Covid-19: New global test will give results 'in minutes'


Lengthy gaps between taking a test and receiving a result have hampered many countries’ attempts to control the spread of coronavirus.

A test that can diagnose Covid-19 in minutes will dramatically expand the capacity to detect cases in low- and middle-income countries, the World Health Organization (WHO) has said.

The $5 test could transform tracking of Covid-19 in less wealthy countries, which have shortages of healthcare workers and laboratories, the BBC reported on Monday.

A deal with manufacturers will provide 120 million tests over six months.

The WHO’s head called it a major milestone.

Lengthy gaps between taking a test and receiving a result have hampered many countries’ attempts to control the spread of coronavirus.

In some countries with high infection rates, including India and Mexico, experts have said that low testing rates are disguising the true spread of their outbreaks.

The "new, highly portable and easy-to-use test" will provide results in 15-30 minutes instead of hours or days, WHO Director General Tedros Adhanom Ghebreyesus told a news conference on Monday.
Drugs manufacturers Abbott and SD Biosensor have agreed with the charitable Bill and Melinda Gates Foundation to produce 120 million of the tests, Tedros explained.

The deal covers 133 countries, including many in Latin America which is currently the region hardest-hit by the pandemic in terms of fatality and infection rates.

"This is a vital addition to their testing capacity and especially important in areas of high transmission," Tedros added.

"This will enable the expansion of testing, particularly in hard-to-reach areas that do not have laboratory facilities or enough trained health workers to carry out tests," he said. IANS

Pregnancy

Even low alcohol use during pregnancy bad for child’s brain (The Tribune: 2020929)


Heavier alcohol use during early pregnancy associated with rule-breaking behaviour and aggression

Even low alcohol use during pregnancy bad for child’s brain

Researchers have found that even low levels of alcohol consumption during pregnancy can have an impact on a child’s brain development.

The study, published in the American Journal of Psychiatry, said that it is also associated with greater psychological and behavioural problems in youth including anxiety, depression and poor attention.

“Our research found that even small amounts of alcohol consumed while pregnant can have a significant impact on a child’s brain development,” said study lead author Briana Lees from the University of Sydney in Australia.

For the findings, the researchers investigated whether any alcohol consumption in pregnancy was related to psychological, behavioural, neural and cognitive differences in children aged nine to ten years.

With a sample of 9,719 youth, this is the largest study to investigate the impact of low-level alcohol use during pregnancy.
Low levels of drinking were considered one to two drinks per occasion with a maximum of six drinks per week.

In the study, 25 per cent of children had been exposed to alcohol in utero (in the womb), 60 per cent of these children had been exposed to low-level alcohol use, and 40 per cent had been exposed to heavier levels.

Heavier exposure being three or more drinks per occasion or seven or more drinks per week.

Children who were exposed to low levels of alcohol in-utero at any time during pregnancy experienced more psychological/emotional problems (including anxiety, depression and being withdrawn) and behavioural problems (including poor attention and being impulsive) than unexposed children.

There was a 25 per cent increased likelihood of an attention deficit hyperactivity disorder (ADHD) diagnosis in children who were exposed to slightly heavier levels of alcohol (approximately 36 drinks) in the first 6-7 weeks of pregnancy.

Heavier alcohol use during early pregnancy was also associated with rule-breaking behaviour and aggression, with a 30 per cent higher risk of the child being diagnosed with the oppositional defiant disorder than unexposed youth.

“Generally, the more a child was exposed to alcohol in utero the more severe the outcomes were,” Lees said.

“This research highlights the importance for women to be aware of the effects that even low levels of drinking can have on the brain development of babies,” she said. — IANS

Mental health problems

COVID-19 may cause global tsunami of mental health problems (The Tribune: 2020929)


The pandemic threatens to reverse years of global development

Researchers, including one of Indian-origin, have found that Covid-19 pandemic will cause a global tsunami of mental health problems.

Mental health problems were already a leading cause of suffering and the most neglected health issue globally before the pandemic,” said study author Vikram Patel from Harvard University in the US.
"The pandemic will, through worsening the social determinants of mental health, fuel a worsening of this crisis," Patel added.

The study, scheduled to be presented at the ESCMID Conference on Coronavirus Disease (ECCVID) in the US, revealed that the pressures on mental health, that already existed in abundance before this global pandemic, are increasing at an alarming rate.

There are so many issues which affect large sections of the population, including worries about jobs and income security, social exclusion, school closures and working from home creating huge pressure on families," Patel said.

"There are also disruptions to medical services and care, potential domestic violence situations, and the varying levels of fear people have of being infected by this new virus," he stressed.

The pandemic threatens to reverse years of global development, including in the countries that can least afford to start going backwards.

In August 2020, World Bank President David Malpass predicted as many as 100 million people will be pushed back into extreme poverty.

As a result of the global economic recession, the mental health tsunami is going to sweep through all countries, rich and poor.

"The 2008 recession, which largely affected only the US, was followed by a wave of 'deaths of despair' in the US, driven by suicide and substance use," Patel said.

He pointed out that Covid-19 arrived, there was already a global mental health crisis.

According to the researchers, the relative burden of mental and substance use disorders increased by nearly 50 per cent in the past 25 years.

"These disorders now account for one in every ten years of lost health globally and suicide rates in young people are rising in many countries," the study authors wrote.

"I believe the pandemic presents a historic opportunity to reimagine mental health care, by realising the science which demonstrates that we must reframe mental health beyond a narrow focus on diagnoses, doctors and drugs," Patel concluded. — IANS

**FDA-approved drug ‘Teicoplanin’**

**FDA-approved drug ‘Teicoplanin’ found more effective in treating COVID-19** *(The Tribune: 2020929)*

IIT-Delhi researchers screened an assemblage of 23 approved drugs

Clinically approved drug “Teicoplanin” is a potential therapeutic option against COVID-19 and can be ten times more effective than several drugs being currently used, a research by Indian Institute of Technology (IIT), Delhi, has found.

The research by the institute’s Kusuma School of Biological Science screened an assemblage of 23 approved drugs, which have shown leads towards being therapeutic options for coronavirus.

While the effect of Teicoplanin was compared with other important drugs in use, Teicoplanin was found to be 10-20 fold more effective than the chief drugs being used against SARS-CoV-2, such as Lopinavir and Hydroxychloroquine in our laboratory conditions,” said Ashok Patel, Professor at IIT Delhi.

Patel, who led the research was also assisted by Dr Pradeep Sharma from AIIMS. The research has also been published in the International Journal of Biological Macromolecules.

Teicoplanin is an FDA-approved glycopeptide antibiotic, which is regularly used for treating Gram-positive bacterial infections with low toxicity profile in humans.

“Recently, there has been a clinical study carried out with Teicoplanin at Sapienza University in Rome. However, a more detailed clinical investigation is required on a large cohort, in different stages mild, moderate and critically ill patients to conclude the definite role of Teicoplanin against COVID-19,” Patel said.

Globally, over 3.2 crore people have been infected with COVID-19, and the total number of deaths from the deadly virus now stands at over 9.80 lakh.

India’s coronavirus tally galloped past 60 lakh on Monday with 82,170 new cases, while the number of recoveries surged to 50.17 lakh after 74,893 more people recuperated, the Health Ministry said.

The death toll from the pathogen climbed to 95,542 with 1,039 more deaths. There are 9,62,640 active cases of the coronavirus disease (COVID-19), comprising 15.85 per cent of the caseload, according to the ministry data. PTI

**Nasal spray**

**Australian firm says its nasal spray reduced coronavirus growth in animal study** *(The Tribune: 2020929)*

Australian firm says its nasal spray reduced coronavirus growth in animal study
A study on ferrets showed the product dubbed INNA-051, which could be used complementary to vaccines, lowered the levels of the virus that causes COVID-19 by up to 96%, the company said. Representative image: iStock

Australian biotech company Ena Respiratory said on Monday that a nasal spray it is developing to improve the human immune system to fight common cold and flu significantly reduced the growth of the coronavirus in a recent study on animals.

A study on ferrets showed the product dubbed INNA-051, which could be used complementary to vaccines, lowered the levels of the virus that causes COVID-19 by up to 96%, the company said.

The study was led by British government agency Public Health England.

Ena Respiratory said it would be ready to test INNA-051 in human trials in less than four months, subject to successful toxicity studies and regulatory approval.

The company has raised A$11.7 million ($8.24 million) for the development of the spray. Investors include venture capital firm Brandon Capital Ltd, the Australian federal government, pension funds and biotech giant CSL Ltd.

Several companies across the world are in the pursuit of developing a coronavirus vaccine. Australia has entered into agreements with some drug companies investing billions to secure potential vaccines for COVID-19, which has killed over 992,000 people worldwide.

Australia has so far reported 875 deaths and just over 27,000 coronavirus cases, far less than the numbers reported in other developed countries. Reuters

**WHO**

**WHO says 120 million rapid COVID-19 tests to be provided to poorer countries? (The Hindu:2020929)**


A medical worker wearing full protective gear takes a nose swab at a COVID-19 test centre in Brussels. File
A medical worker wearing full protective gear takes a nose swab at a COVID-19 test centre in Brussels. File | Photo Credit: AP

The tests will be priced at a maximum of $5 per unit.
Some 120 million rapid diagnostic tests for coronavirus will be made available to low- and middle-income countries at a maximum of $5 each, the World Health Organization (WHO) said on Monday.

The wider availability of quick, reliable and inexpensive testing will help 133 countries to track infections and contain the spread, closing the gap with wealthy ones, it said.

Also read: Coronavirus | Nearly 7 crore COVID-19 tests conducted in India

WHO Director General Tedros Adhanom Ghebreyesus said the manufacturers Abbott and SD Biosensor had agreed with the Bill & Melinda Gates Foundation to “make 120 million of these new, highly portable and easy-to-use rapid COVID-19 diagnostic tests available over a period of six months”.

He told a news conference in Geneva the tests were currently priced at a maximum of $5 each but were expected to become cheaper.

Also read: Data | Why is it necessary to test more to reduce the impact of COVID-19?

“This will enable the expansion of testing, particularly in hard-to-reach areas that do not have laboratory facilities or enough trained health workers to carry out tests,” Mr. Tedros said.

“This is a vital addition to the testing capacity and especially important in areas of high transmission.”

Catharina Boehme, chief executive officer of the Foundation for Innovative New Diagnostics (FIND), a Geneva-based non-profit organisation in the project, said the deal was a “major milestone” as it was urgent to increase testing in poorer countries.

“It is our first line of defence, critical for countries to track, trace and isolate to stop the spread of the virus and to ensure that we are not flying blind,” she said.

Also read: Coronavirus | ‘RT-PCR will remain the gold standard for all viral infections’

“We now have two high-quality tests which are the first in a series that are being developed and assessed by WHO for emergency use listing,” she said.

The antigen tests - which don't require a laboratory — provide reliable results in just 15 minutes rather than hours or days and will help expand testing, Boehme said, adding: “The tests are as simple to use as pregnancy tests.”

The Global Fund to Fight AIDS, Tuberculosis and Malaria — another Geneva-based group — was providing an initial $50 million to the procurement fund and the first orders were expected to be placed this week, she said.

Maria Van Kerkhove, WHO technical lead on COVID-19, said that more tests were undergoing evaluation and would come online.

Also read: 4.33 crore COVID-19 tests conducted so far, 1.22 crore done in last 2 weeks: Centre
They would be particularly useful in remote settings and to investigate clusters quickly and bring them under control and in areas with widespread community transmission.

“This will be really, really helpful for communities and countries to be able to know where is the virus and who is infected with the virus,” she said.

COVID-19, cardiologists

Why should you worry about your heart more than COVID-19? (The Hindu:2020929)


With altered lifestyles for fear of contracting COVID-19, cardiologists are worried because exercise and diet has taken a backseat, and anxiety and fear looms — none of which bode well for the heart
Even though 17 lakh people have died of cardio vascular diseases this year in India (against one lakh COVID deaths), the scare over COVID is obvious given

Transmission of coronavirus

Studies document in-flight transmission of coronavirus (The Hindu: 2020929)


The most likely route is aerosol or droplet transmission
The risk of in-flight transmission of novel coronavirus among passengers is considered to be low. But three studies published recently show that the virus can spread to other passengers. In one study, the researchers found one symptomatic passenger seated in business class had transmitted SARS-CoV-2 virus to at least 15 other passengers during a direct flight from London to Hanoi in early March. While 12 passengers were seated in business class, two other passengers and one flight attendant were in economy class.
COVID-19 vaccine

Coronavirus | COVID-19 vaccine likely to be free for the poor (The Hindu: 2020929)


Will the government of India have ₹80,000 crore over the next one year to buy and distribute the vaccine, asks Serum Institute of India CEO Adar Poonawalla. Those unable to afford a probable COVID-19 vaccine will get it for free and the government is considering a large immunisation programme to make the vaccine widely available, a highly placed official involved in the strategy told The Hindu.

Women’s immunity

Digital short ‘Sehat Ke Tijori’ bats for women’s immunity (The Hindu: 2020929)

https://www.thehindu.com/sci-tech/health/invest-in-your-immunity-because-it-is-your-sehat-ki-tijori/article32715411.ece

The video by Project Streedhan campaigns for immunity-building foods for women, and also aims to break gender stereotypes. To commemorate Nutrition Month in September, Project Streedhan, a CSR initiative of Dutch State Mines (DSM) India, launched its second campaign ‘Sehat Ki Tijori.’ Conceptualised and crafted by FCB Ulka Advertising, the campaign underlines the need for women to build immunity through proper nutrition and the right amount of exercise.

World Heart Day

World Heart Day: Health expert’s advice yoga, exercise and balanced diet to boost heart health (The Hindu: 2020929)

At a time when maintaining good heart health is extremely essential, several health experts suggest that exercising along with a balanced diet can work wonders and reduce the risk of heart diseases.

Talking about maintaining a healthy heart, Dr G Prakash, Deputy Chief Medical Officer, Jindal Naturecure Institute suggests that a healthy lifestyle along with exercising and yoga can help maintain good heart health.

He says, "Exercise is one of the most effective ways of protecting yourself against heart disease. Yoga has a combination of relaxing asanas, meditation and breathing techniques that have a positive effect on the respiratory system and the heart. Regular practice can help lower blood pressure, improve lung capacity and heart rate, lower blood cholesterol levels, and improve circulation."

Prakash also shared about the necessity to maintain a balanced diet along with regular exercise for a healthier heart, "Maintaining a healthy and balanced diet is equally important. Cut down on foods high in sugars and saturated fats. It will help lower the level of LDL cholesterol and prevent the onset of type-2 diabetes. Reduce salt intake to lower the risk of hypertension, which is one of the key CVD risk factors."

"In the past 5 years, the number of people coming with various degrees of heart problems has increased exponentially. Most of them are men/women in the age group of 30 - 50 years. Now that the unlock process has begun, it is important they become active for at least 30 minutes a day, if outdoors with mandatory COVID-19 safety measures i.e wearing masks and if jogging double the social distance to 12 feet and don't draft," says Dr. (Col) Monik Mehta, Chief of Cardiology, Columbia Asia Hospital, Palam Vihar, Gurugram as he talks about the necessity to be active.

"Also regulate binge eating that comprises packaged snacks high on salt, sugar and trans-fat, to reduce their risk of developing heart disease," added Dr Mehta.

Meanwhile, ahead of the World Heart Day, a foundation is working towards achieving a Congenital Heart Defects (CHD) free region in Maharashtra.

As part of the mission to achieve a CHD free Raigad, Ronnie and Zarina Screwvala, co-Founders of Swades Foundation in association with Wockhardt Hospital has conducted 144 CHD surgeries on rural kids between the age group of 0-18.

The foundation has successfully operated most of the CHD cases from the seven blocks they work out of in Raigad and are now are focusing on the new-born cases.

Congenital Heart Defects (CHDs) pose huge life-threatening risks to the patient's life as a result of which it demands diagnosis and treatment in the early stages itself. CHD cases cause psychosocial and financial stress on families, as a result of which patients, especially in rural areas, fail to receive timely and effective treatment.

The program has seen a 94 per cent success rate so far and the foundation aims to focus on cases of newborn babies in the upcoming years.
Swades Foundation, along with the Rashtriya Bal Swasthya Karyakram (RBSK) team, teachers, Anganwadi workers, and private health care providers, carry out the symptomatic screening of children in their respective geographic areas for CHDs.

Diagnosis is carried out through symptomatic screening, along with mobilisation and counselling of parents to attend the primary screening for children at Wockhardt Hospital, Mumbai. After the primary screening, the diagnosed patients are provided with necessary medical and surgical intervention. For complicated cases, the 3-D printed model method is used to plan surgeries.

Common breathing test

Common breathing test comes up short on accuracy: Study (The Hindu: 2020929)


Amid the Covid-19 pandemic, researchers have found that a routine test used to monitor patients' breathing may be unreliable and may put them at risk.

Incorrect results can mean clinical staff fail to spot how unwell a patient with respiratory problems is becoming, they said.

According to the study, published in the journal ERJ Open Research, this widely used method, which counts breaths over a 30-second period, fails to take account of people's irregular breathing patterns.

"The lack of accuracy in measurement of respiration rate could have an impact on a patient's treatment," said study author Gordon Drummond from the University of Edinburgh in the UK.

"We think accuracy would be improved by increasing the time of measurement to two minutes and using specialist equipment to measure respiratory rate," Drummond added.

For the findings, the research team focused on what is referred to as the respiratory rate, which is the measurement of the number of breaths a person takes in one minute.

The rate is measured in all patients who arrive in hospital feeling unwell, as part of what is known as a warning score chart.

Most clinical staff believe that counting breaths taken over a 30-second period will give a reasonable measure of the respiratory rate, the researchers say.

As breathing is not always regular, however, there can be a variation in the respiratory rate when measuring it over a short time period.
The team analysed recordings of breathing in 25 hospital patients to determine how wide this variation can be.

Each recording was made for between 30 minutes and an hour in patients with illnesses that included respiratory, cardiac, neurological and urinary conditions.

Researchers sampled the recordings at random, many times, in the same way the clinical staff might measure the breathing rate.

It was found that there was a large variation in the respiration rate for each patient - more than half of the measurements differed by more than three breaths per minute.

"This change may sound small but, in 40 per cent of cases, the incorrect rate would have meant the warning score chart was wrong," the researchers stressed.

The practice - key to assessing risk in many Covid-19 cases - could be improved by increasing the time of measurement to two minutes, the study noted.

**Heart disease**

*Heart disease in teenagers linked to diabetes exposure in womb (The Hindu: 2020929)*


In a major study, researchers have revealed that heart disease in young adults and teenagers may be related to exposure to diabetes in the womb.

A study of young adults and teenagers in Canada, whose mothers had diabetes during their pregnancies found the offspring had a 50 per cent to 200 per cent higher risk of developing heart disease before age 35 than those who were not exposed in the womb.

"These observations support our hypothesis that cardiovascular disease morbidity in adolescence and early adulthood is related to exposure to maternal diabetes in utero," said Jonathan McGavock from the University of Manitoba in Canada.

For the study, published in the journal CMAJ, the research team looked at data on more than 290,000 children born to almost 190,000 mothers in Manitoba between 1979 and 2005.

Of the total children, 2.8 per cent were exposed to gestational diabetes and 1.1 per cent to pre-existing type 2 diabetes.

Exposure to both types of diabetes became more common during the study period, a trend seen elsewhere in the world.
The three most frequent diagnoses among offspring exposed to diabetes were high blood pressure (8,713 people), type 2 diabetes (3,568 people) and ischemic heart disease (715).

"We found that children born to mothers with diabetes in pregnancy were 30 per cent-80 per cent more likely to develop a heart condition and 2.0 to 3.4 times more likely to develop a heart disease risk factor than children born to mothers without diabetes in pregnancy," McGavock said.

Furthermore, heart conditions and risk factors were diagnosed 2 years earlier in the children exposed to diabetes in the womb.

The authors suggest these findings may be useful for preventive health practices.

"Screening children with in utero exposure to diabetes for cardiovascular disease risk factors might help to evaluate the future burden related to cardiovascular disease in the population," the authors concluded.

Clinical trial of Ayurvedic remedy

Clinical trial of Ayurvedic remedy for Covid-19 shows groundbreaking results (The Hindu: 2020929)


A groundbreaking interim report on a clinical trial being conducted in three hospitals has shown that Covid-19 patients on natural treatment are resolving most symptoms earlier than those on conventional medicines.

The interim report on combination treatment of an Ayurvedic remedy called 'Immunofree' by Corival Life Sciences, and Nutraceutical called 'Reginmune' by Biogetica have shown exceptional results as against the present government SOP of conventional medicines for coronavirus treatment.

Furthermore, numerous tests such as C reactive protein, Procalcitonin, D Dimer and RT-PCR for novel coronavirus are also showing 20 to 60 per cent better improvement for the natural treatment, when compared to conventional treatment.

Numerous subjective endpoints such as body pain and fatigue are also leaning towards the natural treatment. Both Clinician's Global Assessment of Symptoms and Subject's Global Assessment of Symptoms clearly showed improvements on both arms showing more significant data in the test group.

About 86.66 per cent of patients on the natural protocol have tested corona negative on day 5 vs 60 per cent of patients on the conventional treatments. Moreover, on the 10th day test, all patients were negative, which could help in keeping the hospitals less occupied.
Immunofree and Reginmune are being studied in a one-of-a-kind pharmaceutical controlled multicentre clinical trial in 3 hospitals, in India. This CTRI-approved trial is being conducted on moderate COVID-19 positive patients at Government Medical Hospital, Srikakulam Andhra Pradesh, Parul Sevashram Hospital, Vadodara, Gujarat, and Lokmany Hospital Pune, Maharashtra.

What sets this trial apart is the fact that it is the only time where half the patients in the trial have been given only natural treatment, which is being compared against the conventional treatment in use in India for COVID-19 patients.

This comparative study was achieved as a pilot study in Mumbai showed similar startling results. This control on the randomised trial allows for a direct comparison between these protocols from the world of natural medicine and conventional medicine.

The conventional treatment in use depends on the severity of the patient and includes HCQ, Azithromycin, Favipiravir and Cetirizine. This trial also has a broader inclusion criteria than others conducted on natural medicine as it includes patients upto 70 years old, with low oxygen saturation and co-morbidities.

It is significant to note that none of the patients on the natural treatment progressed past moderate, needed ventilators or had any adverse events. These precedent setting results have led to accelerated enrolment into this trial and statistically significant results should be ready by month end.

Numerous countries and states that have adopted or mandated natural treatment for novel coronavirus have shown mortality rates less than 1/10 of their neighbours. China supposedly stopped the outbreak after mandating TCM treatment.

Goa and Kerala both have 1/10th the mortality rate of neighbouring states. Madagascar, Central African Republic, Ghana and other countries which adopted COVID Organics have seen tremendous results compared to other African countries that did not adopt the natural treatment. WHO has now endorsed a clinical trial protocol for COVID natural medicines and this is one of the first studies proving natural medicine for COVID.

It is therefore hoped that India too mandates the use of these herbs for novel coronavirus treatment. All these regions tend to be using a subset combination of Glycyrrhiza Glabra, Artemisia, Hypericum Mysorense, Tinnispora Cardiflora, Inula Racemosa, Andrographis Paniculata and others contained in Immunofree which has 15 ingredients.

"Most remedies in use for Covid-19 are repurposed anti-malaria and anti-viral drugs not made specifically for this new virus that presents itself in ways no virus ever has. We are fortunate to have gotten approval for a very specific remedy that is now showing these startling results beyond our own expectations. It is a matter of great pride for India that our ancient sciences are coming to the forefront with this new empirical evidence and showing the importance of Ayurveda in the pandemic," Biogetica founder Apurve Mehra said.

"The results of this study thus far are startling and I hope to see people across the globe helped by this multifaceted natural remedy, which seems to apply to all who are pre-Covid, Covid positive and post-Covid. We are now approaching AYUSH and ICMR to get listed as the first
herbal treatment of Covid in India, and look forward to government support in seeing this helping Indians and India," Wockhardt Foundation founder Huzaifa Khorakiwala said.

**Tecoplaning (Hindustan: 2020929)**

https://epaper.livhindustan.com/imageview_343880_85042462_4_1_29-09-2020_3_i_1_sf.html
उद्ध व्यक्तियों में डिल्ली शहर से जोगी जानकारी, निजी अस्पतालों की क्षतिपूर्ति का तटका भी पूरा

लाभ: गैर कोरोना मरीजों के लिए कितने बेड्स

कोविड के 1984 नए मामले आए

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शिलोदिया की भावित में सुधार

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