra Pradesh (65% each), Uttar Pradesh (67%), Maharashtra (68%), and Tamil Nadu (69%).

Second-dose coverage increased significantly in the last week of November last year, after South Africa warned the WHO about the emergence of the highly infectious Omicron variant.

In the week ended November 19, India for the first time administered over 3 crore second doses in a week. The seven-day average for the next six weeks has been 3.47 crore doses.

The spike in second-dose vaccinations — due mainly to the door-to-door drive to track down individuals whose second shot was overdue — has played a significant role in reducing mortality in the ongoing surge.

Data from India and around the world show that deaths and severe disease triggered by Omicron have been significantly higher in unvaccinated and part-vaccinated populations.

Five mid-sized states are currently reporting second-dose vaccination coverage above the national average: Telangana (97%), Haryana (83%), Kerala and Assam (78%), and Odisha (76%). Four Northeastern states — Nagaland (37%), Manipur (53%), Meghalaya (45%), and Arunachal Pradesh (69%) — are reporting low second-dose coverage.

Since January 1, the rate of second-dose vaccination has seen a slight fall, official data show. In the first four weeks of this year, the seven-day second-dose coverage has averaged 2.34 crore shots.

Reasons for this include the fact that several large states are now close to saturation first-dose coverage, and a significant population will be eligible for the second dose only months later, given the long interval between doses of Covishield.

The Indian EXPRESS

'Vaccination has reduced severity of disease'

The precaution dose would probably be important but surely not mandatory in the present context of Omicron for healthy, young people.

By: **Express News Service** | Chandigarh | January 31, 2022 1:44:56 am

In this wave, we have seen fewer hospitalisations and deaths, as compared to the second wave, definitely due to the vaccination drive. (File)

Prof Madhu Gupta, Department of Community Medicine and School of Public Health, PGI, who led the Covishield vaccine trial team, and Dr Parvinder Chawla, Senior Consultant, Internal Medicine, Fortis Hospital, Mohali, explain how the Covid vaccination has contributed to less severe disease, deaths and hospitalisation

Dr Chawla said that vaccination has surely contributed to less severe disease, deaths, and hospitalisation in this wave. He said that the hospital had strived to record employee data for a breakthrough infection last year in June-July. "About two-thirds of our employees had been fully vaccinated by that time, while about 20 per cent had had Covid. For our hospital, the absolute number of employees who caught the infection during the first wave was higher than the number catching it during the second wave. 67 per cent of the employees had the infection before getting the vaccine (the unvaccinated group), 7.4 per cent caught it after their first dose (the partially vaccinated group) while 25.6 per cent got it after their second dose (the fully vaccinated group). Hospitalisation was required in 18 per cent of the unvaccinated ones, 3.4 per cent of the partially vaccinated ones, and only 2 per cent of the fully vaccinated ones. Similarly, 8 per cent of the unvaccinated faced oxygenation issues while this fraction fell to 3.4 per cent in the partially vaccinated and 4% in the fully vaccinated ones.

If the precaution dose is important for healthy, young people, or only those who are immunocompromised, senior citizens, and healthcare workers, Dr Chawla said that the precaution dose would probably be important but surely not mandatory in the present context of Omicron for healthy, young people. "Their residual immunity from the previous two doses would probably help them tide over this relatively milder variant. We anyway have an issue of vaccine availability at hand and the available lot needs to be used judiciously. It was concerning to see the overcrowding at the vaccination sites last year. We surely do not want that to happen again. Keeping all the perspectives in mind, the present approach seems to be the best middle path."

As for some reports that the precaution may lower the body's natural immunity to fight disease, Dr Chawla said, "Absolutely not. The information that is circulating seems to be giving a wrong impression. We need to read between the lines. The exact wording of the statement by EMA is, 'Repeat booster doses every four months could eventually weaken the immune system and tire out people. Instead, countries should leave more time between booster programs.'. It is the timing that is important and the interval of nine months between the second and the precautionary dose seems to be very appropriate. If multiple vaccines per se were to lower the body's natural immunity, our childhood vaccination programs would have never succeeded.

Dr Gupta said that in this wave, we have seen fewer hospitalisations and deaths, as compared to the second wave, definitely due to the vaccination drive. Overall, the severity in cases has been also low. Even if we assume that Delta has been more prevalent than Omicron, due to the antibodies and immunity produced by the vaccines, the severity of the disease has been lower, though more severe cases are of Delta. As for the precaution dose, antibodies wane over

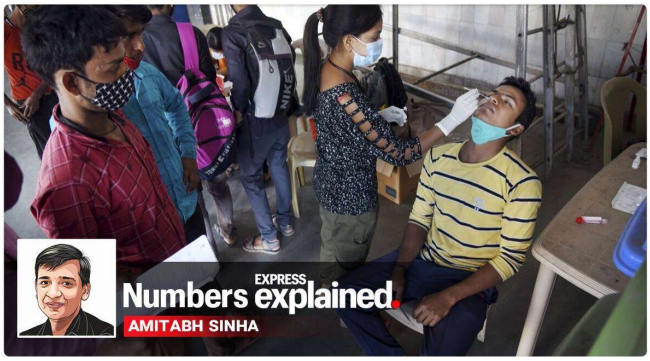
time and so the population which is at high risks, like the elderly, those with comorbidities, and more exposed to the infection, like the health care workers, the precaution dose is important and will help, as does natural infection.

The Indian EXPRESS

Explained: Why declining Covid-19 positivity rate could indicate ebb of third wave

During the third wave, the positivity rate is being considered a much better indicator of the spread of the disease than the daily case count.

Written by **Amitabh Sinha** , Edited by Explained Desk | Pune |
Updated: January 31, 2022 11:15:51 am



A medic from NMMC Health Department collects swab sample of a man for Covid-19 test, at Nerul railway station in Navi Mumbai on Saturday. (PTI)

After 10 days of almost steady decline in the detection of new coronavirus cases, the positivity rate has begun to fall too, indicating that the **third wave in India** could really have begun its downward journey.

The last two days saw a dip in the weekly positivity rate, from 16.84 per cent on Thursday to 15.63 per cent on Saturday. This is the first time in more than a month that the weekly positivity rate has gone down. Positivity rate measures the proportion of people who test positive out of the total number of people who are tested. It is a good indicator of how quickly the disease is spreading in the population, or how prevalent it is.

The weekly positivity rate in India had fallen below half a percent in the third week of December before it began to rise amidst an increasing number of infections caused by the Omicron variant. It had risen continuously after that, till this Friday, when a dip was observed for the first time.

A positivity rate of more than 15 per cent, however, is still very high. If the entire duration of the pandemic in India is considered, taking into account all the positive cases detected so far and the number of tests conducted, the positivity rate is lower than six per cent. For a brief period during the second wave, however, the weekly positivity rate had risen as high as 22 per cent.

More than half of all the districts in India, 388 out of 734, continue to have a weekly positivity rate of more than 10 per cent. Another 144 have positivity rates between 5 and 10 per cent. That leaves 202 districts with less than five per cent positivity rate, Health Ministry data shows.

Not surprisingly, some of the highest positivity rates are in Kerala right now, where most of the districts have been reporting over 40 per cent positivity. Four districts — Ernakulam, Kottayam, Idukki and Thiruvananthapuram — have positivity rates over 50 per cent. One district each in Himachal Pradesh, Assam and Haryana, and three in Arunachal Pradesh also have more than 50 per cent positivity right now.

Kerala has been reporting more than 50,000 new cases for the last five days now, its contribution to the national case count now exceeding 20 per cent. Amongst the major states, it is the only one which is not yet showing any signs of decline

in the daily case numbers. Andhra Pradesh has also not going down, but there the case count is around 12,000. Karnataka and Tamil Nadu, two other states reporting over 25,000 cases every day, seem to have reached their peaks in the third wave and are on their downward journey now.

The Indian EXPRESS

Don't let guard down, Covid cases still high: Centre to States

The Ministry of Home Affairs (MHA) on Thursday passed an order under the Disaster Management Act extending its earlier order of December 27 for covid containment till February 28.

By: **Express News Service** | New Delhi |
Updated: January 28, 2022 6:01:01 am

A healthworker collects a swab sample in New Delhi on Thursday. (Express Photo)

At a time when many states and union territories are planning to lift curbs imposed on public movement with a slight dip in Covid 19 cases in the past one week and the Omicron variant not being seen as deadly, the Centre has asked states to exercise caution while lifting restrictions as the number of infections still remain high.

The Ministry of Home Affairs (MHA) on Thursday passed an order under the Disaster Management Act extending its earlier order of December 27 for covid containment till February 28.

"Due to the current COVID wave, led by the new variant, Omicron, there has been a steady increase in the number of Covid cases in the country and the active cases have increased to over 22 lakhs. Though a majority of active cases are recovering fast and a low percentage of cases are in hospitals, it is still a matter of concern that 407 districts in 34 States & UTs are reporting a positivity rate of more than 10%. Therefore, looking at the current trends of COVID virus, there is a need to exercise caution and vigilance," Home Secretary Ajay Bhalla said in a letter to chief secretaries of all states.

The MHA has told states to observe all precautions and "not let the guard down". It has made the direction based on assessment of the situation and local and district administrations should continue to take prompt and appropriate containment measures.

"Imposition and lifting of local curbs/restrictions should be dynamic and should be based on the case positivity and hospitalisation status at the local level," the letter has said.

The letter has urged states to continue to focus on the five-fold strategy of Test-Track-Treat-Vaccination and adherence to COVID appropriate behaviour.

"The State enforcement machinery should strictly enforce the norms of COVID Appropriate Behaviour, i.e., wearing of face masks and maintaining safe social distancing in all public areas/gatherings. Further, States & UTs should continue to hold regular media briefings to disseminate the right information and to discourage any misinformation on new variants of concern," the letter has said.

While schools in Mumbai have already opened, Delhi is pushing for lifting of weekend curfew and

opening of schools. It's requests for the same were last week rejected by LG Anil Baijal.

The Indian EXPRESS

Explained: What does 'conditional market authorisation' for Covishield and Covaxin mean?

The drug regulator has granted Covishield and Covaxin vaccines "conditional market authorisation" for the country's adult population. What does this mean, and what changes for ordinary recipients?

Written by **Kaunain Sheriff M** , Edited by Explained Desk
| New Delhi |
Updated: January 28, 2022 7:45:42 am

Health workers administer Covid-19 vaccines to senior citizens at the IIT-Madras campus in Chennai. (PTI Photo/R Senthil Kumar)

The drug regulator on Thursday granted Serum Institute of India's Covishield and Bharat Biotech's Covaxin Covid-19 vaccines "conditional market authorisation" for the country's adult population.

What does conditional market authorisation mean?

Since January last year, the two vaccines have been available under "Emergency Use Authorisation" (EUA), under which 140.89 crore doses of Covishield and 22.95 crore doses of Covaxin have been administered so far.

Not every vaccine is granted EUA before it receives full approval. The EUA route, referred to in India as restricted use in emergency situations, is invoked in public health emergencies like the pandemic — provided the regulator, based on initial data from phase 3 of clinical trials, determines that the potential benefits of the vaccine, when used to prevent Covid-19, outweigh its potential risks.

For a year, Serum Institute and Bharat Biotech have been submitting rolling data related to product efficacy and safety in batches, as they have become available.

However, since the two vaccines now meet the high standards of safety, effectiveness, and manufacturing quality that the Drugs and Cosmetics Act, 1940 requires of a new vaccine, they have been upgraded to "conditional market authorisation".

This, however, is still not full market authorisation, sources in the government said.

Do international regulators also grant conditional market authorisation?

The European Medicines Agency (EMA), the European Union agency tasked with the evaluation and supervision of medicinal products, grants conditional marketing authorisation if four key criteria are met:

The benefit-risk balance of the vaccine is positive; it is likely that the applicant will be able to provide comprehensive data post-authorisation; the vaccine fulfills an unmet medical need; and the benefit of the immediate availability of the vaccine to patients is greater than the risk inherent in non-availability of additional data.

Such an approval is valid for one year, and can be renewed annually, the EMA says.

How does India's conditional market authorisation differ from full market authorisation?

The Union Health Ministry said on Thursday that conditional market authorisation is a new category of authorisation that has emerged during the Covid-19 pandemic.

"The approval pathways through this route are fast-tracked with certain conditions to enhance the access to certain pharmaceuticals for meeting the emerging needs of drugs or vaccines," the ministry said.

The conditional market authorisation for Covishield and Covaxin will be similar to the conditional market authorisation that, say, the United States Food and Drug Administration (FDA) has granted to Pfizer's mRNA Covid-19 vaccine, or the Medicines and Healthcare products Regulatory Agency (MHRA) in the United Kingdom has granted to AstraZeneca's Covid-19 vaccine.

A health worker shows empty vials of Covishield vaccine at a vaccination centre in Jammu. (PTI Photo)

What will change for ordinary recipients of the two vaccines with the grant of conditional market authorisation?

Not much.

A drug or vaccine that has received full or general market authorisation would be available in pharmacies or chemist shops for purchase — either as an over-the-counter product, or against a doctor's prescription.

However, Covishield and Covaxin will still not be available in regular pharmacies, and you will not be able to buy them as a retail product, with or without a prescription.

The vaccines will be available for private hospitals and private clinics to procure though, against required documentation and payment, government sources said.

However, the sources said, as and when a private hospital or clinic administers a dose, it will still have to capture it on CoWin, the government's digital vaccination platform.

Will the grant of conditional market authorisation open up the 'precautionary' booster dose to all double-vaccinated people?

No. The two vaccines will be supplied under "programmatic setting", which means only those whom the government has made eligible for the precautionary dose — frontline workers, healthcare workers, and the elderly population with comorbidities — can access the third dose.

Hospitals will be able to administer the third dose of Covishield or Covaxin to others only after the government makes a change in its policy.

How then is this stage of conditional market authorisation different from the existing EUA for the vaccines?

For individual recipients of the vaccines, not much changes. But conditional market authorisation relaxes somewhat the regulatory requirements on monitoring the safety of the vaccines.

Under EUA, manufacturers have to submit safety and efficacy data every 15 days or a month. Under the conditional market authorisation, the Health Ministry said, they have to submit the data every six months.

Also, the ministry said, while adverse event following immunisation (AEFI) and adverse event of special interest (AESI) shall continue to be monitored, the two companies will have to submit AEFI and AESI data with due analysis on a six-monthly basis or as and when available, whichever is earlier as per the New Drugs and Clinical Trial Rules, 2019.

This means hospitals will need to still have all AEFI monitoring systems in place, and will have to continue to systematically record and report adverse events to the vaccine manufacturer.

The Indian EXPRESS

Stealth Omicron: All you need to know about the new 'sub-strain' of the Covid variant

The UK Health Service Agency marked the 'stealth Omicron' as a 'variant under investigation' on January 21.

By: **Lifestyle Desk** | New Delhi |
January 27, 2022 11:30:04 am

The UK Health Service Agency (UKHSA) has designated a sub-variant of Omicron as a "variant under investigation", saying that it is a level below the status of Omicron, marked a "variant of concern" by the WHO.

The stealth omicron is "a sub-lineage known as BA.2 of the dominant and highly transmissible Omicron coronavirus variant", said Dr Mrinal Sircar, director oof Pulmonology and critical care at Fortis Hospital, Noida. "As per UKHSA, 40 countries had reported BA.2 sequences, with the most in Denmark, followed by India, Britain, Sweden and Singapore," the expert added.

A Large number of city peoples lineup for covid testing after covid patients numbers rising in state,at Lohia Hospital in Lucknow on thursday.Express photo by Vishal Srivastav 30122021

While the BA.2 strain is being attributed to faster infection, doctors dismiss the possibility of it being a more severe strain than the present Omicron variant. "So far, there is insufficient evidence to determine whether BA.2 causes more severe illness than Omicron BA.1, but data is limited. For now, what we know is that the BA.2 case severity is comparable to classic variant Omicron cases. Also, there is likely to be minimal differences in vaccine effectiveness against BA.1 and BA.2," Dr Sircar told indianexpress.com.

Agreed Dr Laxman Jessani, Consultant, Infectious Diseases, Apollo Hospitals Navi Mumbai, said that "In India we are already seeing this substrain in our genomic testing. The symptoms and treatment are same as other substrains, like BA.1. Also, the vaccine efficacy of BA.2 is also same as other sub variants."

Both the experts confirmed that while the sub variant doesn't escape an RT-PCR test, "the way the variant was confirmed was by seeing if there was a S gene drop out for BA.1. In BA.2, there is no S gene drop out, it would be difficult to confirm if it is BA.2 or some other variant without a full genome sequencing," stated Dr Sircar.

Answering if the new variant is of concern, where it has already been detected amidst rising Covid-19 cases, Dr Sircar said, "A greater spread of any virus means potentially more mutations, which holds true for this variant as well."

The Indian EXPRESS

Explained: BA.2 sub-variant of Omicron – not new, rise mainly in Europe

Several countries have reported the discovery of BA.2, a sub-variant of Omicron. What do we know about this sub-variant? Is it present in India? Is it more harmful?

Written by **Amitabh Sinha** , Edited by Explained Desk | Pune | Updated: January 28, 2022 12:33:53 am

Health workers wearing protective gear prepare for visitors at a temporary screening clinic for the coronavirus in Seoul, South Korea, Tuesday, Jan. 25, 2022. (AP Photo/Lee Jin-man)

In the last couple of weeks, there has been a noticeable increase in the discovery of BA.2 sub-variant of Omicron from several countries, leading to fresh worries about the possibility of another surge in cases. Last week, the UK Health Security Agency flagged this sub-variant and **designated it as a 'variant under investigation'**. And, in its latest weekly bulletin, the World Health Organisation noted that a number of countries had reported an increase in the BA.2 sub-variant in the last seven days.

This sub-variant has been present in substantial numbers in India as well, but India is not amongst the countries where the recent increase has been noticed. The BA.2 could possibly be more infectious than the more commonly found BA.1 variety but there is no evidence to suggest that it is more harmful.

Not new, a sub-variant of Omicron

BA.2 is one of the several sub-variants of the Omicron which has spread rapidly across the world since November. The Omicron name was given to the B.1.1.529 lineage after it was designated as a variant of concern. Later, it was found that this lineage had small variations of its own, and the three most common were named B.1.1.529.1, B.1.1.529.2, and B.1.1.529.3. For ease of reference, however, these sub-lineages were later re-classified as BA.1, BA.2 and BA.3.

The Omicron sub-variant that has been most common in circulation till now is BA.1. This continues to be the case even now, though the proportion of BA.2 is on the rise. According to the WHO, 98.8 per cent of all Omicron genetic sequences submitted in global databases till January 25 were that of BA.1 variety. BA.2 retains most of the characteristics of BA.1 but has some more mutations that can give it a distinctive characteristic.

"…the BA.2 descendent lineage, which differs from BA.1 in some of the mutations, including in the spike protein, is increasing in many countries. Investigations into the characteristics of BA.2, including immune escape properties and virulence, should be prioritised independently (and comparatively) to BA.1," the WHO has said.

So far, studies have not showed any distinct advantage of BA.2 over BA.1, particularly in the nature of disease that they cause, but the recent

rise in BA.2 cases is likely to put a more intense spotlight on this sub-variant.

Rise mainly in Europe

The increase in proportion of the BA.2 has been noticed mainly in Europe, most prominently in Denmark, where over 8,300 genetic sequences of this Omicron sub-variant have been identified so far. In fact, in Denmark, BA.2 now comprises almost half of all Omicron cases. The United Kingdom has found 607 samples with this sub-variant, while India has discovered 711 till now. The other countries where BA.2 has been found in abundance are the United States, Norway, Sweden and Singapore.

According to the outbreak.info website, that tracks the prevalence of the different lineages of this virus across the world, BA.2 has so far been discovered in 49 countries.

No evidence that it is more harmful

The BA.2 sub-variant is known to be more transmissible than the BA.1 variety, which could possibly explain its surge in recent days. But as of now, researchers have not noticed any difference in the nature of disease that it causes.

Though these are sister lineages, there are important genetic differences between BA.1 and BA.2. In fact, Statens Serum Institut, Denmark's main institution on infection diseases, said the difference between BA.1 and BA.2 was greater than the difference between the original Wuhan variant which started the epidemic and the Alpha variant, the first major variant that had become dominant in 2020.

"Such differences can lead to different properties, for instance concerning infectiousness, vaccine efficiency or severity. So far, there is no information as to whether BA.1 and BA.2 have different properties…," the institute said in a note last week.

"Initial analysis shows no differences in hospitalisations for BA.2 compared to BA.1. Analyses regarding infectiousness and vaccine efficiency etc. are ongoing, including attempts to cultivate BA.2 in order to perform antibody neutralization studies. It is expected that vaccines also have an effect against severe illness upon BA.2 infection," the note said.

Continued from page no.1

Of 11 lakh ILI, SARI patients screened last year, over 7,000 diagnosed with tuberculosis

……From January till December 2021, more than 60,000 TB patients were tested for Covid. State TB department data also showed that as part of the bi-directional TB-Covid screening, around 1,205 persons were diagnosed with the twin co-infection of TB and Covid-19 last year.

Tuberculosis and Covid-19 are both infectious diseases that primarily attack the lungs. They present themselves with similar symptoms — of cough, fever and difficulty in breathing. Although, TB has a longer incubation period and a slower onset of disease.

From January till December last year, around 1.2 lakh persons with ILI/SARI were screened in Mumbai of which 761 were detected with TB while in Pune Municipal Corporation area, at least 85,048 persons with ILI and SARI were screened for TB. "We were able to detect 402 patients with TB," Dr R S Adkekar, state TB officer, told The Indian Express.

In Pimpri-Chinchwad, of the 4,309 persons with ILI/SARI screened, authorities were able to diagnose 1,232 TB cases. Ahmednagar also showed a large number of newly diagnosed TB cases from among persons with ILI/SARI. Of the 62,442 ILI/SARI cases, a total of 768 persons with TB were diagnosed. In Sangli, of the 91,455

persons with ILI/SARI, a total of 335 were diagnosed with TB.

TB notifications (process of reporting diagnosed TB cases to relevant health authorities who, in turn, report them to the World Health Organisation through national TB programmes) have picked up in 2021 in Maharashtra. From January to December last year, nearly two lakh new cases of TB were identified as against 1.59 lakh in 2020. Meanwhile, 5,668 patients with TB died during the same time period.

Recently, the Union health ministry advised Covid-19 patients to undergo tests for TB if cough persists for more than two to three weeks.

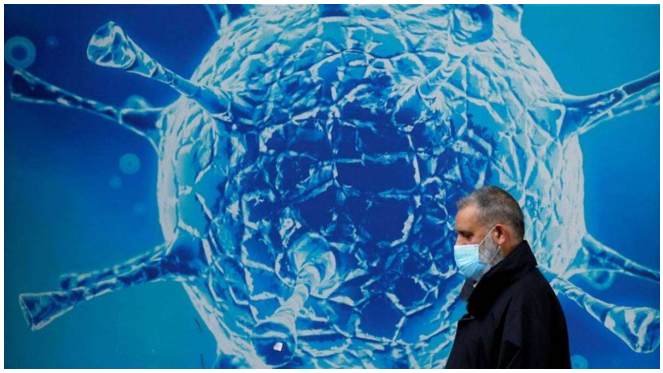
In Maharashtra, Dr R S Adkekar, state TB officer, said that the authorities were planning to step up efforts to diagnose more TB cases. Active case-finding efforts are underway in vulnerable populations while an intensified search will be taken up in industrial areas, jail and chest and non-communicable diseases OPD. A block-wise performance review is also being taken up apart from stepping up coordination with medical and paediatric associations. Dr Sanjay Gaikwad, chairman of the zonal task force for TB prevention and control, West Zone (Maharashtra, MP, Rajasthan, Goa and Gujarat), said that the focus remains on TB-free India. "Agencies have worked together during the Covid pandemic and this effort should be replicated so that we can meet the target of eliminating TB by 2025," Dr Gaikwad said.

The Indian EXPRESS

Omicron survives much longer on plastic, skin than earlier coronavirus variants: Study

The Omicron variant of coronavirus can remain alive on skin for over 21 hours, and more than eights days on plastic surfaces, which may be contributing to its faster spread compared to other strains, according to a study.

By: **Reuters** | Tokyo |
Updated: January 26, 2022 6:35:19 pm



That compared to 193.5 hours for the Omicron variant, according to the researchers.

The Omicron variant of coronavirus can remain alive on skin for over 21 hours, and more than eights days on plastic surfaces, which may be contributing to its faster spread compared to other strains, according to a study.

The researchers from Kyoto Prefectural University of Medicine in Japan analysed the differences in viral environmental stability between the SARS-CoV-2 Wuhan strain and all variants of concern (VOCs).

The yet-to-be peer-reviewed study, posted recently on the preprint repository BioRxiv, found that the Alpha, Beta, Delta, and Omicron variants exhibited more than two-fold longer survival on plastic and skin surfaces, than the Wuhan strain.

"The high environmental stability of these VOCs could increase the risk of contact transmission and contribute to their spread," the authors of study said.

"This study showed that Omicron has the highest environmental stability among VOCs, which

might be one of the factors that have allowed the variant to replace the Delta variant and spread rapidly," they said.

The study shows on plastic surfaces, average survival times of the original strain and the Alpha, Beta, Gamma and Delta variants were 56 hours, 191.3 hours, 156.6 hours, 59.3 hours, and 114 hours, respectively.

That compared to 193.5 hours for the Omicron variant, according to the researchers.

On skin samples, average virus survival times were 8.6 hours for the original version, 19.6 hours for Alpha, 19.1 hours for Beta, 11 hours Gamma, 16.8 hours for Delta and 21.1 hours for Omicron, they said.

There was no significant difference in survival times between Alpha and Beta variants, and they had similar environmental stability, which is consistent with the results of previous studies, according to the researchers.

Although Alpha, Beta, Delta, and Omicron variants showed a slight increase in ethanol resistance in response to increased environmental stability, all VOCs on the skin surface were completely inactivated by 15 second exposure to 35 per cent ethanol.

"Therefore, it is highly recommended that current infection control (hand hygiene) practices use disinfectants… as proposed by the World Health Organization," the researchers added.

The Omicron variant is currently a major concern owing to the rapidly increasing number of infected patients worldwide.

Hindustan Times

Scientists on alert over rising cases caused by Omicron subvariant BA.2

Scientists are now tracking a rise in cases caused by a close cousin of the Omicron Covid-19 variant known as BA.2, which is starting to outcompete BA.1 in parts of Europe and Asia.

Published on Jan 30, 2022 08:23 PM IST

As with other variants, an infection with BA.2 can be detected by coronavirus home tests kits, though they cannot indicate which variant is responsible, experts said.(Reuters)

The highly transmissible Omicron variant of the SARS-CoV-2 virus - the most common form of which is known as BA.1 - now accounts for nearly all of the coronavirus infections globally, although dramatic surges in Covid cases have already peaked in some countries.

Scientists are now tracking a rise in cases caused by a close cousin known as BA.2, which is starting to outcompete BA.1 in parts of Europe and Asia. The following is what we know so far about the new subvariant:

'Stealth subvariant'

Globally, BA.1 accounted for 98.8% of sequenced cases submitted to the public virus tracking database GISAID as of Jan. 25. But several countries are reporting recent increases

in the subvariant known as BA.2, according to the World Health Organization.

In addition to BA.1 and BA.2, the WHO lists two other subvariants under the Omicron umbrella: BA.1.1.529 and BA.3. All are closely related genetically, but each features mutations that could alter how they behave.

Trevor Bedford, a computational virologist at Fred Hutchinson Cancer Center who has been tracking the evolution of SARS-CoV-2, wrote on Twitter on Friday that BA.2 represents roughly 82% of cases in Denmark, 9% in the UK and 8% in the United States, based on his analysis of sequencing data from the GISAID database and case counts from the Our World in Data project at the University of Oxford.

The BA.1 version of Omicron has been somewhat easier to track than prior variants. That is because BA.1 is missing one of three target genes used in a common PCR test. Cases showing this pattern were assumed by default to be caused by BA.1.

BA.2, sometimes known as a "stealth" subvariant, does not have the same missing target gene. Instead, scientists are monitoring it the same way they have prior variants, including Delta, by tracking the number of virus genomes submitted to public databases such as GISAID.

As with other variants, an infection with BA.2 can be detected by coronavirus home tests kits, though they cannot indicate which variant is responsible, experts said.

More transmissible?

Some early reports indicate that BA.2 may be even more infectious than the already extremely contagious BA.1, but there is no evidence so far that it is more likely to evade vaccine protection

Hindustan Times

What are the best masks for Omicron? Know from experts

It is imperative to choose the right mask and also to wear it correctly in order to protect against the highly-contagious Omicron infection.

Published on Jan 30, 2022 06:14 PM IST

What are the best masks for Omicron?(Pixabay)

With highly infections newer variants of Covid-19 making our chances of contracting the virus higher, masks can be the potent weapons to protect against Coronavirus spread. It is imperative to choose the right one and also to wear it correctly to contain the infection.

Omicron variant is said to be highly contagious, much more than the Delta variant dominant during second wave. We all release tiny particles while talking to each other, breathing, coughing, sneezing, etc.; and that is how the virus can get transmitted from one person to another easily if a protective well-fitting mask is not worn.

So what is the best mask for Omicron?

"The best mask for Omicron infection is N-99. However, the N-99 masks are thicker than usual and it is difficult to wear them for prolonged period, therefore N-95 masks are commonly used and provide good protection," says Dr Ravi

Shekhar Jha Additional Director & HOD - Pulmonology, Fortis Escorts Hospital Faridabad.

"N95, KN95, and KF94 are made using global standard material; used accurately ensuring proper fit, these high-quality and high filtration rate masks filter out tiny particles and offer 95% protection," say Dr Sanjith Saseedharan, Consultant & Head Critical Care, SL Raheja Hospital, Mahim-A Fortis Associate and Dr Sandeep Patil, Chief Intensivist, Fortis Hospital, Kalyan.

Double mask while using surgical masks

"If made using good three-ply filtering materials, surgical masks can give protection against large particles and some tiny particles. But these masks do not seal the face properly and leave gaps between the edges. The only way to improve the fit of a surgical mask is 'double-masking'. This mask, when worn in pairs, is ideal for everyone, especially those with COPD, Asthma, or any other breathing issues who can't wear an N95 mask," say Dr Saseedharan and Dr Patil.

Cloth mask: Pair it with surgical mask

"Cloth mask is only effective when worn together with a surgical mask. A cloth mask reduces emissions of larger droplets to some extent from an infected person's nose and mouth, but offers little protection for the uninfected wearer as the material does not significantly filter out small particles," say the experts.

"Many people simply wear cloth mask. Though it doesn't give much protection, but it is better than wearing no mask. Also, if someone only has cloth mask, it is advisable to double up," says Dr Jha.

Triple layer mask

"If someone is having triple layer mask, though it gives you lesser protection than N-95, it is better than a cloth mask and much better than wearing no mask at all," says Dr Jha.

How to wear the mask properly

Experts say that many people keep touching their mask frequently which increases their chances of getting infected. The right fitting is also important as gaps between the edges can make you susceptible.

"What is more important than type of masks is that it should be worn properly and people should avoid touching the mask frequently. What we have seen is that if someone is not very comfortable with his/her mask, they have this tendency to pull down the masks frequently, which leads to infection getting transferred to their hands and then inside the body. That's one of the main reasons why N99 masks are not very popular since it is very difficult to use it for prolonged period," says Dr Jha.

Can we reuse N95 masks?

"Wash your hands and gently remove the N95 mask, place the mask in a sealed plastic, zip-lock bag, or a breathable container such as a paper bag between uses. Secure the bag tightly re-use the mask only on day 7; each mask must be placed in a separate sealed bag and can be re-used on day 7, for up to 4-5 times. For single use N95, place the mask into a sealed bag and place the bag into a garbage can or biomedical waste disposal unit. Surgical masks should be wrapped in a tissue paper or polythene bag and immediately discarded in bins with lids, whereas cloth masks should be washed separately, properly, frequently and left to hang and air dry. Never put on a new mask until you have properly washed your hands. After disposing your single-use and re-usable masks, wash your hands thoroughly," say Dr Saseedharan and Dr Patil.

Dr Jha however cautions against the reuse of the masks

"N95 masks are not reusable. Three ply masks should be changed every 8 hours and N95 masks should be changed daily. Reusing masks can be dangerous," says Dr Jha.

Do not wash your N95 masks

"Another important thing that we all must keep in mind is that these N95 masks are not washable. Many people wash the mask and then re-use it. This destroys the protective nature of the N95 mask," adds Dr Jha.

Hindustan Times

'We got really lucky with Omicron because...': Virologist Gagandeep Kang

Gagandeep Kang said, "We wound up with the virus while it was capable of immune evasion of a level we have never seen before."

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Dr Gagandeep Kang said people must understand that it is nearly impossible to prevent infection by mucosal pathogen through vaccines.

Virologist Gagandeep Kang on Saturday said though Omicron has the potential to get transmitted at a rate never seen before, it did not lead to severity like Delta did because of a phenomenon called epistasis where the background of mutations influences how genes actually work. Talking in a webinar 'Omicron: Enigma or End?', Dr Kang said, "When Omicron was first sequenced, there was a lot of concerns over Omicron because of the number of mutations and also because we did not understand how a virus with so many mutations could have evaded surveillance around the globe. There are multiple theories about how Omicron came."

Omicron, the variant first detected in South Africa in November 2021, drove a fresh surge of the pandemic across the world. Omicron was a cause of worry because it seemed to have all the most dangerous mutations seen in previous variants. "We got really lucky with Omicron because of a phenomenon known as epistasis where the background of mutations influences how genes actually work. We wound up with the virus while it was capable of immune evasion of a level we have never seen before. But it did not result in the severity that we saw before. That's not to say nobody got sick but the proportion was less," Dr Kang said.

"When people talk about protection from contracting Covid, they must understand that it is nearly impossible for a mucosal pathogen. We have seen this flu, influenza. We are relearning those same things with SARS-CoV-2," Dr Kang said.

IIT professor Maninder Agarwal, who has been tracking the movement of the waves, said the peak of the third wave in India is already behind us. Now the wave will go down. Uttar Pradesh, Bihar, Maharashtra, Gujarat, Chhattisgarh, Jharkhand, West Bengal have already peaked. Some southern states have not yet peaked. "The projection was very difficult as there was a sudden increase in the number of cases in the first week. We did not have adequate data required for projection," Prof Agarwal said.

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