

News and Views

Real-World Data Suggest COVID-19 Vaccine Reduces Asymptomatic Infection Risk

Two studies based on real-world data indicate that mRNA coronavirus disease 2019 (COVID-19) vaccines decreased the risk of developing asymptomatic infection.

While one of the studies, from researchers at the Mayo Clinic, was published in a journal, the other was mentioned in a press release. The first study, published in *Clinical Infectious Diseases*, was a retrospective review of around 48,000 asymptomatic patients in Mayo Clinics in Minnesota, Wisconsin and Arizona. The patients were subjected to COVID-19 testing before undergoing surgical procedures. This included nearly 3,000 who had been given at least one dose of either the Pfizer or Moderna mRNA vaccine.

About 3.2% of the unvaccinated patients tested positive, compared to 1.4% of those who had been administered a vaccine. After adjustment for confounding variables, the relative risk of asymptomatic infection was 0.35 (95% confidence interval [CI] 0.26-0.47) with vaccination.

In a press release issued recently, Pfizer and BioNTech claimed that their vaccine was 94% effective against asymptomatic severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection. The data came from de-identified aggregate surveillance from the Israeli Ministry of Health between January 17 and March 6... (*Medpage Today*)

More Than 1 in 5 Healthcare Workers Experienced Depression and Anxiety During Pandemic: Study

New research suggests that over 1 in 5 healthcare workers have experienced anxiety, depression or post-traumatic stress disorder (PTSD) during the pandemic.

The systematic review and meta-analysis, published in *PLOS One*, included 65 studies involving more than 97,000 people. On breaking down the numbers by region, healthcare workers in the Middle East were found to have the highest rates of anxiety and depression, with 28.9% and 34.6% experiencing these mental health conditions, respectively. North America, ranking the lowest, had 14.8% of healthcare workers who experienced anxiety and 18.7% who experienced depression. Around 21.5% of healthcare workers across all regions experienced moderate levels of PTSD... (*CNN*)

HIV, High-risk Pregnancy and COVID-19

While developing COVID-19 during a high-risk pregnancy is bad both for the mother and the baby, having HIV (human immunodeficiency virus) infection as well doesn't seem to make it any worse, reports a study from South Africa.

Among 100 women diagnosed with COVID-19 while receiving care at a high-risk obstetric care service, 8 deaths were reported. These included 6 among the 72 women (8%) with COVID-19, and 2 among the 28 women (7%) who had HIV co-infection. Among the women who died during the study, only 2 of the babies they were carrying survived, reported Liesl De Waard, MBChB, of Stellenbosch University in suburban Cape Town during an oral presentation at the virtual Conference on Retroviruses and Opportunistic Infections (CROI)... (*Medpage Today*)

2021 KDIGO Clinical Practice Guideline: Major Update of BP Guidance

The updated 2021 Kidney Disease: Improving Global Outcomes (KDIGO) clinical practice guideline for the management of blood pressure in adults with chronic kidney disease (CKD) not on dialysis advises a target systolic blood pressure of <120 mmHg, given that the measurements are standardized and that the blood pressure is measured properly.

The blood pressure target is based on evidence from the Systolic Blood Pressure Intervention Trial (SPRINT). This portrays a major update from the 2012 KDIGO guideline wherein clinicians were advised to treat to a target blood pressure of ≤130/80 mmHg for patients with albuminuria and ≤140/90 mmHg for patients without albuminuria. The new target is also lower than the target of <130/80 mmHg recommended in the 2017 American College of Cardiology/American Heart Association (ACC/AHA) guideline... (*Medscape*)

Novavax Vaccine Shows 96% Efficacy Against Original Coronavirus Strain, 86% Against UK Variant

Novavax COVID-19 vaccine has been found to be 96% effective in preventing COVID-19 cases due to the original version of the coronavirus in a late-stage trial in the United Kingdom, reported the company.

No cases of severe illness or deaths were evident among those given the vaccine. Additionally, the vaccine had an efficacy of 86% in protecting against the more contagious variant first detected in the United Kingdom. The combined effectiveness rate based on data from infections due to both versions of the coronavirus was estimated as 90%. A smaller trial in South Africa, where people were exposed to another new, more contagious variant widely prevalent there, noted that the Novavax vaccine was 55% effective, based on people without HIV. However, the vaccine still completely prevented severe illness... (*Mint*)

COVID-19–related Death in Rheumatic Patients

Evaluation of data from an international registry suggests that patients with rheumatic diseases who developed COVID-19 had greater odds of death, with risk factors similar to those observed in the general population, but also because of factors specific to their underlying disease and treatment.

Out of 3,729 patients enrolled in the COVID-19 Global Rheumatology Alliance from March through July 2020, 10.5% died. Older age was a major factor in mortality - 68.7% of those who died were older than 65 years of age. The odds ratios for death were 3 (95% CI 2.13-4.22) among those 66-75 years of age, and increased to 6.18 (95% CI 4.47-8.53) for those over 75 years, reported researchers online in *Annals of the Rheumatic Diseases*. Higher disease activity at the time of COVID-19 diagnosis was shown to have a significant association with increased mortality... (*Medpage Today*)

Wearing Face Mask During Exercise Safe, Says Study

A new research suggests that wearing a face mask during intense exercise appears to be safe for healthy individuals and could diminish the risk of spread of COVID-19 at indoor gyms.

Investigators conducted detailed testing on breathing, heart activity and exercise performance in 12 people when they were using an exercise bike with and without a mask. There were differences in some measurements between wearing a mask and not wearing a mask, but none of the results pointed to any risk to health. Wearing a mask was found to have a small effect on the participants. An average reduction of around 10% was noted in their ability to perform the aerobic exercise. The findings suggested that masks could be worn safely during intense exercise to reduce COVID-19 transmission among people in an indoor gym... (*HT – ANI*)

Type 2 Diabetes Tied to Increased Risk for Parkinson's Disease

New analyses of observational as well as genetic data have suggested that type 2 diabetes is tied to an increased risk for Parkinson's disease. Two separate analyses were conducted - a meta-analysis of observational studies looking into the association between type 2 diabetes and Parkinson's and a Mendelian randomization analysis of genetic data on these two conditions. Similar results were obtained in both studies. The observational data indicated that type 2 diabetes was associated with a 21% increased risk for Parkinson's disease while the genetic data pointed to an 8% increased risk. The findings also pointed that type 2 diabetes might be linked with faster progression of Parkinson's symptoms. The analyses are reported in a paper published online in *Movement Disorders*... (*Medscape*)

WHO Urges Healthcare Workers to Allow Mother-Baby Contact

The COVID-19 pandemic has been affecting the care of sick or premature newborn babies, as many of them are unnecessarily separated from their mothers and put at risk of death or long-term health problems.

Now, two studies cited by the WHO have shown that thousands of neonatal healthcare workers are not letting mothers with confirmed or suspected COVID-19 infection have skin-to-skin contact with their newborns, and about a quarter of those who were surveyed are not allowing breastfeeding. Keeping mothers and babies together and letting the babies have kangaroo mother care could be able to save over 1,25,000 lives, reported a study published in the *Lancet EclinicalMedicine* journal.

A study published in the *BMJ Global Health* noted that two-thirds of the 1,120 healthcare workers surveyed reported that they would separate mothers and babies with a positive COVID-19 test or if there was no clarity on whether they might have the infection. Anshu Banerjee, a WHO expert in maternal and newborn health, stated that newborn babies have a right to life-saving contact with their parents and should not be denied the same due to COVID-19... (*Reuters*)

COVID-19 Antibodies Present in About 1 in 5 Blood Donations from Unvaccinated People: Data from American Red Cross

In the first week of March, over 20% of blood donations from unvaccinated people were found to have COVID-19 antibodies, report data from the American Red Cross.

From the mid of June 2020 to early March 2021, the American Red Cross assessed over 3.3 million donations from unvaccinated people across 44 states for the presence of COVID-19 antibodies. Nearly 7.5% of the donations tested in that time frame had COVID-19 antibodies, thus suggesting that the donors had likely been infected with COVID-19 at some point. Nearly 1.5% of donations tested in the first week of July were found to be positive, rising to around 4% of donations tested in the first week of October. It increased to around 12% of donations tested in the first week of January and about 21% of donations tested in the first week of March... (CNN)

Tobacco Control to Improve Child Health and Development: WHO Report

The WHO has released a new report, titled "Tobacco Control to Improve Child Health and Development" that calls for increasing awareness among practitioners and policymakers about the significance of robust tobacco control measures in order to protect the health and development of children. This includes ban on tobacco advertising, implementation of 100% smoke-free environments and increasing the taxes on tobacco.

Dr Vinayak M Prasad, Unit Head, No Tobacco (TFI) at the WHO Department of Health Promotion, has stated that creating comprehensive smoke-free policies leads to increased benefits, particularly when the policies are enforced appropriately, without any exceptions... (WHO)

Coronavirus Strains First Detected in California "Variants of Concern": CDC

Two coronavirus strains that were first detected in California have been officially declared as "variants of concern", as per the US Centers for Disease Control and Prevention (CDC).

The variants may be around 20% more transmissible, according to early research. Certain COVID-19 treatments may also be less effective against these variants, officially called B.1.427 and B.1.429. However, the CDC didn't say that vaccines won't work against them. Laboratory studies have shown that antibodies from vaccinated individuals appear to be less effective at neutralizing the strains. However, lower levels of antibodies may still suffice to protect against COVID-19, particularly severe cases. Health officials are still concerned that some treatments may not work as well against the variants... (CNN)

Disruption in Kidney Function Appears to Persist Following AKI in COVID-19

Patients who developed acute kidney injury (AKI) during hospitalization for COVID-19 were found to have significantly faster reduction in kidney function and slower recovery following hospital discharge, in comparison with patients with AKI not related to COVID-19, in a new research published in *JAMA Network Open*.

The greater decline was found to be independent of AKI severity and comorbidities. Investigators assessed 182 patients from five hospitals in Connecticut and Rhode Island who developed AKI after COVID-19 diagnosis between March 10 and August 31, 2020, and who survived after discharge and did not need dialysis within 3 days. They were compared with 1,430 patients who developed AKI not linked with COVID-19. Outpatient creatinine levels in the first 6 months after discharge revealed that among patients with AKI associated with COVID-19, the mean rate of decrease in estimated glomerular filtration rate (eGFR) after discharge was faster compared to the patients who did not have COVID-19, after adjustment for baseline characteristics and comorbidities. A subanalysis evaluated the time to recovery among 319 patients who had not fully recovered from AKI at the time of discharge. Patients with AKI after COVID had lesser odds of having experienced kidney recovery at follow-up... (Medscape)

New Clinical and Service Delivery Recommendations for HIV Prevention, Treatment and Care Released by WHO

The WHO has published new guidelines that provide new and updated recommendations on the use of point-of-care testing in children below 18 months of age and point-of-care tests to follow the treatment in people living with HIV; the treatment monitoring algorithm; as well as the timing of antiretroviral therapy (ART) in people living with HIV undergoing treatment for tuberculosis.

The new recommendations delineate pivotal new actions for countries to enhance the delivery of HIV testing, treatment and care services. The new recommendations come as an update to the 2016 WHO Consolidated Guidelines on the use of antiretroviral drugs for the treatment and prevention of HIV... (WHO)

COVID-19 Reinfection Rare, But More Common in Older Individuals: Study

Most of the people who have had COVID-19 are protected against getting the infection again for at least

6 months, reported a study published in *The Lancet*; however, older individuals appear to be more vulnerable to reinfection compared to younger people.

The study noted that only 0.65% of the patients tested positive a second time after previously being infected during Denmark's first and second waves of COVID-19 infection. This figure is much lower than the 3.27% who were found to be positive after initially being negative. It was noted that people above 65 years of age had only 47% protection against repeat infection, compared to 80% protection for younger individuals... (*Reuters*)

Baby Born to Partially Vaccinated Mother has COVID Antibodies

A baby girl born 3 weeks after her mother was vaccinated with the first dose of the Moderna COVID-19 vaccine has antibodies against the virus, reports a pre-print paper published on the *medRxiv* server.

The mother is a healthcare worker in Florida who developed COVID-19 antibodies after receiving the vaccine dose. Testing has shown that the antibodies passed through the placenta to the baby. Previous research has shown that mothers who have recovered from COVID-19 can deliver babies with antibodies, but this appears to be the first report showing that vaccination during pregnancy can also provide antibodies... (*Medscape*)

Ageism a Global Challenge, Says UN

Every second person in the world seems to be holding ageist attitudes, which results in poorer physical and mental health as well as deteriorated quality of life for older individuals, suggests a new report on ageism by the United Nations.

The report by WHO, Office of the High Commissioner for Human Rights (OHCHR), United Nations Department of Economic and Social Affairs (UN DESA) and United Nations Population Fund (UNFPA), encourages urgent action to fight ageism and calls for better assessment and reporting to uncover ageism. WHO Director-General, Dr Tedros Adhanom Ghebreyesus stated that while the world tries to recover from the pandemic, age-based stereotypes, bias and discrimination should not be allowed to restrict the opportunities to assure health and well-being of people globally... (*WHO*)

Sleep Survey Findings Highlight New Sleep Challenges Faced by Indians During Pandemic

Findings of the India Sleep Survey Report titled "Philips Global Sleep Survey 2021" have been released that

focus on the impact of COVID-19 pandemic on sleep health and the surge in acceptance of digital health technologies owing to the pandemic.

About 60% of Indians stated that they have used or are willing to use telehealth for sleep-related issues. Since the onset of the pandemic, Indian adults experienced new sleep challenges: about 37% had difficulty falling asleep, 27% reported difficulty staying asleep and 39% reported waking up during the night. The survey revealed that 80% of patients with sleep apnea experience daytime drowsiness while 52% of those without sleep apnea experience the same. About 47% of the respondents stated that sleep apnea is affecting their relationships... (*ET Healthworld*)

Aspirin can Decrease Risk of ICU Admission and Death in COVID-19 Patients: Researchers

Low-dose aspirin may have a role in protecting the lungs and decreasing the need for ventilators, suggest researchers. In a report published in the journal *Anesthesia & Analgesia*, researchers stated that aspirin could keep patients out of ICUs and could also decrease the risk of death, possibly by preventing blood clots. Researchers assessed the records of 412 patients admitted to US hospitals from March through July 2020. Nearly 24% of the patients received aspirin within 24 hours of hospital admission, or in the 7 days prior to hospitalization. Aspirin use was found to be associated with a 44% decline in mechanical ventilation, a 43% reduction in ICU admission, and a 47% decrease in in-hospital mortality... (*CNN*)

Women with PCOS have Increased Risk for COVID-19

Women with polycystic ovary syndrome (PCOS) have around 30% increased risk for COVID-19 compared with women without PCOS, even after adjusting for cardiometabolic and other related factors, suggested assessment of UK primary care data.

Investigators obtained data from The Health Improvement Network primary care database. The analysis included 21,292 women with PCOS/PCO and 78,310 controls. The mean age at diagnosis of PCOS was 27 years, while the mean duration of the condition was 12.4 years. The crude incidence of COVID-19 was found to be 18.1 per 1,000 person-years among women with PCOS compared to 11.9 per 1,000 person-years among those without the condition. Cox regression analysis adjusted for age suggested that women with PCOS had a significantly higher risk for COVID-19 compared to those without (HR 1.51)... (*Medscape*)

Indian Drugmaker to Produce 200 Million Doses of Sputnik V

The developer of Russia's Sputnik V COVID-19 vaccine stated that it had entered into a partnership with an Indian drugmaker to produce 200 million doses of the vaccine.

The Russian Direct Investment Fund (RDIF) released a statement that it had partnered with Stelis Biopharma for production and supply of at least 200 million doses of the Russian Sputnik V vaccine. The Indian drugmaker is expected to start supplying the vaccine from the second half of 2021.

RDIF stated that 52 countries have approved the use of Sputnik V vaccine. Moscow registered the vaccine in August before large-scale clinical trials, and the medical journal *The Lancet* has also stated that the jab is safe and more than 90% effective... (NDTV - Agence France-Presse)

Cancer Patients' Response Poor to First COVID-19 mRNA Vaccine Dose

Only a quarter of patients with cancer obtained protection against COVID-19 following one dose of the Pfizer/BioNTech COVID-19 vaccine, suggested a prospective study.

The study revealed a considerably low immune efficacy rate of 28% in patients with cancer, including 13% in patients with blood cancers. On the contrary, first-dose seroconversion was noted in 97% of healthy controls, stated investigators in a report posted on the medRxiv preprint server. A second dose, given at Day 21, led to adequate immunity in almost all of the cancer patients. The study thus advocated that cancer patients should be prioritized for an early second dose of the vaccine... (Medpage Today)

New Estimate of Ischemic Stroke Rate in COVID-19

Data from the American Heart Association's COVID-19 Cardiovascular Disease Registry, which included over 20,000 US adults hospitalized with COVID-19 between March and November 2020, has revealed an overall rate of ischemic stroke of 0.75%.

While the rate appears to be lower than earlier estimates of risk of ischemic stroke with severe COVID-19, it is higher than that observed in other infections, like influenza or sepsis. Patients with ischemic stroke while hospitalized for COVID-19 had double the odds of death compared to those who did not have a stroke. The data were presented at the virtual International Stroke Conference (ISC) 2021. It was noted that patients

who had an ischemic stroke were more likely older than patients who did not have a stroke and were also more likely to be male (63% vs. 54%)... (Medscape)

Lockdown due to COVID-19 Negatively Affected Mental Health of Teenagers, Says Study

A new study suggests that the lockdown imposed to check the spread of the novel coronavirus in March 2020 took a toll on mental health of teenagers.

The CS Mott Children's Hospital National Poll on Children's Health at Michigan Medicine noted 46% of parents reported that their teen has shown signs of a new or worsening mental health condition since the pandemic started in March 2020. It was more likely for parents of teen girls to say that the child had a new onset or worsening of depressive symptoms and anxiety compared to parents of teen boys.

Investigators received responses from 977 parents of teens, 13-18 years of age. According to the poll, 36% of parents of teen girls and 19% parents of teen boys reported a surge in anxiety/worry, while 31% parents of teen girls and 18% parents of teen boys reported a rise in depression/sadness... (HT - ANI)

COVID-19 Tied to Atypical Thyroid Inflammation

People experiencing inflammation of the thyroid gland during acute COVID-19 disease may continue to have subacute thyroiditis months later even if thyroid function normalizes, reveals new research.

Additionally, the thyroiditis appears to be different from the thyroid inflammation that is caused by other viruses, said Ilaria Muller, while presenting data at the virtual ENDO 2021 meeting. Investigators described patients hospitalized with severe COVID-19 in July last year. About 15% of these had thyrotoxicosis from atypical subacute thyroiditis, compared to just 1% of a comparison group that was admitted to the same ICUs during spring 2019.

The atypical thyroiditis noted in COVID-19 patients was not associated with neck pain and was found to impact more men than women. It was associated with low thyroid-stimulating hormone (TSH) and free-triiodothyronine (T3) levels, as well as normal or raised free thyroxine (T4). An evaluation of 51 patients 3 months following hospitalization for moderate-to-severe COVID-19 revealed normalization of both inflammatory markers and thyroid function; however, on imaging, one-third of patients still had focal hypochoic areas indicating thyroiditis... (Medscape)

1.4 Million Fewer People Received Care for TB in 2020

Preliminary data compiled by the WHO from more than 80 countries suggest that around 1.4 million fewer people received care for TB in the past year compared to 2019, translating to a reduction of 21% from 2019. The countries that demonstrated the biggest relative gaps include Indonesia (42%), South Africa (41%), Philippines (37%) and India (25%). The WHO issued new guidance on World TB Day in order to assist countries identify the needs of communities, the populations that have the highest risk of TB, and the locations that are most affected so that people have access to appropriate prevention and care services. Systematic use of screening tools is vital to achieve this aim... (WHO)

Inequity of COVID-19 Vaccines Becoming "More Grotesque Every Day", Says WHO Chief

The increasing gap between the number of vaccines being given in rich countries and those given through COVAX is becoming "more grotesque every day", stated the chief of the WHO.

Director-General of the WHO, Tedros Adhanom Ghebreyesus, had stated in January that the world was on the verge of a disastrous moral failure and there is a need for urgent action to ensure equitable distribution of vaccines. At a recent news briefing, he stated that little has been done to avert this failure, adding that WHO was constantly working to find solutions to enhance the production and equitable distribution of vaccines across the world. He emphasized that some countries are vaccinating their entire populations, while others have no vaccine at all... (UN)

Interval Between Doses of Covishield Increased to 4-8 Weeks in India

The Indian Government decided to increase the interval between the two doses of Covishield vaccine to 4-8 weeks, stated the Health Ministry.

According to the Ministry, the protection is increased if the second dose of the vaccine is given between 6-8 weeks, but not later than 8 weeks, considering the existing scientific evidence. The Center has directed states and union territories to increase the interval between two doses of Covishield on the basis of recommendations of National Technical Advisory Group on Immunization (NTAGI) and National Expert Group on Vaccine Administration for Covid-19 (NEGVAC). (ET Healthworld – IANS)

Israel, New Zealand Give Interim Approval for Sale of Nitric Oxide Nasal Spray

Israel and New Zealand have provided interim approval for the sale of Nitric Oxide Nasal Spray (NONS) developed by SaNOTize Research and Development. The spray could help prevent the transmission of COVID-19 virus, stated the company.

Manufacturing of NONS has been started in Israel with SaNOTize's partner Nextar Chempharma Solutions Ltd and the product is expected to be on sale this summer. Meanwhile, in New Zealand, the company has registered the spray with the New Zealand Medicines and Medical Devices Safety Authority. The company has been allowed there to distribute and sell the nasal spray over-the-counter immediately. New Zealand's Health Ministry; however, clarified that the spray has not been approved for use as an antiviral nasal spray... (Reuters)

UK is Planning COVID-19 Vaccinations for Children from August

Children in the United Kingdom will likely start receiving a COVID-19 vaccine from August under provisional government plans in order to push for maximum immunity nationwide from the coronavirus, reported in *The Telegraph*.

This timeline would be months earlier than anticipated, stated the newspaper. Officials are awaiting the results from a child vaccine trial being conducted by Oxford University on the vaccine that it has developed along with AstraZeneca Plc, before a final decision on the rollout is taken. According to *The Telegraph*, safety data from the study of 300 individuals aged 6-17 years will be available soon, with conclusions expected in June or July... (Reuters)

Less Sleep, More Professional Burnout Tied to Higher Risk for COVID-19: Study

A new study, published online in *BMJ Nutrition, Prevention and Health*, has shown that more sleep at night, few or no sleep problems and low levels of work-related burnout among healthcare workers who are considered to have a high risk for exposure to COVID-19 patients, seem to be linked with a reduced risk of developing COVID-19.

For every extra hour of sleep at night, the risk for COVID-19 declined by 12% in the study that included 2,844 frontline healthcare workers. Participants who experienced work-related burnout had 2.6-fold greater likelihood of reporting having COVID-19, having the

illness for a longer duration, and having more severe COVID-19... (*Medscape*)

CDC: Counties with Large Asian, Black or Hispanic Populations had Higher Number of Coronavirus Cases

The US CDC has stated that the counties in the United States that had large Black, Asian and Hispanic populations had a greater number of COVID-19 cases in the initial months of the pandemic. A new study suggests that over a quarter of counties with large Asian or Black populations had a high incidence rate of COVID-19 infections in the first 2 weeks of April 2020. High incidence has been defined by the CDC as over 100 new cases per 1,00,000 people in the population. At the time, around 11.4% of all counties were reported to have a high COVID-19 incidence rate, as opposed to around 29% of counties that had an above-average share of Asian individuals and about 28% of counties with an above-average share of Black individuals... (*CNN*)

COVID-19: Remdesivir Beneficial in Minority Groups

Remdesivir was found to be associated with faster clinical improvement in a largely non-white group of patients admitted to the hospital with COVID-19, reported a new study. A little over 80% of patients receiving remdesivir in the study identified as non-white. A retrospective analysis of nearly 2,300 hospitalized COVID-19 patients in Baltimore and Washington, DC noted that the median time to clinical improvement was shorter among patients who were given remdesivir compared to those who were not given the drug (5 vs. 7 days, adjusted HR 1.47, 95% CI 1.22-1.79). There was no significant difference in 28-day mortality, though the trend favored remdesivir (7.7% vs. 14.0% in controls). The findings were published in *JAMA Network Open*... (*Medpage Today*)

Oral COVID Vaccine to Enter Clinical Trials

A COVID-19 vaccine that could be taken as an oral pill may enter into clinical trials in the second quarter of this year. The oral vaccine is being developed by Oravax Medical, a joint venture of the Israeli-American company Oramed and the Indian company Premas Biotech. An advantage of an oral vaccine is that it can be taken at home instead of having it administered by healthcare personnel at a central location. It would also be easier to distribute an oral vaccine as it could be shipped in a normal refrigerator and stored at room temperature. This yeast-based vaccine targets three structural proteins of the novel coronavirus... (*Medscape*)

Caffeine Prior to Exercise Helps Burn Fat

Intake of caffeine, or drinking strong coffee, half an hour prior to doing aerobic exercise can escalate fat-burning, suggests a new study.

The effects of caffeine appear to be higher if the exercise is done in the afternoon as compared to when it is done in the morning, reported the authors in the *Journal of the International Society of Sports Nutrition*. It was noted that taking caffeine 30 minutes before aerobic exercise increased fat oxidation during exercise, irrespective of the time of day. The rate of fat-burning was found to be higher in the afternoon compared to morning for equal hours of fasting. Additionally, in comparison with placebo, caffeine was found to raise fat oxidation by 10.7% in the morning and 29% in the afternoon. Caffeine also had an impact on exercise intensity, increasing it by 11% in the morning and 13% in the afternoon... (*Medscape*)

COVID-19 Vaccines Provide Protection for Pregnant and Lactating Women and Their Newborns

A new study published in the *American Journal of Obstetrics and Gynecology* has noted that the Pfizer/BioNTech and Moderna COVID-19 vaccines are effective among pregnant and lactating women, and that they can pass protective antibodies to their newborns.

Researchers at Massachusetts General Hospital, Brigham and Women's Hospital and the Ragon Institute of MGH, MIT and Harvard evaluated 131 women who were administered either the Pfizer/BioNTech or Moderna vaccine. Eighty-four of these women were pregnant, 31 were lactating and 16 were not pregnant. Investigators collected samples from the study participants from December 17, 2020 through March 2, 2021. The vaccine-induced antibody levels appeared to be equivalent in pregnant and lactating women, compared to nonpregnant women. The antibody levels were considerably higher than the levels reached after coronavirus infection during pregnancy. It was also noted that these women passed protective antibodies to their newborns, measured in breast milk and placenta... (*CNN*)

Glucocorticoid Use at Presentation Tied to Severe Outcomes of COVID-19 in Patients with Systemic Vasculitis

A study published in *Arthritis & Rheumatology* has noted that among patients with systemic vasculitis, glucocorticoid use at presentation and comorbid respiratory disease are linked with severe outcomes of

COVID-19. The study looked at data from 65 patients with systemic vasculitis who contracted COVID-19 infection and were registered with the UK and Ireland Vasculitis Registry and the Irish Rare Kidney Disease Registry. Around 85% of the study participants had antineutrophil cytoplasm antibody (ANCA)-associated vasculitis (AAV). About 69% of the participants were receiving background glucocorticoids at the time of COVID-19 diagnosis. Background glucocorticoid treatment was found to be associated with severe outcome with an adjusted odds ratio (aOR) of 3.7. Comorbid respiratory disease was also linked to a severe outcome in these patients with an aOR of 7.5... (DG Alerts)

Successful Results Prompt Early Closure of Drug-resistant TB Trial

Médecins Sans Frontières (MSF/Doctors without Borders) have announced that the phase II/III trial of a 6-month multidrug regimen for multidrug-resistant tuberculosis (MDR-TB) has been stopped early as it was ascertained by an independent DSMB that the multidrug regimen was superior to current therapy, stated a press release. The TB PRACTECAL trial compared the local standard of care with a 6-month regimen of bedaquiline, pretomanid, linezolid and moxifloxacin. The interim analysis involved 242 patients and the randomized controlled trial was done in Belarus, South Africa and Uzbekistan. The preliminary data will be shared with the WHO and will be submitted to a peer reviewed journal as well... (Medscape)

COVID-19 in Pregnancy Tied to Adverse Maternal and Fetal Outcomes

SARS-CoV-2 infection in pregnancy has been found to be associated with increased risks of pre-eclampsia, preterm birth and other adverse pregnancy outcomes in a meta-analysis published in the *Canadian Medical Association Journal*.

The meta-analysis included 42 studies involving 4,38,548 pregnant women. In comparison with no infection, SARS-CoV-2 infection in pregnancy was found to be linked with pre-eclampsia (odds ratio [OR] 1.33), preterm birth (OR 1.82) and stillbirth (OR 2.11). Additionally, having the infection in pregnancy was tied to a heightened risk of ICU admission, neonatal ICU (NICU) admission and lower birth weight, when compared with pregnancy without SARS-CoV-2 infection. Severe COVID-19 during pregnancy had a strong link with pre-eclampsia, preterm birth, gestational diabetes, low birth weight, NICU admission and cesarean delivery, when compared with mild infection... (DG Alerts)

Encephalopathy Common, Fatal in Hospitalized COVID-19 Patients

According to new research published in *Neurocritical Care*, toxic metabolic encephalopathy (TME) appears to be common and often fatal in hospitalized COVID-19 patients. A retrospective study of around 4,500 patients with COVID-19 noted that 12% were diagnosed with TME. About 78% of these developed encephalopathy immediately before hospitalization. The most common causes included septic encephalopathy, hypoxic-ischemic encephalopathy (HIE) and uremia; however, multiple causes were identified in nearly 80% of the patients. TME was also found to be tied to a 24% higher risk of death during hospitalization. The researchers noted that around 1 in 8 patients hospitalized with COVID-19 had TME, which was not connected with the effects of sedatives... (Medscape)

Harmony Transcatheter Pulmonary Valve Approved by FDA

The first in the world nonsurgical heart valve has been approved by the US FDA for the treatment of children and adult patients with a native or surgically-repaired right ventricular outflow tract (RVOT).

The device is intended for use in patients with severe pulmonary valve regurgitation. The Harmony Transcatheter Pulmonary Valve (TPV) System aims to improve blood flow to the lungs in patients with severe pulmonary valve regurgitation without having to do open-heart surgery. The use of the new device is expected to delay the time before a patient needs additional open-heart surgery. The use of the device may also decrease the total number of open-heart surgeries required over a person's lifetime... (FDA)

More Americans Below 30 Report Anxiety, Depression During Pandemic: CDC

More young adults in the US reported having anxiety or depression over the past 6 months of the COVID-19 pandemic, and fewer individuals reported getting the required help, suggests a US government study.

It was noted that the percentage of adults below 30 years of age with recent symptoms of anxiety or depressive disorder increased significantly nearly 5 months after the COVID-19-related lockdowns were imposed. From August 2020 to February 2021, this number rose to 41.5% from 36.4%. According to the study, the surge in anxiety or depressive disorder symptoms corresponded with the weekly figures of reported COVID-19 cases... (Reuters)

EU Regulator Supports Pfizer Vaccine Storage at Regular Freezer Temperature

The EU drugs regulator stated that the Pfizer/BioNTech COVID-19 vaccine can be stored at normal freezer temperatures for short periods of time instead of being kept in ultra-cold storage.

The European Medicines Agency stated that this change would facilitate rapid rollout of vaccines across Europe. The EU regulator gave a positive opinion to permit the transportation and storage of vaccine vials at temperatures of -25 to -15°C, for a one-off period of 2 weeks. This is a substitute to the long-term storage at a temperature of -90 to -60°C in special freezers, said the regulator.

The US had also made a similar decision about the Pfizer vaccine on February 25... (NDTV - Agence France-Presse)

Infected Saliva could Push COVID Through the Body, Says Study

The sites of SARS-CoV-2 infection are well-known in the airways and other body parts; however, new research suggests that the virus infects mouth cells as well.

The new findings may help explain the loss of taste and smell, dry mouth and blistering seen in some patients with COVID-19. This comes as the first direct evidence that SARS-CoV-2 not only infects and replicates in cells of the mouth but the fluid generated by the mouth is infectious too. The researchers noted that the salivary glands were actually working as a virus production factory. Additionally, the study findings also help validate the importance of wearing masks, appropriate use of personal protective equipment (PPE) and social distancing. The findings are published online in *Nature Medicine*... (Medscape)

\$29 Billion a Year Required by 2025 to Get Back on Track in the Fight Against AIDS

A new report from UNAIDS, the agency working towards ending HIV and acquired immune deficiency syndrome (AIDS), has revealed that an investment of \$29 billion a year to HIV response in low- and middle-income countries by the year 2025 will help us get back on track to eliminate the virus as a public health threat by 2030.

The agency adopted the new Global AIDS Strategy 2021-2026 during a special session held on March 24 and 25, 2021. The new strategy updates the 2016 targets for 2020, which were unmet. The three priorities mentioned in the strategy include maximizing equal

access to comprehensive people-centered HIV services; breaking down legal and societal barriers to attaining HIV outcomes; and sustaining HIV responses and incorporating them into systems for health, social protection and humanitarian settings... (UN)

Pfizer, Moderna Coronavirus Vaccines Highly Effective After First Dose in Real-World

The Pfizer/BioNTech and Moderna COVID-19 vaccines have been shown to decrease the risk of COVID-19 infection by 80% 2 weeks or more following the first dose in data obtained from a real-world US study.

The study included around 4,000 US healthcare personnel and first responders and revealed that the risk of infection declined by 90% by 2 weeks following the second dose. The real-world data from the use of these mRNA vaccines confirm the efficacy seen in large controlled clinical trials conducted before EUAs were given by the US FDA. The findings endorse previous studies that suggested that the vaccines started working soon after the first dose, and verify that they prevent asymptomatic infections as well... (Reuters)

Very Low Chance of COVID-19 Origin from Frozen Food: WHO Report

International health experts have stated that the odds that COVID-19 emerged in Wuhan from imported frozen food are very low, thus questioning one of the key theories China has adopted for the cause of the first COVID-19 outbreak in late 2019.

China has challenged the initial assumption that the virus originated in Wuhan. Scientists from the WHO and China have reported that the chances of a cold-chain contamination with the virus from a reservoir are extremely low, adding that the introduction of the virus into the country through frozen food would have been 'extraordinary' in December 2019, considering the fact that it had not been detected anywhere else at that time. The report stated that the odds were high that the virus first passed to humans from a bat through an intermediary animal... (NDTV - Agence France-Presse)

COVID Vaccine Hesitancy could Result in More Deaths, Longer Restrictions

Researchers with Imperial College London (ICL)'s COVID-19 Response Team attempted at modeling what would happen with vaccine hesitancy and noted that despite the availability of highly effective vaccines against the virus, at the current levels of vaccine hesitancy in the United States, the country would need to continue with interventions like closing of workplaces and

schools and wearing masks at least through the end of next year in order to keep the pandemic under control. It is also estimated that thousands of more people, both vaccinated and unvaccinated ones, could die and need hospital admission over the coming months because some people question the vaccines. The model also predicts several surges in COVID-19 cases in the future, particularly over the winter months, which may continue into 2024... (*Medscape*)

Congenital Heart Disease Alone does not Increase COVID-19 Risk

According to new research, adults with congenital heart disease (CHD) do not have an inherently increased risk for COVID-19 mortality or severe infection. However, physiological stage was a key risk factor.

Investigators noted that among patients with confirmed or suspected COVID-19, those across the spectrum of CHD complexity and comorbidity had a case fatality rate of 2.3%, which is comparable with the general population. Presence of a structural CHD was not essentially predictive of an increased risk of mortality or morbidity from COVID-19 infection. In this study of 1,044 infected CHD patients, worse physiological stage (cyanosis, pulmonary hypertension) was found to have a link with mortality, while anatomic complexity and defect group did not. The findings are published in the *Journal of the American College of Cardiology*... (*Medpage Today*)

T cells-induced by COVID-19 Respond to New Variants

A US laboratory study suggests that T cells that respond to fight infection from the original version of the novel coronavirus appear to provide protection against three of the concerning new virus variants as well.

The study by researchers at the NIAID assessed blood samples from 30 individuals who had recovered from COVID-19 prior to the emergence of the new variants. Investigators identified a specific form of T-cell from these samples that was active against the virus, and analyzed how these T cells worked against the new variants from South Africa, the UK and Brazil. The T-cell responses remained intact to a great extent and were able to identify all mutations in the variants that were assessed. The paper was accepted for publication in *Open Forum Infectious Diseases* (*Reuters*)

Depressive Symptoms and Inflammatory Diet Tied to Higher Frailty Risk

Depressive symptoms and a pro-inflammatory diet, including red meat, refined carbohydrates and sweetened beverages, seem to heighten the risk of frailty in adults, according to new research.

New findings from the Framingham Heart Study suggest that adults with depressive symptoms who consumed such a diet had a 28% higher likelihood of developing frailty compared to their counterparts who did not have depression, but consumed a pro-inflammatory diet. Over a 16-year period, 227 participants became frail. The mean dietary inflammatory index (DII) for the study group was -0.17. The mean DII for frail individuals was 0.08 while that for nonfrail individuals was -0.20. A more positive score indicates a more pro-inflammatory diet. The mean Center for Epidemiologic Studies Depression (CES-D) score at baseline was significantly higher in frail individuals compared to nonfrail ones. After the investigators adjusted for baseline age, sex, energy intake, smoking, diabetes treatment, cardiovascular disease and nonmelanoma cancers, a 1-unit higher DII was tied to 13% higher likelihood of developing frailty in those with no depressive symptoms (CES-D <16) and 41% higher odds in those having depressive symptoms (CES-D >16). The study was presented at the virtual Anxiety and Depression Association of America (ADAA) Conference 2021... (*Medscape*)

Abbott's Rapid COVID-19 Test for At-home Testing in those without Symptoms Cleared in US

Abbott Laboratories has stated that US regulators have cleared the company's rapid COVID-19 antigen test for over-the-counter, at-home use among people who do not have symptoms, thus rendering the tests more easily available for regular screening at places like schools and workplaces.

The company will start shipping the test to retailers in the coming weeks. This is an extensively available COVID-19 test in the United States and provides results in about 15 minutes. People will now be able to purchase the tests at stores or online without a prescription and use them at home. It will be sold to retailers for less than \$10 each; however, the cost of the test when sold over-the-counter is not clear yet... (*Reuters*)

