



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
Friday 20201127

COVID-19 infections

India had estimated 74 million COVID-19 infections by August: ICMR's 2nd serosurvey

Large proportion of population remains susceptible to infection (The Tribune: 20201127)

<https://www.tribuneindia.com/news/health/india-had-estimated-74-million-covid-19-infections-by-august-icmrs-2nd-serosurvey-176254>

India had estimated 74 million COVID-19 infections by August: ICMR's 2nd serosurvey
Commuters wearing face masks on their way to step out of the Chhatrapati Shivaji Maharaj Terminus (CSMT), in Mumbai, on Thursday, November 26, 2020. PTI

Nearly 7 per cent of India's population aged 10 and above was exposed to SARS-CoV-2, amounting to an estimated 74.3 million infections by August, with the seroprevalence being highest in urban slum areas followed by urban non-slum and rural areas, the findings of ICMR's second national serosurvey stated.

According to the findings which have appeared in the Lancet Global Health pre-print, the overall seroprevalence of below 10 per cent in India indicates that a large proportion of the population remains susceptible to novel coronavirus infection.

"The transmission of infection is expected to continue in most Indian states till the herd immunity threshold is achieved, either by natural infection or vaccination. While this threshold is unknown, most estimates place it above 50 per cent," the report said.

It stated that one in nine individuals who did not report any COVID-19-related symptoms in the past had the presence of SARS-CoV-2 IgG antibodies, indicating asymptomatic seroconversion among the general population in India.

Seroconversion was also documented among individuals without a history of known contact with a COVID-19 case, and among those without any prior SARS-CoV-2 testing.

“Our data supports the expansion of testing strategies to include individuals without having known exposure or symptoms. We found only 3 per cent of seropositive individuals reported COVID-19 symptoms highlighting the limitations of symptom directed testing and the importance of universal prevention methods,” the report stated.

“Nearly one in 15 individuals aged 10 years and above had SARS-CoV-2 infection by August 2020. The adult seroprevalence increased ten times between May and August 2020. Lower infection to case ratio in August compared to May reflects a substantial increase in testing across the country,” the findings stated.

Also, 26–32 infections were reported per case diagnosed in August 2020 as against 82-131 in May 2020, when the first round of serosurvey was conducted, underlining the consequence of the growth of testing outpacing the growth of infections.

The seroprevalence was higher in slum areas of Mumbai (57·8 per cent) compared to non-slum areas (17·4 per cent).

While population density coupled with high mobility, and challenges in safe distancing and hand hygiene are the main drivers of spread of infection in urban areas, especially urban slums, the findings of the serosurvey also indicate substantial transmission among the rural population now, in contrast to the first round, the report stated.

“Transmission will increase further in these rural areas in the coming months, underscoring the need for implementing nonpharmaceutical interventions as well as strengthening healthcare facilities for the effective management of cases,” it said.

Of the 29,082 individuals tested for the presence of IgG antibodies against SARS-CoV-2, 3,135 tested positive, with an unweighted seroprevalence of 10·8 per cent.

Of the 29,082 people (aged 10 and above) surveyed from August 17 to September 22, 6.6 per cent showed evidence of past exposure to COVID-19 while the seroprevalence among adults was 7·1 per cent.

The seroprevalence was similar across age groups, sex, and occupation, the report said. The IgG positivity across districts ranged between 0·5 per cent (Palakkad in Kerala, Kullu in Himachal Pradesh), and 42·5 per cent (Ganjam in Odisha).

The study indicate that the seroprevalence among adults has increased by about ten-fold, from 0·73 per cent in May 2020 to 7·1 per cent during August 2020.

All 70 districts showed a rise in IgG seropositivity between the two surveys, although the change is highly variable. While the study is not powered to provide reliable district-level estimates, some of the variations observed matches known context. For example, the largest increase was recorded from Ganjam district which is also reporting the highest number of COVID-19 cases in Odisha state subsequent to migration of inter- and intra-state informal workers, and challenges in facility-based quarantine.

Inter-state migration of informal workers is also thought to explain the substantial rise in seroprevalence in all six districts in Bihar, and Kamrup Metropolitan district in Assam.

The first nationwide serosurvey in India was conducted in May, when the entire country was under stringent lockdown, with the exception of conditional relaxation in areas deemed to be minimally affected, and indicated a low prevalence of 0.73 per cent among the general adult population.

The second household serosurvey was conducted among individuals aged 10 years and above in the same 700 villages and wards from 70 districts selected during the first serosurvey. — PTI

Most lungs recover well after COVID-19, says study

**Most lungs recover well after COVID-19, says study
According to the study, the most common complaints after three months are fatigue, shortness of breath and chest pains. (The Tribune: 20201127)**

<https://www.tribuneindia.com/news/health/most-lungs-recover-well-after-covid-19-says-study-176154>

Most lungs recover well after COVID-19, says study

According to the study, the most common complaints after three months are fatigue, shortness of breath and chest pains. Reuters photo.

Lung tissue of patients who suffer severely from COVID-19 shows good recovery in most cases, according to a study.

The researchers at the Radboud University in the Netherlands found that the group which was referred by a GP did not recover as well as patients who were admitted to the hospital's Intensive Care Unit (ICU).

The study, published in the journal Clinical Infectious Diseases, included 124 patients who had recovered from acute COVID-19 infections.

The patients were examined by CT scan and a lung functional test. After three months, the researchers took stock, which revealed that the patients' lung tissue is recovering well.

Residual damage in the lung tissue was generally limited, and was most often seen in patients who were treated in the ICU, they said.

According to the study, the most common complaints after three months are fatigue, shortness of breath and chest pains.

"The patterns we see in these patients show similarities with recovery after acute pneumonia or acute respiratory distress syndrome (ARDS), in which fluid accumulates in the lungs," pulmonologist Bram van den Borst said.

"Recovery from these conditions also generally takes a long time. It is encouraging to see that lungs after COVID-19 infections exhibit this level of recovery," van den Borst said in a statement.

In the study, the patients were divided into three categories: a group who were admitted to the ICU, patients who were admitted to a nursing ward in the hospital, and those who could stay home but experienced persisting symptoms that eventually warranted a referral from their GP.

The study assessed how patients fared after three months, and revealed that the patients who were referred to the aftercare clinic by their GP showed the worst recovery in the following period, the researchers said.

This latter group of patients was referred because of their persisting symptoms, they said.

"However, it does seem that there is a clear subgroup of patients who initially experienced mild COVID-19 symptoms and later kept experiencing persistent long-term complaints and limitations," van den Borst explained.

"What is striking is that we barely found any anomalies in the lungs of these patients. Considering the variety and seriousness of the complaints and the plausible size of this subgroup, there is an urgent need for further research into explanations and treatment options," he said. PTI

HIV/ AIDS

A child or young person newly infected with HIV every 100 seconds last year: UNICEF

The report added that 150,000 children aged 0-9 years were newly infected with HIV (The Tribune: 20201127)

<https://www.tribuneindia.com/news/health/a-child-or-young-person-newly-infected-with-hiv-every-100-seconds-last-year-unicef-175760>

A child or young person newly infected with HIV every 100 seconds last year: UNICEF
Photo for representation.

A child or young person under the age of 20 was newly infected with HIV approximately every minute and 40 seconds last year, bringing the total number of children living with HIV globally to 2.8 million, the UNICEF said.

The UNICEF report "Reimagining a resilient HIV response for children, adolescents and pregnant women living with HIV", said that nearly 320,000 children and adolescents were newly infected with Human Immunodeficiency Virus (HIV) and 110,000 children died of Acquired Immune Deficiency Syndrome (AIDS) last year. Of these children, 79,000 were aged 0-9 years and 34,000 aged 10-19.

Warning that children are being left behind in the fight against HIV, it said that prevention efforts and treatment for children remain some of the lowest amongst key affected populations.

In 2019, a little more than half of children worldwide had access to life-saving treatment, significantly lagging behind coverage for both mothers (85 per cent) and all adults living with HIV (62 per cent).

Despite some progress in the decades-long fight against HIV and AIDS, deep regional disparities persist among all populations, especially for children, the report says.

Paediatric coverage of antiretroviral treatment is highest in the Middle East and North Africa, at 81 per cent, followed by South Asia (76 per cent), Eastern and Southern Africa (58 per cent), East Asia and the Pacific (50 per cent), Latin America and the Caribbean (46 per cent) and West and Central Africa (32 per cent).

“Even as the world struggles in the midst of an ongoing global pandemic, hundreds of thousands of children continue to suffer the ravages of the HIV epidemic,” UNICEF Executive Director Henrietta Fore said.

“There is still no HIV vaccine. Children are still getting infected at alarming rates, and they are still dying from AIDS. This was even before COVID-19 interrupted vital HIV treatment and prevention services putting countless more lives at risk,” Fore said.

The report added that 150,000 children aged 0-9 years were newly infected with HIV, bringing the total number of children in this age group living with HIV to 1.1 million.

About 170,000 adolescents aged 10-19 were newly infected with HIV, bringing the total number of adolescents living with HIV to 1.7 million. The report added that 130,000 adolescent girls were newly infected with HIV in 2019, compared with 44,000 adolescent boys.

The number of pregnant women living with HIV was 1.3 million; an estimated 82,000 children under the age of five were infected during pregnancy or birth and 68,000 were infected during breast feeding.

The report calls on all governments to protect, sustain and accelerate progress in fighting childhood HIV by maintaining essential health services and strengthening health systems.

The COVID-19 crisis has further exacerbated inequities in access to life-saving HIV services for children, adolescents and pregnant mothers everywhere.

In a recent UNICEF survey of 29 HIV priority countries, one third responded that service coverage for children, adolescents and women living with and vulnerable to HIV is lower by 10 per cent or more compared with pre-pandemic numbers.

UNAIDS’ HIV service disruption data, cited in the report, further illustrate the impact of necessary control measures, supply chain disruptions, lack of personal protective equipment, and the redeployment of healthcare workers on HIV services.

The report said in the months of April and May, coinciding with partial and full lockdowns, paediatric HIV treatment and viral load testing in children in some countries declined between 50 to 70 per cent, and new treatment initiation fell by 25 to 50 per cent.

Similarly, health facility deliveries and maternal treatment were also reported to have reduced by 20 to 60 per cent, maternal HIV testing and ART initiation declined by 25 to 50 per cent, and infant testing services declined by approximately 10 per cent.

Though the easing of control measures and the strategic targeting of children and pregnant mothers have successfully led to a rebound of services in recent months, challenges remain, and the world is still far from achieving the global 2020 paediatric HIV targets. PTI

AstraZeneca

AstraZeneca likely to run fresh trial after concerns (Hindustan Times: 20201127)

<https://epaper.hindustantimes.com/Home/ArticleView>

AstraZeneca said on Thursday it was likely to conduct an additional global trial to assess the efficacy of the Covid-19 vaccine it was developing along with University of Oxford after some studies raised questions over its level of protection and a lack of transparency around the late-stage clinical trials.

The new trial would be run instead of adding an arm to an ongoing US trial and would evaluate a lower dosage that performed better than a full amount in AstraZeneca's studies, according to a Bloomberg report.

"Now that we've found what looks like a better efficacy we have to validate this, so we need to do an additional study," the pharma group's CEO Pascal Soriot said in his first interview since the data was released. It will probably be another "international study, but this one could be faster because we know the efficacy is high so we need a smaller number of patients".

Experts are increasingly concerned about data that showed the vaccine candidate was up to 90% effective, citing a lack of transparency around the late-stage clinical trials that could make or break the chances for billions of people to get early access to a cheap inoculation. The questions surround the use of the half-strength initial dose, which the developers said had higher efficacy but also revealed as having been administered as a mistake, and the possible lack of uniformity in the way the trial was split in two countries: the UK and Brazil.

Oxford and AstraZeneca announced that their trial findings were based on 131 infections among 20,260 people split across trial sites in the UK and Brazil. P8

Covid-19: What you need to know today (Hindustan Times: 20201127)

<https://epaper.hindustantimes.com/Home/ArticleView>

The Oxford/AstraZeneca vaccine may well be effective – as the developers claimed earlier this week – but enough questions have been asked about the trials and the reporting for drug regulators around the world to think long, and hard, and perhaps wait for more trial data – after all, trials are also on in the US and India – before approving the two-shot vaccine that offers protection from Covid-19.

In September, amidst rising concerns that vaccine developers would rush through trials, ignoring safety concerns as well as detailed and nuanced analysis of efficacy, companies including AstraZeneca (it is developing its vaccine in collaboration with the University of Oxford and Vaccitech Ltd, the company that has licensed the adenovirus vector platform used in the vaccine from the university's Jenner Institute), Moderna, and the Pfizer/BioNTech combine, released elaborate protocols for their Phase 3 trials – unprecedented in the annals of vaccine development.

The coronavirus disease has resulted in huge public interest in a process that is usually restricted to the research departments of pharma companies, laboratories and research institutions, and peer-reviewed academic journals with readership in the thousands (or tens of thousands). Indeed, the results of clinical trials are usually announced in such journals, not in press releases and briefings with analysts at investment banks. But with cases exceeding 60 million, deaths nearing 1.5 million (and actual deaths being much higher), and lives and livelihoods disturbed by a virus that is airborne, it isn't surprising that everyone is more interested in the results of vaccine trials than they are in, say, a royal wedding. Both Moderna and Pfizer/BioNTech followed this approach while disclosing the results of the trials of their vaccines, both based on a hitherto untested mRNA (or messenger RNA platform). The results were good, 90% in one case, later updated to 95% based on more readings, and 95% in another. That's very high for a vaccine. Even better, a close reading of the results by analysts, scientists, and experts – including many amateurs with the ability to convert complex scientific papers and research into language laypeople can understand, and built huge followings on social media in the process – didn't turn up any gaps or unpleasant surprises. Both vaccines work.

There was more riding on the AstraZeneca/Oxford vaccine, though. It only required refrigeration, compared to the Moderna and Pfizer/BioNTech ones that needed sub-zero temperatures, and it was going to be inexpensive (which meant it would end up being the vaccine of choice for low-income and poor countries). It was also going to be the first vaccine available in India – thanks to a deal between Serum Institute of India, the world's largest vaccine manufacturer, and AstraZeneca/Oxford. There may also have been some pressure on company executives to announce the results of the trials following the success of the Moderna and the Pfizer/BioNTech vaccines.

Whatever the reason, AstraZeneca/Oxford seem to have hurried the announcement of the results – and it shows. Following the initial announcement of the results on Monday, it has emerged that what was reported as a trial involving an alternative approach to dosing was actually a mistake that was converted into an experiment; that the results announced combine those from two separate trials with two different protocols and demographic groups; and that

the data used was from sub-groups within these groups. These are worrying lapses – and have rightly been called out by scientists, epidemiologists, and bio-statisticians. They are dodgy from the perspective of science, data, and clinical trial protocols.

This is a pity – especially because the findings were also encouraging in terms of the vaccine candidate's ability to prevent transmission (protecting infected people from developing Covid-19, and preventing transmission are two very different things) – something that is especially critical in the case of a disease that has been found to be transmitted significantly by infected people that are asymptomatic.

More trial data may substantiate the efficacy of the vaccine (some experts believe that there is a high likelihood of this), but the episode once again highlights that unlike in the case of food and fashion, there is no such thing as fast science.

PS: Late on Thursday, Bloomberg reported AstraZeneca's CEO Pascal Soriot as saying that it may conduct an additional global trial to assess the efficacy of the vaccine after some studies raised questions over its level of protection.

New Cases (The Asian Age: 20201127)

<http://onlinepaper.asianage.com/articledetailpage.aspx?id=15247553>

City records 91 more Covid deaths, 5,475 cases in a day

AGE CORRESPONDENT
NEW DELHI, NOV. 26

The national capital recorded 5,475 fresh Covid cases in a day as the number of RT-PCR tests crossed the 28,000 mark, while 91 more fatalities pushed the city's death toll to 8,811 on Thursday, authorities said.

The positivity rate was 8.65 per cent. It was 8.49 per cent on Wednesday.

As many as 63,266 tests, including 28,897 RT-PCR ones — the highest till date for the city — and 34,369 rapid antigen tests were conducted the previous day for the detection of Covid according to a bulletin issued by the Delhi health department on Thursday.

The city had recorded its highest single-day spike of 8,593 cases on November 11. As many as 131 Covid-related deaths were recorded on November 18, the highest till date.

According to the bulletin, the total number of

Delhi environment minister tests +ve for coronavirus

New Delhi, Nov. 26: Delhi environment minister Gopal Rai on Thursday tested positive for coronavirus.

Mr Rai is the third minister in the Arvind Kejriwal government to have contracted the virus.

Earlier, deputy chief minister Manish Sisodia and health minister Satyendar Jain had been infected with coronavirus.

An official said that Mr Rai, who is also AAP's Delhi convenor, had met party workers around

Diwali.

The minister had not attended the all-party meeting convened by chief minister Arvind Kejriwal to discuss the Covid situation in Delhi on November 19 as he was not feeling well. In a tweet, Mr Rai said that after initial symptoms, he underwent Covid test and the report has come positive.

The environment minister has requested those who recently came in contact with him to undergo test for Covid. —PTI

coronavirus cases climbed to 5,51,262 on Thursday, of which 5,03,717 have recovered.

The tally of active cases in Delhi was 38,734, up from 38,287 on Wednesday.

Delhi recorded 6,746 new cases on Sunday, 4,454 on Monday, 6,224 on Tuesday

and 5,246 on Wednesday.

The number of Covid containment zones in Delhi rose to 5,156 on Thursday from 4,980 on Wednesday. Of the total number of 18,252 beds in Covid hospitals, 9,143 are vacant, according to official data.

First 'wave' of COVID-19 vaccination

Coronavirus | First 'wave' of COVID-19 vaccination to cover 30 crore Indians (The Hindu: 20201127)

<https://www.thehindu.com/news/national/coronavirus-first-phase-of-covid-19-vaccination-to-cover-30-crore-indians/article33187596.ece>

A medic fills a syringe with an experimental COVID-19 vaccine to administer it to a health worker during its trials at the Gujarat Medical Education and Research Society in Ahmedabad on November 26, 2020. | Photo Credit: REUTERS

National vaccine committee, headed by Dr. V.K. Paul, has finalised a broad blueprint, says Principal Scientific Adviser K. VijayRaghavan.

About 30 crore people will be part of the first “wave” to get the COVID-19 vaccine in India. They consist of health care workers, police personnel, those above 50 and those younger with underlying illnesses that make them vulnerable, said Principal Scientific Adviser K. VijayRaghavan.

He was speaking at a meeting organised by the Science Ministry and the Confederation of Indian Industry on Thursday. Mr. VijayRaghavan said the national vaccine committee, headed by Dr. V.K. Paul, had finalised a broad blueprint.

Coronavirus | Syringe firms ready to meet demand

He said from “March to May” vaccines were likely to be available in significant numbers and would be progressively rolled out over the years using the national immunisation programme. “There are one crore health workers, frontline workers such as State and central police, armed forces, home guards, civil defence about 2 crore; priority groups above the age of 50 because you are including those with significant challenges as India has a large fraction of those with cardiovascular disease and diabetes — that’s about 26 crore — and finally those below 50 with significant comorbidities, about 1 crore. So that’s nearly 30 crore,” Mr. VijayRaghavan said.

Prime Minister Narendra Modi on Tuesday asked State governments to set up steering committees and block-wise task forces to prepare for the distribution of COVID-19 vaccines and disbursement.

Coronavirus | AstraZeneca manufacturing error clouds vaccine study results

Vaccines will be available when they pass regulatory stages and it still wasn't clear which vaccine candidates would pass all the required criteria and by what date, Mr. Modi had said at his meeting with Chief Ministers.

“It will be a large scale enterprise looking at the size of our country and keeping in mind our experience with large immunisation campaigns, we want this to be a smooth exercise with great

co-ordination with State governments, who are the best judge of how things are to be done in particular States,” he had said.

Comment | The storage tale of two vaccines

First quarter of 2021

Union Health Minister Harsh Vardhan has said a COVID-19 vaccine was likely to be available by the first quarter of 2021 and that the Centre estimates to receive and utilise 40-50 crore doses covering around 25 crore people by July next year.

There are five potential vaccines are under different phases of clinical trials in India with the Serum Institute of India conducting phase-3 trial of the Oxford-Astrazeneca COVID-19 vaccine while the indigenously developed Bharat Biotech and ICMR vaccine have already started the phase III clinical trials.

An indigenously developed vaccine by Zydus Cadila had completed phase-2 clinical trial in the country and Dr. Reddy's Laboratories would be beginning combined phase 2 and 3 clinical trials of the Russian Sputnik V vaccine in India. Biological E. Ltd has started early phase 1 and 2 human trials of its COVID-19 vaccine candidate.

New gene therapy

Scientists develop new gene therapy for eye disease (New Kerala: 20201127)

<https://www.newkerala.com/news/2020/206011.htm>

Scientists from Trinity College Dublin have developed a new gene therapy approach that offers promise for one day treating an eye disease that leads to a progressive loss of vision and affects thousands of people across the globe.

The study, which involved a collaboration with clinical teams in the Royal Victoria Eye and Ear Hospital and the Mater Hospital, also has implications for a much wider suite of neurological disorders associated with ageing.

The scientists published their results in leading journal, *Frontiers in Neuroscience*.

Dominant optic atrophy (DOA)

Characterised by degeneration of the optic nerves, DOA typically starts to cause symptoms in patients in their early adult years. These include moderate vision loss and some colour vision defects, but severity varies, symptoms can worsen over time and some people may become blind. There is currently no way to prevent or cure DOA.

A gene (OPA1) provides instructions for making a protein that is found in cells and tissues throughout the body, and which is pivotal for maintaining proper function in mitochondria, which are the energy producers in cells.

Without the protein made by OPA1, mitochondrial function is sub-optimal and the mitochondrial network which in healthy cells is well interconnected is highly disrupted.

For those living with DOA, it is mutations in OPA1 and the dysfunctional mitochondria that are responsible for the onset and progression of the disorder.

The new gene therapy

The scientists, led by Dr Daniel Maloney and Professor Jane Farrar from Trinity's School of Genetics and Microbiology, have developed a new gene therapy, which successfully protected the visual function of mice who were treated with a chemical targeting the mitochondria and were consequently living with dysfunctional mitochondria.

The scientists also found that their gene therapy improved mitochondrial performance in human cells that contained mutations in the OPA1 gene, offering hope that it may be effective in people.

Dr Maloney, Research Fellow, said

"We used a clever lab technique that allows scientists to provide a specific gene to cells that need it using specially engineered non-harmful viruses. This allowed us to directly alter the functioning of the mitochondria in the cells we treated, boosting their ability to produce energy which in turn helps protect them from cell damage.

"Excitingly, our results demonstrate that this OPA1-based gene therapy can potentially provide benefit for diseases like DOA, which are due to OPA1 mutations, and also possibly for a wider array of diseases involving mitochondrial dysfunction."

Importantly, mitochondrial dysfunction causes problems in a suite of other neurological disorders such as Alzheimer's and Parkinson's disease. The impacts gradually build up over time, which is why many may associate such disorders with ageing.

Professor Farrar, Research Professor, added

"We are very excited by the prospect of this new gene therapy strategy, although it is important to highlight that there is still a long journey to complete from a research and development perspective before this therapeutic approach may one day be available as a treatment.

"OPA1 mutations are involved in DOA and so this OPA1-based therapeutic approach is relevant to DOA. However mitochondrial dysfunction is implicated in many neurological disorders that collectively affect millions of people worldwide. We think there is great potential for this type of therapeutic strategy targeting mitochondrial dysfunction to provide benefit and thereby make a major societal impact. Having worked together with patients over many years who live with visual and neurological disorders it would be a privilege to play a role in a treatment that may one day help many."

Coronaviruses

Coronaviruses related to pandemic virus found in lab freezers: Study (New Kerla: 20201127)

<https://www.newkerala.com/news/2020/205819.htm>

Researchers have found coronaviruses closely related to SARS-CoV-2, the virus responsible for the Covid-19 pandemic, in bats stored in laboratory freezers in Cambodia and Japan, according to a study published in the journal Nature.

The virus in Cambodia was discovered in two Shamel's horseshoe bats stored in a freezer, which were captured in the north of the country in 2010.

Meanwhile, a team in Japan found another closely related coronavirus in frozen bat droppings, the study showed.

"The viruses are the first known relatives of SARS-CoV-2 to be found outside China," said the study, noting that the new findings support the World Health Organisation's search across Asia to investigate the animal origin of the COVID-19 pandemic.

But whether the new coronavirus SARS-CoV-2 passed directly from bats to people or through an intermediate host still remains unknown, reports Xinhua news agency.

"Both discoveries are exciting because they confirm that viruses closely related to SARS-CoV-2 are relatively common in Rhinolophus bats, and even in bats found outside China," Alice Latinne, an evolutionary biologist at the Wildlife Conservation Society Vietnam in Hanoi, who has seen some of the Cambodian team's analysis, was quoted as saying.

Aaron Irving, an infectious-diseases researcher at Zhejiang University in China's Hangzhou, who also plans to test stored samples of bats and other mammals, said the findings suggest that other "as-yet undiscovered SARS-CoV-2 relatives" could be stored in lab freezers, it added.

Pneumonia vaccine

Pneumonia vaccine may reduce impact of Covid-19: Study (New Kerala: 20201127)

Pneumonia vaccines can potentially reduce the impact of viruses such as Covid-19, said researchers, adding that it has reduced illness and death in patients with pneumonia, serious lung conditions and rotavirus, a common disease which causes severe diarrhoea and vomiting.

The University of Melbourne-led research team, which worked with the Fiji Ministry of Health and Medical Services, said the results underline the importance of vaccines and how they can potentially reduce the impact of viruses such as Covid-19.

Published in the journal 'Lancet Regional Health - Western Pacific', the first study looked at Fiji's national rotavirus vaccine programme five years after it became the first independent Pacific island country to introduce the vaccine in 2012.

According to the researchers, rotavirus is severely contagious and the most common cause of diarrhoeal disease among infants and young children. It can even cause death in extreme cases.

After taking the vaccine, morbidity and mortality due to rotavirus and all-cause diarrhoea in Fiji fell in those aged two months to 55 years. Rotavirus diarrhoea admissions at the largest hospital among children aged under five fell by 87 per cent.

These reductions were most likely due to the vaccine as rotavirus diarrhoeal outbreaks remained blunted for the five years after vaccine introduction.

At the same time, in 2012, the Fiji government introduced a routine infant immunisation schedule for ten-valent pneumococcal conjugate (PCV10) vaccine using three primary doses and no booster dose.

Published in 'The Lancet Global Health', this second study looked at hospital admission rates for children with pneumonia at three Fiji public tertiary hospitals.

Five years after the vaccine was introduced, hospital admissions for all-cause pneumonia had fallen for children aged 24-59 months. Mortality was down by 39 per cent among children aged two to 24 months who were admitted to hospitals with all-case pneumonia, bronchiolitis and asthma.

The study showed the effect of PCV10 vaccine and supported its introduction for children in other low and middle-income countries in that region.

"These results provide supportive evidence of the probable benefits of PCV10 in reducing pneumonia in children in Fiji," said study lead researcher Fiona Russell from the Murdoch Children's Research Institute and the University of Melbourne.

Enhance chronic pain treatments

New study to enhance chronic pain treatments (New Kerala: 20201127)

<https://www.newkerala.com/news/2020/205374.htm>

Researchers at Kyushu University's Graduate School of Pharmaceutical Sciences have discovered a unique population of spinal cord astrocytes with a role in producing pain hypersensitivity to strengthen the effect of chronic pain treatments.

According to a study using mouse model by Kyushu University, researchers revealed the identification of a unique population of astrocytes in the dorsal horn of the spinal cord of mice that produces pain hypersensitivity when activated by neurons carrying signals down from the brain which indicate the role of descending neurons in controlling spinal pain transmission, not limited to suppression; suggesting this group of astrocytes as a new target to enhance the effect of chronic pain treatments.

The researcher's state that an assortment of non-neuronal cells first discovered in the mid-nineteenth century also plays a wide variety of important roles.

The glial cells named after the Greek word 'glue' are now known to be the critical elements for regulating neuronal development and function in the central nervous system.

According to researchers, a detailed understanding of the groupings of astrocytes with distinct properties is yet to be done to understand the different types of glial cells and their roles.

Makoto Tsuda, professor at Kyushu University's Graduate School of Pharmaceutical Sciences and his team have discovered a unique population of spinal cord astrocytes with a role in producing pain hypersensitivity. "The discovery of this new population of astrocytes reveals a new role of descending LC-NAergic neurons in facilitating spinal pain transmission," explains Tsuda.

According to the study, the astrocytes found near the back of the spinal cord are in a region known to carry general sensory information such as pressure, pain, and heat from around the body to the brain.

With the use of mouse model, the researchers showed that stimulating noradrenergic (NAergic) neurons carry signals from the locus coeruleus (LC) in the brain down to the spinal dorsal horn and activates the astrocytes which result in pain hypersensitivity.

Considering these findings, the results conclude descending LC-NAergic neurons can help suppress pain transmission in the spinal dorsal horn and may enhance the effect of drugs for chronic pain.

According to the study, for the initial test, the researchers genetically engineered mice in which the response of astrocytes to noradrenaline was selectively inhibited. This gave them the final results of using duloxetine, an analgesic drug to increase levels of noradrenaline in the spinal cord by preventing uptake by descending LC-NAergic neurons.

"Although we still need more studies with different drugs, this astrocyte population appears to be a very promising target for enhancing the therapeutic potential of drugs for chronic pain," says Tsuda.

Genetic variations

Genetic variations linked to COVID-19 disease severity: Study (New Kerala: 20201127)

<https://www.newkerala.com/news/2020/205327.htm>

November 26: With Coronavirus being the most experimented field from past few months', a new study led by Beth Israel Deaconess Medical Center (BIDMC) sheds light on the genetic risk factors that make individuals more or less susceptible to severe COVID-19.

Thousands of people test positive for the virus each day, and the reason behind people experiencing mild to no symptoms while others becoming critically ill is still under the shadow of a doubt. According to a new study published in the New England Journal of Medicine (NEJM), research led by Robert E. Gerszten, MD, Chief of the Division of Cardiovascular Medicine at BIDMC irradiate the key process of COVID-19 which can open new possibilities for the treatment of this disease.

Gerszten, Professor of Medicine at Harvard Medical School shared that different patients effected by COVID-19 display different symptoms and different degrees of severity, "Pre-existing conditions, particularly cardiovascular and metabolic disease, are risk factors for disease severity and outcomes, the underlying reasons that some people develop the life-threatening disease while others remain asymptomatic are not well understood."

Findings published in the NEJM describes the link of COVID-19 outcomes to variations in two regions of the human genome on the basis of genetic evidence from patients in China, Europe and the United States. But, to find about the difference occurring due to the disease, scientists need to understand the role of the proteins carried by the genome in the context of disease.

The database generated by Gerszten and colleagues of all the proteins and metabolites associated with various regions of the human genome found one genomic "hot spot" to be associated with COVID-19 disease severity. This drove the researchers' one step forward to realize that the same region was linked to a protein, recently been implicated in the process of SARS-CoV-2 virus infecting human cells.

"We determined that the protein most highly expressed by that region turned out to be a co-receptor for the virus that causes COVID-19. The so-called antibody cocktails currently available mostly target the spike proteins on the virus. In turn, our work identifies which proteins in the human body that SARS-CoV-2 and other viruses latch on to," Gerszten said.

According to the report, the second region was linked to a poorly understood protein that appears to play a role in attracting immune cells called lymphocytes to sites of infection. The study also suggests that these genetic variants and proteins may vary across races. On the

whole, these findings are important contributions to science to understand the mysteries of COVID-19.

Infection (Hindustan: 20201127)

https://epaper.livehindustan.com/imageview_476303_129653422_4_1_27-11-2020_5_i_1_sf.html

महामारी की संक्रमण दर 40 फीसदी तक घटी : जैन

नई दिल्ली | वरिष्ठ संवाददाता

दिल्ली में कोरोना से संक्रमण दर में तेजी से सुधार हो रहा है। पिछले 20 दिनों की तुलना में संक्रमण दर 40 फीसदी तक घट गई। दिल्ली के स्वास्थ्य मंत्री सत्येंद्र जैन ने कहा कि 7 नवंबर को दिल्ली में कोरोना का संक्रमण दर 15.26 फीसदी था जो बुधवार को घटकर 8.49 फीसदी के करीब आ गई है।

उन्होंने कहा कि मुख्यमंत्री अरविंद केजरीवाल ने बुधवार को हुई बैठक में कौराना से मौत पर चिंता जाहिर करते हुए इसमें कमी लाने का निर्देश दिया है। वहीं स्कूल खोलने के संबंध में उन्होंने कहा कि दिल्ली में जब तक स्थिति बेहतर नहीं हो जाती तब तक स्कूल नहीं खुलेंगे। स्कूलों को खोलने से पहले स्थिति देखी जाएगी, जब लगेगा कि



● सत्येंद्र जैन, स्वास्थ्य मंत्री दिल्ली।

नहीं मिल रही समय पर रिपोर्ट

दिल्ली में एक लाख टेस्ट करने के संबंध में एक सवाल पर सत्येंद्र जैन ने कहा कि आरटीपीसीआर की रिपोर्ट समय पर नहीं मिल रही है। कई रिपोर्ट के लिए दो से तीन दिन तक लग रहे हैं। उन्होंने कहा, अभी 35 हजार के करीब आरटीपीसीआर टेस्ट किए जा रहे हैं और उनकी रिपोर्ट देरी से मिल रही है।

स्कूल खोल सकते हैं और स्थिति बेहतर है तभी इसपर फैसला लिया जाएगा।

कोरोना के 5475 नए केस मिले 4937 ने वायरस को मात दी

नई दिल्ली | वरिष्ठ संवाददाता

दिल्ली में गुरुवार को भी पांच हजार से ज्यादा कोरोना संक्रमित मिले हैं। गुरुवार को स्वास्थ्य विभाग द्वारा जारी आंकड़ों के अनुसार पिछले 24 घंटों में 63266 लोगों की कोरोना जांच की गई थी। जिसमें से 5475 लोग कोरोना संक्रमित पाए गए। जबकि पिछले 24 घंटों में संक्रमण के चलते 91 लोगों ने अपनी जान गवाई है।

हालांकि यह आंकड़ा कई दिनों बाद कम हुआ है। लेकिन राहत की बात यह रही है कि 4937 लोग संक्रमण को मात देकर अपने घर लौटे हैं। जिन्हें अस्पताल और कोरोना केयर सेंटर्स से घर भेजा गया है। ऐसे में अब दिल्ली में

17213 बिस्तर खाली हैं

दिल्ली सरकार के विभिन्न अस्पतालों और कोरोना केयर व हेल्थ सेंटर्स में कुल 27031 बिस्तर हैं, जिसमें से 17213 बिस्तर खाली हैं।

38734 एक्टिव केस हैं। इसमें 23479 लोग घरों में अपना उपचार कर रहे हैं। स्वास्थ्य विभाग के अनुसार दिल्ली में अभी कोरोना के 551262 मामले सामने आ चुके हैं और 503717 लोग संक्रमण को मात दे चुके हैं। मृतकों की संख्या 8811 पहुंच चुकी है। फिलहाल दिल्ली में 6039703 लोगों की कोरोना जांच की जा चुकी है। पिछले 24 घंटे में आरटीपीसीआर 28897 और एंटीजन जांच 34369 की गई है।

घर-घर सर्वे जारी रहेगा, इस बार अन्य बीमारियों से पीड़ित अधिक उम्र के लोग इसके दायरे में आएंगे

50 वर्ष से ज्यादा के लोगों की जांच पर जोर



नई दिल्ली | वृजेश सिंह/सज्जन चौधरी

राजधानी में कोविड के संदिग्ध मरीजों की पहचान करने के लिए घर-घर सर्वे जारी रहेगा। इस बार सर्वे में हाई रिस्क समूह वाले लोगों को चिह्नित करके उनकी जांच की जाएगी। इसमें 50 साल से अधिक उम्र वाले और को-मॉरबिलिटीज (पहले से ही किसी बीमारी से ग्रसित) का सर्वे किया जाएगा। जांच के लिए चिह्नित लोगों की आरटीपीसीआर जांच कराई जाएगी।

दिल्ली में 20 से 25 नवंबर के बीच घर-घर सर्वे चला था। उसमें संक्रमित के जो आंकड़े निकलकर आए वह बेहद कम हैं। इसे लेकर जिलाधिकारियों की दिल्ली सरकार के उच्चाधिकारियों के साथ वीडियो कॉन्फ्रेंसिंग के जरिए बैठक हुई। बैठक में यह फैसला लिया गया कि आगे भी वह सर्वे जारी रहेगा। इस दौरान यह टीम 50 साल से अधिक उम्र वाले और हाई रिस्क समूह के संदिग्ध लोगों की पहचान करके जांच करेगी। सर्वे जारी रखने के फैसले के बाद पश्चिमी जिला प्रशासन ने सर्वे को लेकर बुधवार को ही आदेश भी जारी कर दिया है। दिल्ली में नवंबर



कोशांबी बस स्टैंड पर गुरुवार को कोविड-19 के बढ़ते प्रकोप के बाद भी लोग सामाजिक दूरी के नियमों का उल्लंघन करते दिखे। अपने गंतव्य तक पहुंचने की जल्दी में लोग एक-दूसरे से एकदम सटकर चल रहे थे। कई ने मास्क भी नहीं लगाया था। ● एजेंसी

कंटेनमेंट जोन में सिर्फ आरटीपीसीआर

दिल्ली सरकार के आधिकारिक सूत्रों की माने तो अब कंटेनमेंट जोन में रहने वाले लोगों और सर्वे के दौरान चिह्नित हाई रिस्क समूह के लोगों की सिर्फ आरटीपीसीआर जांच होगी। अब तक यह जांच रैपिड एंटीजन किट से की जाती थी। अगर किसी में लक्षण मिलते हैं, लेकिन रैपिड जांच में रिपोर्ट निगेटिव आती थी तब फॉलोअप जांच में आरटीपीसीआर जांच होती थी। मगर अब ऐसा नहीं होगा। अगर किसी माइक्रो कंटेनमेंट जोन में 40 लोग हैं।

में हुए सर्वे के दौरान कुल 57.30 लाख से अधिक लोगों का सर्वे किया गया। इस दौरान 13 हजार से अधिक लोग लक्षण वाले मिले। उनके संपर्क में आए करीब 6 हजार से अधिक लोगों की जांच की गई। इस दौरान कुल 1178 लोग संक्रमित मिले। इन सबकी जांच रैपिड

एंटीजन किट से की गई थी।

डिस्पेंसरी से लिंक होगे हाई रिस्क समूह वाले लोग: कंटेनमेंट जोन में रहने वाले हाई रिस्क समूह वाले (बुजुर्ग, गर्भवती महिला, बच्चे, किडनी, हार्ट जैसे गंभीर बीमारी से ग्रसित लोग) लोगों को डिस्पेंसरी से लिंक किया जाएगा।

अगर किसी क्षेत्र को कंटेनमेंट जोन बनाए जाने के बाद उसे डी-कंटेन कर भी दिया जाता है तो भी उस क्षेत्र में रहने वाले हाई रिस्क समूह वाले लोगों का डाटा नजदीकी डिस्पेंसरी से लिंक किया जाएगा, जिससे उनकी बाद में फॉलोअप निगरानी की जा सके।

दिल्ली में संक्रमण खतरनाक : कोर्ट

नई दिल्ली (प्र.सं.) उच्च न्यायालय ने गुरुवार को तेजी से बढ़ते कोरोना संक्रमण की स्थिति को खतरनाक और चिंताजनक बताया।

न्यायालय ने दिल्ली सरकार द्वारा 33 निजी अस्पतालों के 80 फीसदी आईसीयू बेड कोरोना मरीजों के लिए आरक्षित करने के लिए दिल्ली सरकार के फैसले के खिलाफ दाखिल याचिका पर यह टिप्पणी की। जस्टिस नवीन चावला ने कहा कि जिस तेजी से संक्रमित मरीजों की संख्या बढ़ रही है, इसे देखते हुए मौजूदा स्थिति खतरनाक और चिंताजनक है। उन्होंने मामले की अगली सुनवाई 9 दिसंबर तक की है।

तिहाड़ में मां के साथ मौजूद बच्चों में लक्षण दिखे

नई दिल्ली (व.सं.) तिहाड़ की महिला जेल में अपनी मां के साथ मौजूद कई बच्चों में कोरोना के लक्षण दिखाई दिए हैं। जिसके बाद सभी की जांच की प्रक्रिया शुरू कर दी गई है। इस बीच एक बच्चे में कोरोना संक्रमण की पुष्टि होने के बाद उन्हें उपचार के लिए अस्पताल में भर्ती कराया गया है। करीब 10 दिन पहले सात महिला कैदियों में कोरोना संक्रमण की पुष्टि हुई थी।