News and Views

Pulse Oximeters not to be Used to Diagnose COVID-19: US FDA

The US Food and Drug Administration (FDA) has cautioned that pulse oximeters should not be used to diagnose COVID-19. The devices could give inaccurate readings under some situations, stated the agency.

The World Health Organization had included the use of pulse oximeter to detect patients who may require hospitalization in its clinical advice for treating COVID-19 in the month of January. The FDA has stated that the devices cannot be used to diagnose or exclude COVID-19. The agency further recommended not to depend on them to evaluate health. The agency recommended that attention should be focused on other indicators of low oxygen, including blueness of the face or a rapid pulse… *(Reuters, February 20, 2021)*

Pfizer Says its COVID-19 Vaccine Can Be Stored in Ordinary Freezers

BioNTech and its partner Pfizer have stated that investigation suggests that their COVID-19 vaccine can tolerate warmer temperatures than previously believed.

The companies mentioned that they have requested the US Food and Drug Administration to allow that the vaccine be stored for up to 2 weeks at -25 to -15 degrees Celsius, i.e., -13 to 5 degrees Fahrenheit. These are the common temperatures in pharmaceutical freezers and refrigerators. The existing guidelines suggest that the vaccine needs to be stored at -80 to -60° C until 5 days prior to use. Pfizer CEO Albert Bourla said that if approval is granted, the new storage option would enable pharmacies and vaccination centers better manage the vaccine supply… *(NDTV - Agence France-Presse, February 19, 2021)*

It is Unlikely that Food and Food Packaging Spread COVID-19

It is highly unlikely that food and food packaging can spread COVID-19, stated the US Food and Drug Administration, (FDA) US Department of Agriculture and the Centers for Disease Control and Prevention.

An FDA statement mentioned that available information and international scientific consensus support that foods that people consume and food packaging they touch are highly unlikely to spread COVID-19 infection. The agencies emphasized that there was a dearth of reliable evidence that could suggest that food or food packaging can transmit SARS-CoV-2. The FDA added that the amount of virus particles that could be picked up through touching a surface would be very small while the amount that is required to cause infection by means of oral inhalation would be very high. Therefore, the odds of catching infection by touching the surface of food packaging or eating food appear to be very low… *(CNN, February 19, 2021)*

Exposure to Air Pollution *in utero* Linked to Poorer Cognition Later

A study published online in the *Journal of Alzheimer's Disease* noted that *in utero* exposure to air pollution appears to be linked with poorer cognition later in life.

The longitudinal study noted that exposure to air pollution in early life seems to have a small yet detectable association with worse cognition from 11 to 70 years of age. The effect size, though, was small.

Investigators assessed data from 572 individuals in the Lothian Birth Cohort 1936 with information on lifetime residential history. Participants were subjected to the Moray House Test of cognitive ability at 11 years of age and again at 70, 76 and 79 years of age. A small association was evident between exposure to greater levels of air pollution in 1935, when participants were *in utero*, and worse cognition between age 11 years and 70 years… *(Medscape)*

WHO Update on New Molecular Assays for Diagnosis of TB and Drug Resistance

The World Health Organization (WHO) has announced vital updates on new molecular assays in a Rapid Communication, which is expected to result in significant improvements in the diagnosis of tuberculosis (TB) and drug resistance among adults, adolescents as well as children.

A meeting of a Guideline Development Group was convened in December 2020 to update WHO policies on molecular assays employed for the diagnosis of TB and drug resistance. The evidence reviewed and presented in the Rapid Communication point to high diagnostic accuracy for 3 new technologies, including moderate complexity automated nucleic acid amplification tests

(NAATs), to detect TB and resistance to rifampicin and isoniazid; low complexity automated NAATs to identify resistance to isoniazid and second-line anti-TB agents; and high complexity hybridization-based NAATs to detect resistance to pyrazinamide… *(WHO, February 17, 2021)*

South African Variant could Diminish Vaccine Protection, Says Pfizer

The South African variant of the coronavirus may cause a two-thirds reduction in the antibody protection provided by the Pfizer/BioNTech vaccine, suggests a laboratory investigation. It is still not known whether the vaccine will be effective against the mutation, stated the companies.

According to the study, the vaccine could neutralize the virus and evidence is not yet available from trials in people to suggest that the variant alters the protection extended by the vaccine.

Investigators studied an engineered virus and the blood obtained from individuals who had received the vaccine. There was a decline in the level of neutralizing antibodies by two-thirds compared to its effect on the most common version of the coronavirus in US trials. The study is published in the *New England Journal of Medicine… (Reuters, February 18, 2021)*

Britain Approves Trial Exposing People to COVID-19

The United Kingdom has become the first country in the world to approve the human challenge trials that will expose volunteers to COVID-19.

The trial is expected to start in a month's time. It will include about 90 healthy volunteers aged 18 to 30 years who will be exposed to the smallest amount of the virus required to cause the infection. Investigators will assess the volunteers for possible health risks.

The volunteers will be in quarantine for monitoring for a period of at least 14 days in a specialist unit at London's Royal Free Hospital. Peter Openshaw, professor of experimental medicine at Imperial College London, stated that safety of the volunteers is the priority. Volunteers will be given a compensation of around £88 per day for the study period, and will include follow-up evaluation for 1 year. To ensure safety, the SARS-CoV-2 virus that has been circulating in England since March 2020 will be used, and not a new variant… *(ET Healthworld – Reuters, February 18, 2021)*

New Guidelines for Travelers as New COVID Variants Detected in India

New set of travel guidelines has been issued following the detection of two new, more contagious South African and Brazilian variants of SARS-CoV-2 in India.

The health ministry stated that the new rules are applicable to all international passengers entering India, except those from the UK, Europe and Middle East. While the South African variant has been detected in four people, the Brazil variant has been found in one individual thus far, stated the Indian Council of Medical Research. According to the new rules, only passengers whose RT-PCR test results are negative 72 hours prior to departure will be allowed to board the flight. Passengers traveling due to a death in the family will be exempted… *(NDTV, February 18, 2021)*

WHO Lists Two More COVID-19 Vaccines for Emergency Use and Rollout

The World Health Organization (WHO) has authorized two versions of the AstraZeneca/Oxford COVID-19 vaccine for emergency use.

The vaccines can now be rolled out across the globe through COVAX Facility. The two newly approved vaccines have been manufactured by AstraZeneca-SKBio (Republic of Korea) and the Serum Institute of India.

WHO's Emergency Use Listing (EUL) determines the quality, safety and efficacy of COVID-19 vaccines and is essential for vaccine supply under the COVAX Facility. The EUL enables countries to accelerate their regulatory approval in order to import and administer the vaccines. In this case, WHO looked at the data available on quality, safety and efficacy, as well as risk management plans and cold chain requirements, and the process was complete in less than 4 weeks… *(WHO, February 15, 2021)*

Pfizer-BioNTech COVID-19 Vaccine Decreases Symptomatic Infection in Real World: Israeli Researchers

Researchers from Israel suggest that the Pfizer-BioNTech COVID-19 vaccine seems to decrease symptomatic COVID-19 infections by over 90% in the real world.

Preliminary findings indicate that the vaccine is highly effective in a mass vaccination campaign. The Clalit Research Institute looked at data on 1.2 million people; nearly half of these received the Pfizer-BioNTech vaccine. Patients receiving the vaccine were compared with

those who didn't. The rate of symptomatic COVID-19 was found to reduce by 94% among those who were given two doses of the vaccine. Additionally, the rate of serious illness was found to be reduced by 92%. The findings are in line with data obtained from Pfizer's vaccine trial, which stated that the vaccine yielded 95% protection against symptomatic COVID-19… *(CNN, February 15, 2021)*

Younger People Half as Likely as Adults to Contract COVID-19: Study

A new modelling study has shown that individuals below the age of 20 years have about half the odds of contracting COVID-19 infection, compared to adults. These individuals also have lesser odds of transmitting the disease to others.

The study looked at 637 households whose members had undergone PCR testing in spring last year. Some of them also underwent serology testing for antibodies to SARS-CoV-2. It was noted that those below 20 had 43% lesser susceptibility to COVID-19 as compared to those above 20. Children appeared to have greater odds of getting a negative PCR result in spite of being infected. This could probably account for the reports from across the globe that lesser number of children are diagnosed in comparison with adults. The findings are published in the journal *PLOS Computational Biology… (NDTV – PTI, February 15, 2021)*

DR Congo Starts Ebola Vaccination Campaign

The Democratic Republic of Congo has initiated an Ebola vaccination campaign in the east following an outbreak in early February, stated the WHO.

DR Congo had reported four confirmed cases of Ebola since a resurgence declared on 7 February in Butembo. Health workers at a medical center, where the first Ebola patient was treated, have been the first to receive the vaccination. Guinea, in West Africa, has also announced an Ebola outbreak. A previous Ebola outbreak in DR Congo was declared to have been over in June 2020. Nearly 8,000 doses of the Ervebo vaccine, the first Ebola vaccine to receive the US Food and Drug Administration (FDA) approval in December 2019, are being used in the vaccination campaign… *(BBC, February 15, 2021)*

US CDC Issues Guidance for Reopening of Schools

The US Centers for Disease Control and Prevention (CDC) has issued new guidance for reopening of US schools. The agency recommends universal wearing of masks and physical distancing as important strategies to control COVID-19.

The guidelines also stress on facility cleaning, personal hygiene as well as contact tracing. CDC Director Rochelle Walensky stated that with the strategies suggested by the agency, there will be little to no transmission of COVID-19 in schools, if followed properly. The agency also recommended that priority should be given to teachers and school staff for COVID-19 vaccination.

US President Joe Biden had also assured that most K-8 schools would be reopened within 100 days of his taking office on January 20. The President lauded the agency's new guidance as he highlighted the problems faced by children due to school closure… *(Reuters, February 12, 2021)*

COVID Antibodies May Last for 8 Months After Vaccination, Says AIIMS Director

The director of All India Institute of Medical Sciences (AIIMS), Dr Randeep Guleria, has stated that antibodies against the SARS-CoV-2 virus may last for up to 8 months or even longer following vaccination against COVID-19.

He further stated that scientists are exploring the long-term protection provided by the vaccines. He mentioned that antibodies will develop around 14 days following the second dose of the vaccine, adding that while it was not clearly known as to how long the protection will last, but it is believed to last for a duration of at least 8 months, or longer.

He stated that people aged above 50 years will start getting the vaccination from March 2021… *(ET Healthworld – IANS, February 12, 2021)*

Alien Cells May Account for COVID 'Brain Fog'

New research suggests that the long-term neurologic symptoms, such as brain fog, that some patients with COVID-19 experience, may occur as a result of the occlusion of brain capillaries by large megakaryocytes. The findings, shared in a research letter, report on five post-mortem cases from patients who succumbed to COVID-19. Researchers noted large cells that resembled megakaryocytes in cortical capillaries. Immunohistochemistry validated that they were megakaryocytes. According to the researchers, megakaryocytes have not been seen in the brain previously. The report is published online February 12 in *JAMA Neurology*.

Lead author David Nauen noted these cells in the first evaluation of brain tissue from a COVID-19 patient. He

found no viral encephalitis, but there were unusually large cells in the brain capillaries. He stated that he had never seen these cells in the brain before… *(Medscape)*

High Rates of Anxiety Among Physician Mothers

A new report suggests that physician mothers are reporting increased rates of moderate-to-severe anxiety during the COVID-19 crisis. Among them, frontline workers and informal caregivers have the highest rates of anxiety.

A survey was conducted among the Physician Moms Group on Facebook. Among over 1,800 respondents, around 41% of them had scores above the Generalized Anxiety Disorder 7-item scale (GAD-7) cutoff for moderate-to-severe anxiety. Additionally, 18% were found to have severe anxiety. Frontline workers and informal caregivers had higher anxiety levels. About 46% of them scored on the higher end of the GAD-7. The data is published in the *American Journal of Psychiatry… (Medpage Today)*

Drug to Reduce Bone Marrow Suppression Due to Chemotherapy Approved

Trilaciclib became the first drug in its class to be approved by the US Food and Drug Administration for reducing the incidence of chemotherapy-induced bone marrow suppression in patients being given chemotherapy for extensive-stage small cell lung cancer.

The drug may provide protection to the bone marrow cells against damage from chemotherapy by inhibition of cyclin-dependent kinase 4/6.

Three randomized, double-blind, placebo-controlled trials conducted in patients with extensive-stage small cell lung cancer randomized a total of 245 patients to either trilaciclib or a placebo prior to chemotherapy. Patients given trilaciclib were found to have reduced odds of having severe neutropenia in comparison with patients receiving a placebo. Among the patients who had severe neutropenia, those on trilaciclib treatment had it for a shorter duration on average, compared to patients who received a placebo… *(FDA, February 12, 2021)*

Acute Malnutrition Estimated to Affect 2.3 Million Children Under Five in Yemen in 2021

It is estimated that around 2.3 million children below 5 years of age in Yemen will likely suffer from acute malnutrition in 2021, warn four United Nations agencies.

Overall, 400,000 among these are estimated to have severe acute malnutrition and could even die if urgent treatment is not provided. These numbers represent an increase in acute malnutrition and severe acute malnutrition of 16% and 22%, respectively, among children under 5 years of age in comparison with 2020.

The data come from the Integrated Food Security Phase Classification (IPC) Acute Malnutrition report that has been released by the Food and Agriculture Organization of the United Nations (FAO), the United Nations Children's Fund (UNICEF), the World Food Programme (WFP), the World Health Organization (WHO) and partners… *(WHO, February 12, 2021)*

UK Coronavirus Variant Accounts for 18% of COVID Infections in Italy

The more contagious variant of the coronavirus that was first detected in Britain is estimated to account for around 17.8% of all new COVID-19 cases in Italy, stated the health ministry.

The estimated COVID-19 reproduction "R" number has reportedly increased to 0.95 from 0.84 during the last week, added the health ministry. Officials cautioned that new restrictions will be announced for several regions. British scientists had stated that the variant, first detected in southeast England at the end of 2020, is about 70% more contagious than other variants, and is associated with a 30% higher mortality risk. Italy's National Institute of Health stated that this variant would probably become the dominant one in Italy in the months to come… *(Reuters, February 12, 2021)*

Steep Fall in India's Active COVID-19 Cases

The active COVID-19 cases in the country have shown a sharp fall, coming down to 1.35 lakh on Friday. Over a period of 24 hours, only 1 state recorded more than 1,000 cases.

Four states and UTs including Daman and Diu, Dadra and Nagar Haveli, Ladakh, Tripura and Andaman and Nicobar Island did not report any new case in the previous 24 hours.

Daily deaths have also shown a decline, with 18 states and UTs not reporting any new deaths in 24 hours. Thirteen states reported 1-5 deaths. The health ministry stated that 9309 new confirmed COVID-19 cases were reported in the previous 24 hours in the country, and 15,858 patients recovered. The national recovery rate stands at 97.32%... *(ET Healthworld, February 12, 2021)*