



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DA
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Cadila Healthcare

Cadila Healthcare to be known as Zydus Lifesciences Ahmedabad-based group is present in 55 countries, with 36 manufacturing plants, 8 R&D centres (The Tribune:20220225)

Cadila Healthcare to be known as Zydus Lifesciences
Zydus Biotech park at Changodar in Ahmedabad. PTI file

<https://www.tribuneindia.com/news/health/cadila-healthcare-to-be-known-as-zydus-lifesciences-372778>

The Zydus group on Thursday said its listed entity Cadila Healthcare would now be known as Zydus Lifesciences Ltd as part of new brand identity.

The Ahmedabad-based group is present in 55 countries, with 36 manufacturing plants, 8 R&D centres, 1,400 research scientists and 23,000 employees worldwide.

“Our new brand identity is a confluence of what we truly are. A global lifesciences company driven by the purpose of delivering care and nurturance for the patients, backed by the power of innovation, science and cutting edge technology. With these attributes close to our heart, we wish to make a meaningful difference in serving patients and communities,” Zydus Lifesciences MD Sharvil Patel said in a statement.

These pillars of care, compassion and commitment to innovation will remain at the heart of all that Zydus stands for, he added.

Remdesivir

Government removes export curbs on Remdesivir, its APIs Centre has also removed similar curbs for exports of organic LEDs and liquid crystals (The Tribune:20220225)

<https://www.tribuneindia.com/news/health/government-removes-export-curbs-on-remdesivir-its-apis-372777>

The government on Thursday removed export curbs on Remdesivir injection and its active pharmaceutical ingredients (APIs) amid declining Covid-19 cases in the country.

The Centre has also removed similar curbs for exports of organic LEDs (Light Emitting Diodes) and liquid crystals.

“The export policy of Injection Remdesivir and Remdesivir API, Amphotericin-B injections, Enoxaparin (formulation and API) and Intra-Venous Immunoglobulin (IVIG) (Formulation and API) ... has been made ‘Free’ with immediate effect,” the Directorate General of Foreign Trade (DGFT) said in a notification.

In April last year, the export of injection Remdesivir, considered a key anti-viral drug in the fight against Covid-19, and its API was prohibited till the pandemic situation in the country improves.

India logged 14,148 new coronavirus infections taking the total tally of Covid-19 cases to 4,28,81,179, while the active cases dipped to 1,48,359, according to the Union Health Ministry data updated on Thursday.

The daily Covid-19 cases have remained below one lakh for 18 consecutive days.

Air pollution

Air pollution may increase risk of ADHD in children: Study

The research found that children living in greener and less polluted areas have a 50 per cent lower risk of developing ADHD, one of the most prevalent neurodevelopmental disorders (The Tribune:20220225)

<https://www.tribuneindia.com/news/health/air-pollution-may-increase-risk-of-adhd-in-children-study-372752>

Children living in areas with higher levels of small pollution particles and less green spaces might have up to 62 per cent increased risk of developing ADHD, according to a study.

The research, published in the journal Environment International, found that children living in greener and less polluted areas have a 50 per cent lower risk of developing ADHD, one of the most prevalent neurodevelopmental disorders.

The researchers led by Matilda van den Bosch, from Barcelona Institute for Global Health (ISGlobal), used data from 37,000 children in Vancouver, Canada.

They analysed the possible associations between exposure to greenness, small pollution particles (PM2.5) and noise in early life with later incidence of ADHD, which affects up to approximately 5-10 per cent children and adolescents.

“We observed that children living in greener neighbourhoods with low air pollution had a substantially decreased risk of ADHD,” said van den Bosch.

“This is an environmental inequality where, in turn, those children living in areas with higher pollution and less greenness face a disproportionately greater risk,” she said.

The study used administrative data of births from 2000 to 2001 and retrieved data on ADHD cases from hospital records, physician visits and prescriptions.

The percentage of green space in the participants’ neighbourhood was estimated with a novel and precise satellite metric, while the residential levels of two air pollutants—NO₂ and PM_{2.5} -- as well as noise levels were estimated using available exposure models.

The possible associations between the three environmental exposures and ADHD were assessed using a statistical model that allowed to determine hazard ratios.

The researchers were able to identify 1,217 cases of ADHD, equivalent to a 4.2 per cent of the total study population.

The green space analysis revealed that participants living in areas with a greater percentage of vegetation had a lower risk of ADHD, the researchers said.

The results show that a 12 per cent increase in vegetation percentage was associated with a 10 per cent reduction in the risk of ADHD, they said.

The study found that participants with a higher exposure to fine particles had higher risk of ADHD.

No associations were found for the rest of environmental exposures assessed: NO₂ and noise, they said.

The results are consistent with previous studies, which found associations between green space and air pollution, respectively, with ADHD.

However, most of the research conducted until now focused on the evaluation of single exposures and rarely evaluated joint effects of multiple environmental exposures.

“These associations are particularly relevant because exposures take place in early life, a crucial period for brain development where children are especially vulnerable,” van den Bosch said.

“Our findings also show that the associations between PM_{2.5} and ADHD were attenuated by residential green space and vice versa, as if the beneficial effects of vegetation and the harmful effects of PM_{2.5} neutralised each other,” said Weiran Yuchi, from the University of British Columbia, and first author of the study.

Omicron 'silent killer'

Omicron 'silent killer', recovery takes long: CJI (The Tribune:20220225)
Omicron 'silent killer', recovery takes long: CJI
Chief Justice of India NV Ramana. File photo

<https://www.tribuneindia.com/news/nation/omicron-silent-killer-recovery-takes-long-cji-372543>

Describing the Omicron variant of Covid-19 as a “silent killer”, Chief Justice of India NV Ramana today said it took a long time to recover from the latest strain.

“I suffered in the first wave and recovered in four days, but now in this wave, it has been 25 days and I am still suffering,” the CJI told the Supreme Court Bar Association president Vikas Singh after the latter requested that the top court now revert to full physical hearing.

The CJI said there was a jump of 15,000 in Omicron cases. As Singh said Omicron was much milder, Justice Ramana said it had been 25 days and he was still suffering. —

Global reports hail India's Covid vaccination drive

Reports acknowledge robustness of Indian vaccine drive and major challenges faced in their delivery and administration(The Tribune:20220225)

<https://www.tribuneindia.com/news/nation/global-reports-hail-indias-vax-drive-372480>

Two newly published global reports backed by Harvard Business School have acknowledged the robustness of the Indian Covid-19 vaccine drive and the major challenges the government faced in delivering and administering vaccines to a majority of its 1.3 billion people.

Released by Health Minister Mansukh Mandaviya today, reports of the Institute for Competitiveness (part of the global network of the Institute for Strategy and Competitiveness and affiliated to Harvard Business School), hail the Centre’s initiative of working with the state governments to ensure free and equitable distribution and effective management of vaccine eagerness along with addressing vaccine hesitancy prevalent in certain pockets.

Centre’s initiative

Reports of the Institute for Competitiveness highlight all crucial aspects that have contributed to the success of India's vaccine development & administration efforts

It mentions the scientific and phased approach in covering beneficiaries, starting with frontline workers and then expanding it to cover all adults

They say India aligned itself with the world and entered the Covid vaccine manufacturing race on March 11, 2020, with the ICMR and Bharat Biotech announcing a partnership to develop an indigenous vaccine.

Titled "Covid-19 — India's Vaccine Development Story" and "India's Covid-19 Vaccination Administration Journey", the reports highlight all crucial aspects that have contributed to the success of India's vaccine development and administration efforts, including manufacturing of indigenous vaccines, sturdy and timely procedures and protocols for approvals that ensured the safe administration of vaccination. It also mentions the scientific and phased approach in covering beneficiaries starting with health and frontline workers and the elderly with comorbidities and then expanding to cover all adults and eventually 15 to 18-year-olds.

He said, "This documentation records the world's largest vaccination drive — India's scientific capacity demonstrated by the development of indigenous vaccines; our ability to trace, test, treat and contain the infection spread."

LifeScience (The Tribune:20220225)

<http://onlinepaper.asianage.com/article/detailpage.aspx?id=16190099>

Cadila Health to become Zydus Lifesciences

The Zydus Group said its listed entity Cadila Healthcare would now be known as Zydus Lifesciences Ltd as part of new brand identity. The Ahmedabad-based group is present in 55 countries, with 36 manufacturing plants, 8 R&D centres, 1,400 research scientists and 23,000 employees worldwide. "Our new brand identity is a confluence of what we truly are," MD Sharvil Patel said in a statement.

Digestion

Follow these five steps to improve digestion

According to nutritionist Bhakti Kapoor, when digestion does not happen as it should, "your body sends you clear signals"(The Indian Express:20220225)

<https://indianexpress.com/article/lifestyle/health/improve-digestion-health-steps-fibre-water-exercise-7787067/>

how to digest food better, steps to digest food, how to make digestion better, tips for easy digestion, digestive health, indian express newsA few simple lifestyle tweaks in diet and physical activity "can help your digestive system do the job it is meant to do more efficiently". (Photo: Getty/Thinkstock)

When food does not get digested well, it can cause a host of problems including feeling bloated and nausea. Digestive health is important, and as experts say, the gut ultimately dictates how your body and mind functions.

According to nutritionist Bhakti Kapoor, when digestion does not happen as it should, “your body sends you clear signals, such as excessive gas, bloating, high acidity, frequent loose motions, or bowel irregularity”.

ALSO READ |Why Ayurveda recommends against consuming curd at night, and on a daily basis

She took to Instagram to mention that a few simple lifestyle tweaks in diet and physical activity “can help your digestive system do the job it is meant to do more efficiently”, which is to “fully deliver and absorb nutrients for overall health and smoothly rid the body of its unwanted waste”.

She listed the following five points to improve digestion in a simple manner:

Food and Nutrition

‘Nectar on earth’: Why Ayurveda highly recommends the consumption of buttermilk

"Enjoy this 'divine healing digestive drink- takra' and keep indigestion at bay," Ayurvedic expert Dr Dixa Bhavsar said"(The Indian Express:20220225)

<https://indianexpress.com/article/lifestyle/health/nectar-on-earth-buttermilk-health-benefits-quick-easy-recipe-ayurveda-7784011/>

buttermilkButtermilk has a host of health benefits. (Source: Unsplash)

With winter gradually receding and summer almost knocking on our doors, it's time to indulge in healthy beverages that will not only provide relief during the sultry months but also benefit health. As such, what better than enjoying a glass of buttermilk with your meals?

According to Ayurveda, "He who uses takra (buttermilk) daily does not suffer from diseases, and diseases cured by takra do not recur; just as amrita (nectar) is for the gods, takra is to humans."

ALSO READ [Nutritionist suggests 10 winter superfoods for 'bone health, immunity, good skin and hair']

Buttermilk is not just a delicious drink, but is also super healthy and can help treat many diseases. Ayurvedic expert Dr Dixa Bhavsar said, "Ayurveda uses buttermilk both to maintain health and to treat diseases."

Here are some benefits, as shared by the expert.

- *Is easy to digest, has an astringent and sour taste, and is hot in nature.
- *Improves digestion and mitigates kapha and vata.
- *In Ayurvedic treatment, it is useful in the treatment of inflammation, digestive disorders, gastrointestinal disorders, lack of appetite, spleen disorders, and anaemia.
- *Is highly beneficial in vata imbalance related disorders.

Alzheimer's-related symptoms

New landmark study sheds light on the possible cause of Alzheimer's-related symptoms

The researchers found that the loss of synapses or connections between brain cells was strongly associated with poor performance on cognitive tests" (The Indian Express:20220225)

<https://indianexpress.com/article/lifestyle/health/study-alzheimers-disease-memory-cause-synaptic-loss-study-7788573/>

alzheimer'sWhat may be causing alzheimer's? A new study has some answers (Source: Getty Images/Thinkstock)

For many years, it has been believed that degenerative brain cells caused Alzheimer's-related symptoms like memory loss, but a new study that used advanced imaging technology has highlighted how it is synaptic loss that is responsible for the condition.

Using positron emission tomography (PET) scanning technology, Yale University researchers gauged the role of synaptic loss through a small number of brain biopsies and post-mortem brain exams conducted on patients with moderate or advanced disease. Synaptic loss is associated with sensory, motor, and cognitive impairments in neurodegenerative conditions.

Also Read |Alzheimer's care amid pandemic: All you need to know

According to mayoclinic.org, Alzheimer's disease is a progressive neurologic disorder that causes the brain to shrink (atrophy) and brain cells to die. Alzheimer's disease is the most common cause of dementia — a continuous decline in thinking, behavioral and social skills that affects a person's ability to function independently.

World alzheimer's day 2020, world Alzheimer's day, what is alzheimer's, indianexpress.com, indianexpress, Here's what you need to know about alzheimer's and its cause (Source: Getty Images/Thinkstock)

Published in the journal Alzheimer's and Dementia: The Journal of the Alzheimer's Association, on February 17, 2022, the study used the new glycoprotein 2A (SV2A) PET imaging scan to measure metabolic activity at the brain synapses of 45 people diagnosed with mild to moderate Alzheimer's disease.

How does the technology work?

Dr Pavan Pai, neurologist, Wockhardt Hospital, Mira Road informed indianexpress.com that the PET scan allows the doctor to check for any abnormalities present in the body. "Special dye with radioactive tracers can be injected into a vein in the arm based on what part of the body is being examined. Then, the doctor will tell you how the organs and tissues are working and check for heart problems, memory disorders, or cancer. This scan tends to detect changes in one's cells. Furthermore, this scan will also help with amyloid protein plaques in the brain linked to Alzheimer's disease. Alzheimer's can be diagnosed even before one notices the symptoms. The distinct patterns of cerebral glucose metabolism also help in differentiating Alzheimer's from other causes of dementia," he said.

The researchers then measure each person's cognitive performance in five key areas: verbal memory, language skills, executive function, processing speed, and visual-spatial ability.

Also Read |What is Deep Brain Stimulation? Doctor explains the 'fully-awake' surgical method for Parkinson's Disease

The study notes that the researchers can now track the loss of synapses in patients over time, providing better understanding of development of cognitive decline in individuals, said Christopher van Dyck, a professor of psychiatry, neurology, and neuroscience at Yale School of Medicine, director of the Yale Alzheimer's Disease Research Center, and senior author of the paper.

"The findings help us understand the neurobiology of the disease and can be an important new biomarker to test the efficacy of new Alzheimer's drugs," said Adam Mecca, assistant professor of psychiatry and lead author of the paper.

How pertinent is this study?

Dr Pradeep Mahajan, regenerative medicine researcher, StemRx Bioscience Solutions Pvt. Ltd., Mumbai states that Alzheimer's disease is a major cause of dementia and its prevalence is increasing worldwide. "PET scanning enabled researchers to observe the loss of synapses (gaps between nerve cells) even in patients with mild AD in the study. This is a newer mechanism as, for long it has been believed that Alzheimer's symptoms are caused by loss of connections between brain cells. Also, certain unwanted proteins accumulate in the brain in AD, which largely go undetected in early stages. PET identifies cellular level/metabolic changes, thus can be used to detect diseases earlier than other tests," he told indianexpress.com.

According to Dr Mahajan, an annual or biennial PET scan could be recommended in older individuals to observe changes of Alzheimer's, thereby enabling early identification even before symptoms set in and delay cognitive decline.

Omicron sub-lineage BA.2

Why Omicron sub-lineage BA.2 spreads faster than BA.1 "(The Hindu:20220225)

<https://www.thehindu.com/sci-tech/why-omicron-sub-lineage-ba2-spreads-faster-than-ba1/article65064889.ece>

Racing virus: After quickly spreading to many countries and becoming the dominant strain in circulation the Omicron sub-lineage BA.2 is now following the in the footsteps of BA.1 in many countries.

Racing virus: After quickly spreading to many countries and becoming the dominant strain in circulation the Omicron sub-lineage BA.2 is now following the in the footsteps of BA.1 in many countries. | Photo Credit: Getty Images

A few studies are now discovering that BA.2 sub-lineage has even higher propensity than BA.1 to spread among people

After quickly spreading to many countries and becoming the dominant strain in circulation within a very short time after Omicron was designated as a variant of concern on November 26, 2021, the Omicron sub-lineage BA.2 is now following the in the footsteps of BA.1 in many countries, including Denmark, the Philippines and South Africa in the past few weeks. This suggests that the sub-lineage BA.2 has a "selective advantage" over the original Omicron variant — BA.1 sub-lineage.

Cluster of sequences

The BA.2 has a "cluster of sequences that share many of the same mutations as the 'original' Omicron (BA.1) but is missing some mutations and has some other new ones," Dr Emma Hodcroft, co-developer of Next Strain tweeted.

A few studies are now discovering that BA.2 sub-lineage has even higher propensity to spread among people and has the ability to infect people who have been fully vaccinated and/or previously infected by escaping from neutralising antibodies induced by vaccination or infection.

A study was carried out in 24 individuals who were fully vaccinated and received a booster shot of the Pfizer vaccine and eight participants who were naturally infected with SARS-CoV-2. In people who have been fully vaccinated with the Pfizer vaccine, compared with the Wuhan strain, there was a 23-fold and 27-fold reduction in median neutralising antibody titres to BA.1 and BA.2, respectively. The results were posted in a preprint server medRxiv on February 7. Preprints are yet to be peer-reviewed.

Good protection

Two weeks after a booster shot, the reduction in median neutralising antibody titres to BA.1 and BA.2 was only 6.1-fold and 8.4-fold, respectively, compared with the Wuhan strain. The neutralising antibody titres to BA.2 were about 1.4-fold lower than BA.1. From a public health perspective, the study found that when vaccinated individuals were infected with BA.1, they developed robust neutralising antibodies against BA.2. So BA.1 infection in vaccinated people offered good protection against BA.2.

The differences in protection to BA.1 and BA.2 in both fully vaccinated and those who received a booster shot were not sufficiently different to explain why BA.2 is spreading widely in many regions of the world.

Difference in resistance

Another study by a team led by Dr. Dan H. Barouch from the Center for Virology and Vaccine Research, Boston, Massachusetts, U.S. found that both BA.1 and BA.2 had comparable ability to escape neutralising antibodies in people who are either fully vaccinated or naturally infected. Using a panel of 19 neutralising monoclonal antibodies as probes, the researchers found that like BA.1, BA.2 also totally or severely resisted 17 of 19 monoclonal antibodies but with certain critical differences. BA.1 was more resistant to one class of antibodies than BA.2, while BA.2 was more resistant to another class of antibodies tested. The results were posted as a preprint in bioRxiv server on February 9.

“These findings have important public health implications and suggest that the increasing BA.2 frequency in the context of the BA.1 surge is likely related to increased transmissibility rather than enhanced immunologic escape,” Dr. Dan H. Barouch and others write.

More infectious

Another study carried out in over 8,500 Danish households that were infected with the Omicron variant by a team led by Frederik Plesner Lyngse from the Danish Ministry of Health, Copenhagen, Denmark, found that unvaccinated, fully vaccinated and those who have received a booster shot were more susceptible to infection by BA.2 than BA.1. In short, BA.2 was more infectious than BA.1.

Surprisingly, the “relative increase in susceptibility was significantly greater in vaccinated individuals compared to unvaccinated individuals which points towards immune evasive properties of the BA.2 conferring an even greater advantage for BA.2 in a highly vaccinated population such as Denmark,” the researchers note.

Unvaccinated people infected with BA.2 had greater transmissibility than those who were infected by BA.1. But this difference between BA.1 and BA.2 was not seen in people who have been fully vaccinated or among those who have taken a booster shot. The results are posted on a preprint server medRxiv on January 30, this year.

“We conclude that Omicron BA.2 is inherently substantially more transmissible than BA.1, and that it also possesses immune-evasive properties that further reduce the protective effect of vaccination against infection, but do not increase its transmissibility from vaccinated individuals with breakthrough infections,” the Danish researchers write.

Hamster experiments

Another study posted as preprint in bioRxiv found that in cell culture, BA.2 had higher ability to replicate in human nasal epithelial cells and also the ability to fuse with cells was higher.

Importantly, infection experiments using hamsters showed that BA.2 is more pathogenic than BA.1, the authors write.

In January, another sub-lineage of Omicron — BA.3 — was detected. It has 33 mutations in the spike protein. But none of the mutations are novel. Of the 33 mutations, 31 are seen in BA.1 as well, and the remaining two are seen in BA.2.

Compared with BA.1 and BA.2, the BA.3 sub-lineage is marked by slow spread. One reason could be the absence of six mutations seen in BA.1, according to an article in the BMJ.

A few studies are now discovering that BA.2 sub-lineage has even higher propensity to spread among people and has the ability to infect people who have been fully vaccinated and/or previously infected by escaping from neutralising antibodies induced by vaccination or infection.

While BA.1 infection in vaccinated people offered good protection against BA.2, the differences in protection to BA.1 and BA.2 in both fully vaccinated and those who received a booster shot were not sufficiently different to explain why BA.2 is spreading widely in many regions of the world.

Unvaccinated people infected with BA.2 had greater transmissibility than those who were infected by BA.1. But this difference between BA.1 and BA.2 was not seen in people who have been fully vaccinated or among those who have taken a booster shot.

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Human challenge

Human challenge study finds high viral shedding in asymptomatic people"(The Hindu:20220225)

<https://www.thehindu.com/sci-tech/science/human-challenge-study-finds-high-viral-shedding-in-asymptomatic-people/article38419945.ece>

Close up of a young man having a nasal swab test done by his doctor

Close up of a young man having a nasal swab test done by his doctor | Photo Credit: Geber86

The study first detected the virus in the throat and the nose two days before peak symptoms showed up

The Imperial College London has concluded the first study on 36 participants aged 18–29 years who were deliberately exposed to low dose of SARS-CoV-2 virus through the nose, and the various facets of infection were studied. All the volunteers had no previous infection or vaccination. In all, only 18 of 36 participants became infected, and the viral load in these people increased steeply before peaking on day five post-exposure.

Virus was first detected in the throat but the viral load increased to significantly higher levels in the nose than in the throat. Viral shedding began within two days of infection and the viral load increased to high levels and remained detectable for as long as 12 days after exposure to the virus. The results are posted as a preprint server Research Square. Preprints are yet to be peer-reviewed.

“This paper is the first of a series of deep analyses that this unprecedented consortium will produce. The manufacture of a Delta challenge agent is nearly complete,” immunologist Dr. Christopher Chiu from the Imperial College of London who led the team tweeted.

The study did not find any quantitative correlation between viral load and symptoms; high viral load and high viral shedding were seen even among participants who were asymptomatic. This suggests how wrong it is to consider asymptomatic people as less likely to infect others as such people are believed to have low viral load.

Before symptoms

While it is estimated that the incubation period is about five days post-exposure before symptoms show up, the human challenge study found that symptoms were found to be associated with viral shedding within two–four days of inoculation. Importantly, virus was first detected in the throat and then the nose about two days before peak symptoms showed up. Viral load in the throat and nose increased steeply to achieve a sustained peak, in many cases before peak symptoms were reached. This corresponds to many modelling studies that indicated up to 44% of transmissions occur before symptoms show up.

“With virus present at significantly higher titres in the nose than the throat, these data provide clear evidence that emphasises the critical importance of wearing face coverings [masks] over the nose as well as mouth,” they write.

Small steps

Mild-to-moderate symptoms were reported by 16 (89%) infected participants. The symptoms began two–four days after being deliberately exposed to the virus. Loss of smell developed “more gradually” in 12 volunteers. “In this first SARS-CoV-2 human challenge study, no serious safety signals were detected,” they write.

Since this is the first time a human challenge study is undertaken using the SARS-CoV-2 virus, and with incomplete understanding of long-term effects following COVID-19 disease, the

study progressed in small steps. The investigators from the Imperial College of London undertook maximum risk reduction at the beginning and proceeded by adding more participants once clinical features of the disease were collected from the earlier sets of people who were deliberately exposed to the virus.

Initially three participants were enrolled followed by seven. All the 10 participants were given remdesivir pre-emptively once nose or throat swabs showed quantifiable SARS-CoV-2 virus. The purpose behind this was to mitigate any risk of progression to severe disease. External experts found that pre-emptive remdesivir treatment was unnecessary.

Of the first 10 participants who received pre-emptive remdesivir on PCR-confirmed infection, six became infected. There was no difference between the viral load between those who received pre-emptive remdesivir and those who did not. Among the six remdesivir-treated individuals, there was an apparent trend towards lower viral load in the nose during treatment and peaking of viral load was also delayed. But no such difference was observed in the throat. Hence pre-emptive remdesivir treatment was discontinued in other volunteers who were enrolled later.

“This study was not designed nor powered to assess the efficacy of early treatment with remdesivir so this remains to be tested,” they write.

Monoclonal antibodies

Once pre-emptive remdesivir was no longer used, clinical severity criteria based on certain symptoms such as persistent fever, persistent severe cough, greater than mild CT imaging changes were used for providing treatment with monoclonal antibodies (Regeneron), but no such treatment was ultimately required, they write.

In the 18 infected individuals, viral shedding was detected from the throat 40 hours after deliberate introduction. Viral shedding from the throat was detected earlier than in the nose. This is because viral load peaked in the throat earlier than in the nose. Viral load peaked in the throat 112 hours (about 4.7 days) after inoculation, while viral load peaked in the nose 148 hours (about 6.2 days) after the virus was introduced into the nose of participants. “However, at its peak, viral load was significantly higher in nasal samples,” they write.

Since some participants continued to shed infectious virus even 12 days after virus introduction, and, on average, viable virus was detectable 10 days post-inoculation (up to eight days after symptom onset). “These data therefore support the isolation periods of 10 days post-symptom onset advocated in many guidelines to minimise onward transmission,” they note.

Neutralising antibodies were generated in all infected participants 14 days post inoculation and further increased at 28 days.

Health Care Services

Govt. to exchange with private hospitals COVID-19 vaccines with longer expiry period"(The Hindu:20220225)

<https://www.thehindu.com/news/national/tamil-nadu/govt-to-exchange-with-private-hospitals-covid-19-vaccines-with-longer-expiry-period/article65081648.ece?homepage=true>

A health worker administers a precautionary dose to a senior citizen in Chennai on Thursday. A health worker administers a precautionary dose to a senior citizen in Chennai on Thursday. | Photo Credit: K.V. SRINIVASAN

Directorate of Public Health and Preventive Medicine issues a circular to all deputy directors The Directorate of Public Health (DPH) and Preventive Medicine has instructed all deputy directors of health services (DDHS) and the city medical officer of the Greater Chennai Corporation to review the COVID-19 vaccine availability in all vaccination centres and exchange vials with shorter expiry from private COVID-19 Vaccination Centres (PCVC) with vials having longer expiry available with the Government COVID-19 Vaccination Centres (GCVC).

In a circular issued in line with a letter from the Union Health Ministry, the DPH said that regular review on the status of vaccines available with PCVCs should be conducted either in person or entry in Co-WIN portal to know about vaccines with shorter expiry period.

The Union Health Ministry said that it had no objections to States and Union Territories exchanging near expiry vaccine vials of PCVCs with long expiry vaccine vials available with government centres after due diligence.

All DDHS and city medical officer were instructed to review the vaccine availability in all centres, including PCVCs, and ensure that no vial in GCVCs as well as PCVCs was wasted for reason of shorter expiry. If vaccines were received from the private centres as donation/exchange due to shorter expiry or other reasons, the respective district had to add stock at District Vaccine Store-level to avoid wastage.

Vaccines with shorter expiry from PCVCs can be exchanged with longer expiry vaccines available with GCVCs if the private centres make a request for exchange after ensuring that the vaccines at the PCVCs were maintained as per the temperature norms prescribed by the immunisation division of the Union Health Ministry, the vaccines are beyond one month date of expiry from the date of receipt by DIOs and by deputing the respective cold chain technicians to PCVCs to confirm the functioning of the cold chain equipment.

All DDHS were instructed that the exchanged vaccines should be exhausted before the expiry date.

COVID-19 patients

PWD to complete establishing ICU beds for COVID-19 patients"(The Hindu:20220225)

<https://www.thehindu.com/news/cities/chennai/pwd-to-complete-establishing-icu-beds-for-covid-19-patients/article65081152.ece?homepage=true>

The ₹70-crore project is being executed along with Tamil Nadu Medical Services Corporation Ltd. with financial assistance of the Centre through the National Health Mission.

The ₹70-crore project is being executed along with Tamil Nadu Medical Services Corporation Ltd. with financial assistance of the Centre through the National Health Mission. | Photo Credit: B. JOTHI RAMALINGAM

2,096 ICU beds with oxygent support being set up in 255 tertiary care hospitals

The Public Works Department will soon complete the setting up of intensive care unit beds in various hospitals across the State as part of Emergency Covid Response Plan Phase II.

Officials said the work was in full swing to build nearly 2,096 ICU beds with oxygen support in nearly 255 government tertiary care hospitals, including 37 district and 116 taluk hospitals across the State.

The ₹70-crore project is being executed along with Tamil Nadu Medical Services Corporation Ltd. with financial assistance of the Centre through the National Health Mission. In Chennai alone, nearly 305 beds are being established in 14 hospitals, including the Institute of Child Health and Hospital for Children.

About 150 sq. ft. has been allotted to set up each ICU bed and every hospital would be equipped with five, 10, 12 to 35-bed facility depending on the requirement, the officials said. The modular ICU beds would have modern equipment required to monitor the condition of the patients admitted.

The wards would have air-conditioning facility, anti-static flooring, false ceiling and stainless steel doors. Work is being taken up to refurbish windows and doors in the hospitals. The ICU wards would have dedicated rooms for doctors and nurses' station to monitor the condition of the patients.

Civil works, including electrical and toilet facilities, in the ICU wards are being carried out. Work is in progress to provide oxygen pipelines for COVID-19 ICU beds. The project was set to be completed in a few days, the officials added.

Medical Education (Dainik Bhasker 20220225)

<https://epaper.bhaskar.com/detail/1212961/4570291052/mpcg/25022022/120/image/>

किताबें तैयार करने बनाई कमेटी

देश में पहली बार... हिंदी में मेडिकल की पढ़ाई, जुलाई में जीएमसी से होगी शुरुआत

वॉररूम बनेगा... मटेरियल तैयार करने का होगा काम

हेल्थ रिपोर्टर | भोपाल

देश में पहली बार मध्यप्रदेश में मेडिकल की पढ़ाई हिंदी में होगी। हालांकि ये व्यवस्था वैकल्पिक होगी। शुरुआत में एमबीबीएस पहले वर्ष के 3 विषय एनाटॉमी, फिजियोलॉजी व बायोकेमिस्ट्री को हिंदी में कन्वर्ट (रूपांतरित) किया जाएगा। हिंदी में कंटेंट डेवलपमेंट-कोर्स मटेरियल तैयार करने के लिए एक उच्च स्तरीय हिंदी पाठ्यक्रम निर्धारण समिति बनाए जाएगी। प्रदेश में पायलट प्रोजेक्ट के तौर पर इसकी शुरुआत गांधी मेडिकल कॉलेज (जीएमसी) भोपाल से होगी। इसके बाद अन्य मेडिकल कॉलेजों में व्यवस्था लागू होगी। व्याख्यान के दौरान टीचर्स को अंग्रेजी के साथ हिंदी का उपयोग करना होगा। नेशनल मेडिकल कमीशन (एनएमसी) हिंदी में पाठ्यपुस्तकों की अनुमति नहीं देता है, इसलिए राज्य सरकार पूरक किताबें तैयार करेगी, जो हिंदी-अंग्रेजी में होंगी। इसके लिए एक कमेटी भी बनाई गई है।

ऑडियो और विजुअल में भी मिलेगा सिलेबस

हिंदी में सिलेबस किताबों के साथ ही ऑडियो व विजुअल में भी मिलेगा। इसके लिए यूट्यूब और पॉडकास्ट भी शुरू किए जाएंगे। चिकित्सा शिक्षा विभाग गठित समिति के लिए वार्षिक कैलेंडर भी बनाएगा। एक साल होने पर इसे अन्य मेडिकल कॉलेजों में लागू किया जाएगा।

लेखकों से ली अनुवाद करने की अनुमति

अप्रैल महीने में पहले साल की किताबों के कुछ खंड यानी वॉल्यूम तैयार कर लिया जाएगा। स्टेप बाय स्टेप इसे लागू किया जाएगा। कॉपी राइट में कोई दिक्कत न हो इसका ध्यान रखा जाएगा। संबंधित विषय के लेखक से उसकी किताब का हिंदी में अनुवाद करने की अनुमति ली जाएगी। कई सारे लेखकों ने इसकी अनुमति दे दी है।

चीन, रूस जैसे कई देश खुद की भाषा में चलाते हैं सिलेबस

■ जर्मनी, चीन, रूस, फ्रांस जैसे कई देशों में मेडिकल की पढ़ाई स्थानीय भाषा में ही होती है, फिर हमारे देश में क्यों नहीं हो सकती है। अभी शुरुआत जीएमसी से की जाएगी। -विश्वास सारंग, मंत्री, चिकित्सा शिक्षा विभाग

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कोरोना बढ़ा तो वैक्सीनेशन बढ़ा

दूसरी लहर

50 दिन अब केस 3.7 लाख पार हुए तो वैक्सीनेशन कामे वालों की संख्या 1.32 करोड़ पर कर गई

तीसरी लहर

सबसे ज्यादा 2.5 लाख केस पर 100% वैक्सीनेशन से 55 दिन में 99.5% ट्रिकवरा

दूसरी लहर में 5.40 लाख केस तो 60 दिन में 3 करोड़ डोज लगे; पिछले 55 दिन में 2.5 लाख केस तो डोज 1.7 करोड़

तीसरी लहर... केस बढ़े तो वैक्सीनेशन का आंकड़ा भी 100% तक पहुंच गया

अवधि

16 फरवरी से 15 फरवरी 2021

16 फरवरी से 15 मार्च 2021

16 मार्च से 15 अप्रैल 2021

16 अप्रैल से 15 मई 2021

16 मई से 15 जून 2021

16 जून से 15 जुलाई 2021

16 जुलाई से 15 अगस्त

(एक लहर के बाद डोज लगाना, लेकिन वैक्सीनेशन का दर नीचे नहीं पड़ा, क्योंकि 16 जनवरी से 15 अगस्त के बीच 7764 लोगों ने डोजें जमा कराईं।)

16 जनवरी से 15 फरवरी 2022

(केस बढ़े तो वैक्सीनेशन भी 100% के करीब पहुंच गया) | फरवरी 2021 तक 10% वैक्सीनेशन तक ही, लेकिन करीब 55 दिन में 99% ही गया।

अवधि	मोहाल में केस	मोहाल में डोज	वैक्सीनेशन
16 जनवरी से 15 फरवरी 2021 तक	4,81,188	62,000	17,228
22 मई से 9 जुलाई 2021 तक	1,32 करोड़ डोज लगे। क्योंकि इसके पहले दोन लहर में सबसे ज्यादा संक्रमित और मौत हुई।	29,162	80,776
1 जनवरी से 24 फरवरी 2022 तक	1.7 करोड़ डोज लगे। क्योंकि सबसे कम 176 की डोज लगे।	2,43,077	47,961