



The IDAK Sentinel

Helping you keep your guard up against COVID 19

Issue No.3



COVID VACCINES



On Nov. 9, New York-based Pfizer, and the German company BioNTech made history by presenting preliminary data indicating that their coronavirus vaccine was over 90 percent effective. It was the first time anyone had found such evidence. Just over a month later, on Dec. 11, the Food and Drug Administration granted it the first emergency use authorization ever given by the United States to a coronavirus vaccine.

THE STORY BEGAN...

In January 2020, BioNTech researchers began designing a vaccine. They based it on a genetic molecule called messenger RNA (mRNA). The vaccine contains genetic instructions for building a coronavirus protein, known as spike. When injected into cells, the vaccine causes them to make spike proteins, which then get released into the body and provoke a response from the immune system.

In March, BioNTech partnered with Pfizer to scale up the research, launching a clinical trial in May. They gave the vaccine, the generic name, tozinameran and the brand name Comirnaty.

The researchers found that the spike proteins caused volunteers to produce antibodies against SARS-CoV-2, as well as immune cells called T cells that respond to the virus.

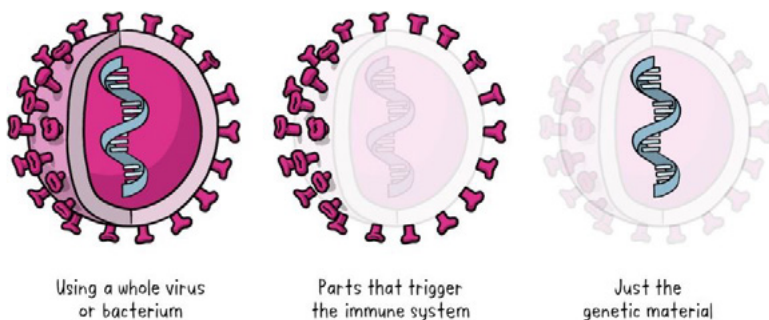
The Cost of the Pandemic

Ever since it was first identified in December 2019 in Wuhan, the Covid

19 pandemic has extracted a huge cost in terms of human lives and sickness and as well as economic hardship running into trillions of dollars. It was therefore imperative for countries to quickly develop a vaccine for the prevention and spread of the disease. The outbreak was declared a Public Health Emergency of International Concern in January 2020, and a pandemic in March 2020.

What types of COVID-19 vaccines are being developed?

There are three main approaches to making a vaccine:



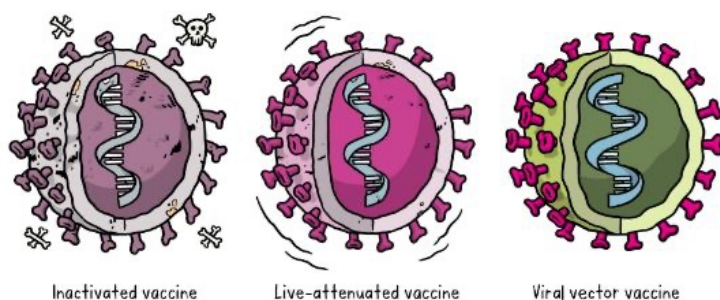
Inactivated (IV) or weakened virus vaccines, which use a form of the virus that has been inactivated or weakened so it doesn't cause disease, but still generates an immune response.

Live Attenuated Virus (LAV) A live-attenuated vaccine uses a living but weakened version of the virus or one that's very similar.

Viral vector vaccines (VV), which use a different virus that has been genetically engineered so that it can't cause disease but produces coronavirus proteins to safely generate an immune response.

These are of 2 types - **VVnr** Viral Vector (non-replicating)
VVr Viral Vector (replicating)

The whole-microbe approach



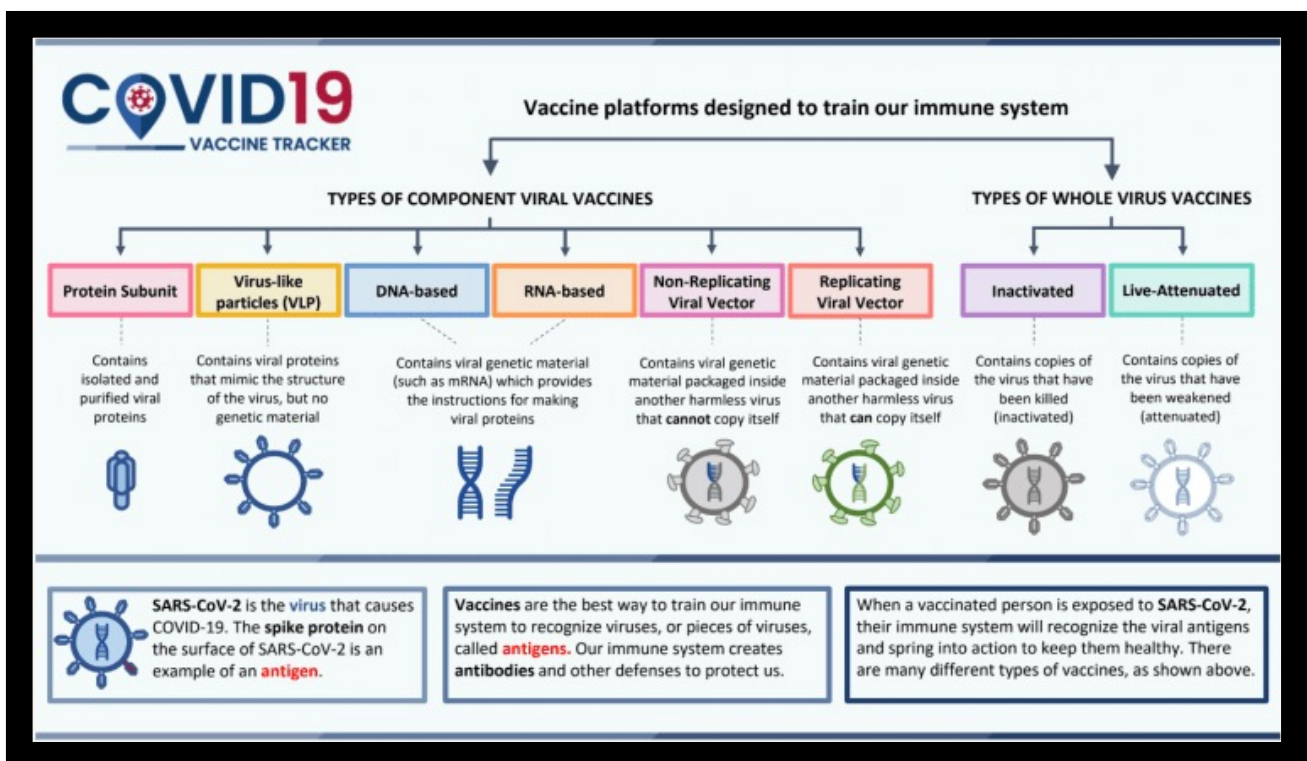
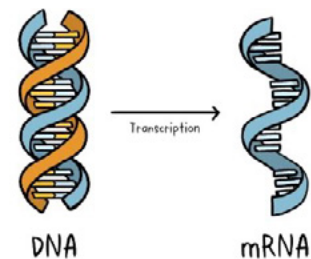
The subunit approach



Only uses the very specific parts (the subunits) of a virus or bacterium that the immune system needs to recognize.

Protein subunit (PS) Protein-based vaccines, which use harmless fragments of proteins or protein shells that mimic the COVID-19 virus to safely generate an immune response.

DNA and RNA vaccines, a cutting-edge approach that uses genetically engineered RNA or DNA to generate a protein that itself safely prompts an immune response.



What are the Trial phases?

PRECLINICAL TESTING: Scientists test a new vaccine on cells and then give it to animals such as mice or monkeys to see if it produces an immune response.

Phase 1 SAFETY TRIALS: Scientists give the vaccine to a small number of people to test safety and dosage, as well as to confirm that it stimulates the immune system.

Phase 2 EXPANDED TRIALS: Scientists give the vaccine to hundreds of people split into groups, such as children and the elderly, to see if the vaccine acts differently in them. These trials further test the vaccine's safety.



Phase 3 EFFICACY TRIALS: Scientists give the vaccine to thousands of people and wait to see how many become infected, compared with volunteers who received a placebo. These trials can determine if the vaccine protects against the corona virus, measuring what's known as the efficacy rate. Phase 3 trials are also large enough to reveal evidence of relatively rare side effects.

EARLY OR LIMITED APPROVAL: Many countries have given emergency authorization based on preliminary evidence that they are safe and effective. China, Russia, India and other countries have begun administering vaccines before detailed Phase 3 trial data has been made public. Experts have warned of serious risks from jumping ahead of these results.

Regulatory APPROVAL: Regulators review the complete trial results and plans for a vaccine's manufacturing and decide whether to give it full approval.

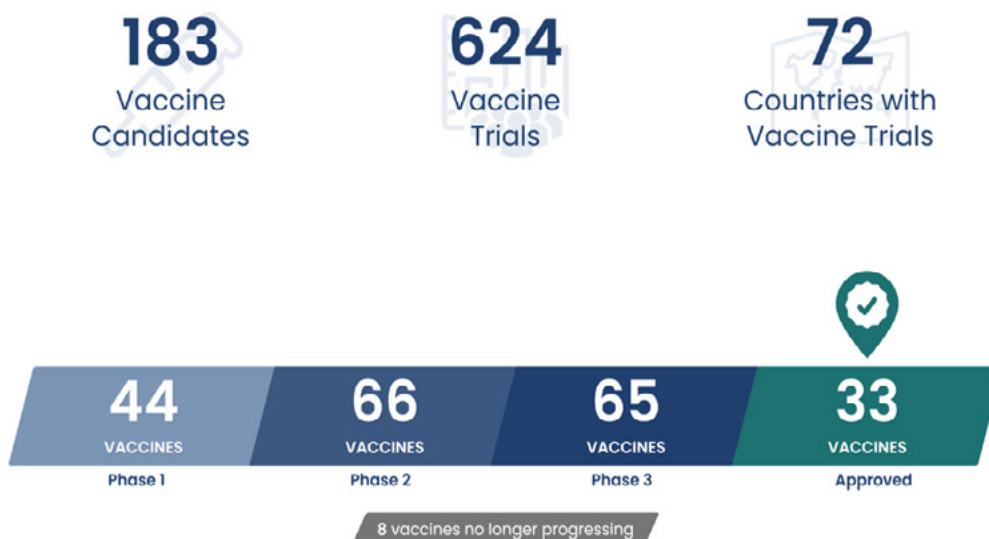
After a successful Phase 3 trial, vaccine manufacturers apply to regulatory bodies such as the European Commission or the U.S. Food and Drug Administration (FDA). At this stage, clinical trial data is reviewed to make sure the vaccine is safe and effective.

COMBINED PHASES: One way to accelerate vaccine development is to combine phases. Some vaccines are now in Phase 1/2 trials, for example, which this tracker would count as both Phase 1 and Phase 2.

PAUSED or ABANDONED: If investigators observe worrying symptoms in volunteers, they can pause the trial. After an investigation, the trial may resume or be abandoned.

At the time of issue of this newsletter, there are 33 approved covid vaccines and 10 WHO listed vaccines for Emergency use.

VACCINES CANDIDATES IN CLINICAL TRIALS





VACCINE FOR KIDS



Dr. B. Devi Priya

Kids should get vaccinated against COVID. Although kids are not affected to the same degree of severe illness or death as adults, their lives have been disrupted to a great extent. COVID has caused a significant change in educational, emotional, and social development. In order to develop community immunity, it is essential that kids are vaccinated. Also, for families and kids to get back to a sense of normalcy, Kids need to be vaccinated.

The Center for Disease Control and Prevention (CDC) now recommends a COVID-19 vaccine for children ages 5 and older. Currently, Pfizer's vaccine is the only approved COVID-19 vaccine for children.

Children aged 5 to 11 years will be offered the Pfizer/BioNTech vaccine. They'll be given a child-sized dose. A child-sized dose is one third of the dose offered to adults/adolescents (12 years and over).

Children aged 5 to 11 years will be offered 2 doses of the coronavirus vaccine. The second dose will be offered from 8 weeks after their first dose.

A third primary dose is also being offered to children aged 5 to 11 years with a severely weakened immune system. The third primary dose will be offered from 8 weeks after the second dose.

If your child has recently tested positive for coronavirus, they should wait until 4 weeks after the date they tested positive to get the vaccine (first or second dose).

Booster dose:

- People aged 12–17 can receive a Pfizer-BioNTech booster.
- Everyone 5 and older who has certain medical conditions associated with immunosuppression can receive an additional dose. Children ages 5–11 who are fully vaccinated and are not immunosuppressed are not authorized for a booster at this time.

Back to School precautions:

CDC recommends universal indoor masking by all students (age 2 and older), staff, teachers, and visitors to K-12 schools, regardless of vaccination status, as well as physical distancing and other precautions. Having your teen or child vaccinated as soon as he or she is eligible will help prevent infections and spread of COVID-19.

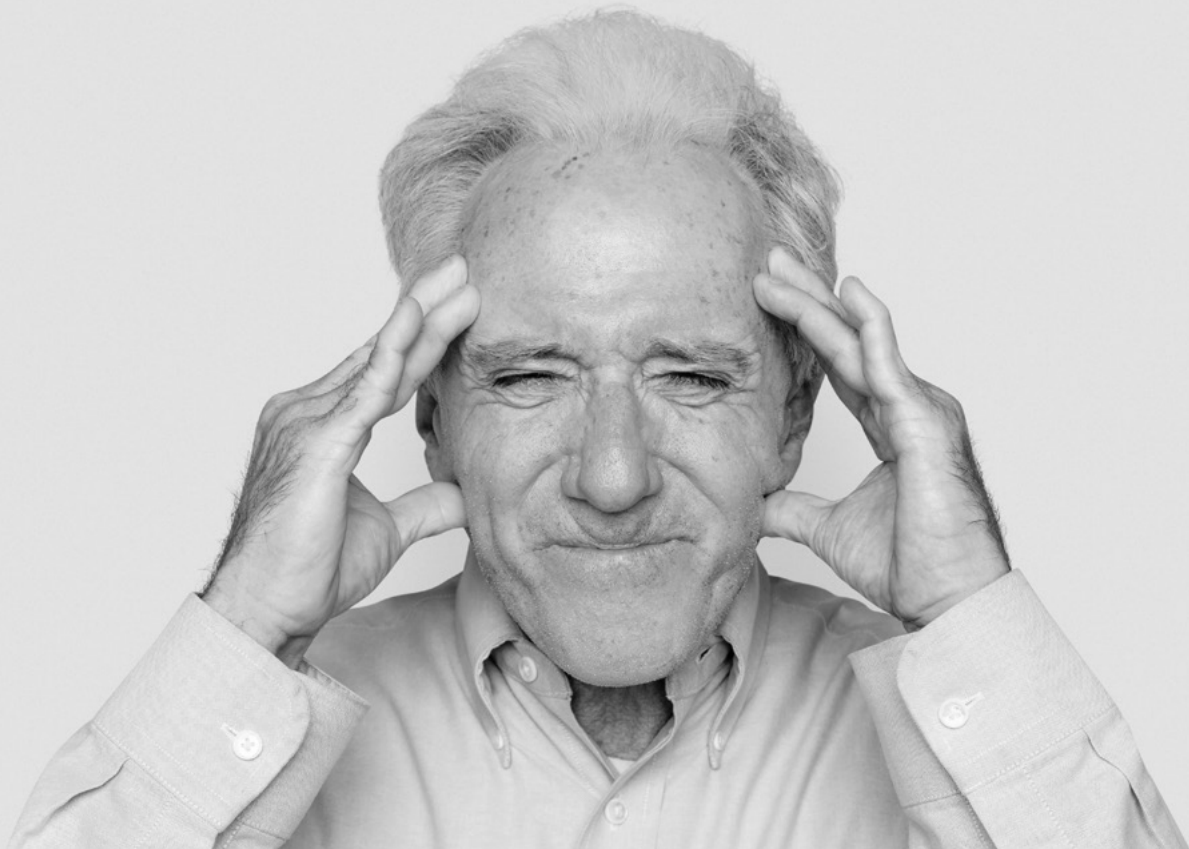
Are there any reasons my child should not get the vaccine?

The vaccine should not be given to:

- children who have had a confirmed severe allergic reaction (anaphylaxis) to any of the ingredients in the vaccine
- those who have had a confirmed severe allergic reaction to a previous dose of the Pfizer/BioNTech vaccine

Children with a history of serious allergic reaction to food, an identified drug or vaccine, or an insect sting can get the coronavirus vaccine, if they are not known to be allergic to any ingredient of the vaccine. It's important that you tell the person giving your child the vaccine if they've ever had a serious allergic reaction. The vaccine does not contain any animal products or egg.





SIDE EFFECTS AND ADVERSE EVENTS



Dr. B. Devi Priya

COVID-19 vaccines are effective at protecting you from COVID-19, especially severe illness and death. COVID-19 vaccines can reduce the risk of people spreading the virus that causes COVID-19. If you are fully vaccinated, you can resume activities that you did before the pandemic. COVID-19 vaccines teach our immune systems how to recognize and fight the virus that causes COVID-19. It typically takes 2 weeks after vaccination for the body to build protection (immunity) against the virus that causes COVID-19. That means it is possible a person could still get COVID-19 before or just after vaccination and then get sick because the vaccine did not have enough time to build protection.

To receive the most protection, people should receive all recommended doses of a COVID-19 vaccine. People can sometimes get COVID-19 after being fully vaccinated. When these infections occur among vaccinated people, they tend to be mild.

After COVID-19 vaccination, side effects can be expected. These are normal signs that the body is building protection. The side effects from COVID-19 vaccination, such as tiredness, headache, or chills, may affect ability to do daily activities, but they should go away within a few days.

Serious adverse events after covid-19 vaccination are rare but may occur. **1. Anaphylaxis** after COVID-19 vaccination is rare. Severe allergic reactions, including anaphylaxis, can occur after any vaccination. If this occurs, vaccination providers can effectively and immediately treat the reaction. If you had a severe allergic reaction — also known as anaphylaxis —

after getting a shot of an mRNA COVID-19 vaccine, it is recommended that you DO NOT get another shot of that vaccine. If you had a red, itchy, swollen, or painful rash where you got a COVID-19 shot, you should still get another shot at the recommended interval if a second, additional, or booster shot is recommended. These rashes can start a few days to more than a week after the first shot and are sometimes quite large. These rashes are also known as “COVID ARM.” Your vaccination provider may recommend that you get the second shot in the opposite arm.

If the rash is itchy, you can take an antihistamine. If it is painful, you can take a pain medication like acetaminophen or a non-steroidal anti-inflammatory drug (NSAID).

2. Thrombosis with thrombocytopenia syndrome after COVID-19 vaccination is rare. Most reports of this serious condition, which involves blood clots with low platelets, have been in adult women younger than 50 years old. However, women younger than 50 years old especially should be aware of the rare but increased risk of this adverse event, and they should know about other available covid-19 vaccine options for which this risk has not been seen.

3. Reports of Guillain-Barré syndrome (GBS) in people who have received the J&J/Janssen COVID-19 vaccine. GBS is a rare disorder where the body's immune system damages nerve cells, causing muscle weakness and sometimes paralysis. Most people fully recover but some have permanent nerve damage. These cases have largely been reported about 2 weeks after vaccination and mostly in men, many 50 years and older.

4. Myocarditis and pericarditis after covid-19 vaccination are rare. Myocarditis is inflammation of the heart muscle, and pericarditis is inflammation of the outer lining of the heart. In both cases, the body's immune system causes inflammation in response to an infection or some other trigger.

Cases have been reported after mRNA COVID-19 vaccination especially in male adolescents and young adults. Most patients with myocarditis or pericarditis who received care responded well to medicine and rest and felt better quickly.





Patients can usually return to their normal daily activities after their symptoms improve. Those who have been diagnosed with myocarditis should consult with their cardiologist (heart doctor) about return to exercise or sports.

Both myocarditis and pericarditis have the following symptoms:

- Chest pain
- Shortness of breath
- Feelings of having a fast-beating, fluttering, or pounding heart

5. Reports of death after COVID-19 vaccination are rare. Reports of adverse events following vaccination, including deaths, do not necessarily mean that a vaccine caused a health problem. However, recent reports indicate a plausible causal relationship between the J&J/ Janssen covid-19 vaccine and TTS, a rare and serious adverse event—blood clots with low platelets—which has caused deaths

6. Most people who report a change to their period after vaccination find that it returns to normal the following cycle and, importantly, there is no evidence that COVID-19 vaccination adversely affects fertility. Menstrual changes have been reported after both mRNA and adenovirus vectored covid-19 vaccines, suggesting that, if there is a connection, it is likely to be a result of the immune response to vaccination rather than a specific vaccine component. Biologically plausible mechanisms linking immune stimulation with menstrual changes include immunological influences on the hormones driving the menstrual cycle or effects mediated by immune cells in the lining of the uterus, which are involved in the cyclical build-up and breakdown of this tissue.

7. Lymphadenopathy, also called adenopathy, is when lymph nodes are abnormal in size or consistency. The most common inflammatory type is lymphadenitis, producing swollen or enlarged lymph nodes. A small number of patients have reported swollen lymph nodes under the arm two-to-four days after vaccination, on average. The swelling is almost always on the same side where they were vaccinated, and typically returns to normal about four weeks later. This is a common response to vaccination, in general.

COVID Hot topics:



Dr, Tiny

Should I wear a face mask?

The coronavirus that causes COVID-19 is primarily transmitted through viral particles that float in the air or through droplets containing virus. Even people who are infected but do not have symptoms, or have not yet developed symptoms, can infect others. Masks reduce the amount of virus we breathe in and breathe out. Combined with the vaccines and boosters, masks provide a punch that reduces the risk of spread. Masks also provide protection for the wearer, even those who are fully vaccinated.

A high-quality, well-fitting mask provides good protection even if people around you are unmasked. High quality KN95, KF94, and N95 masks have the tightest fit and the best filtration. Make sure your mask completely covers your nose and mouth and fits snugly against the sides of your face without leaving any gaps.

Transmission is much less likely to occur outdoors, and masks are not needed in most outdoor settings.

There is a sense of confusion and uncertainty about unmasking as the virus continues to circulate. Consider the following points as you decide whether you and your family should continue masking indoors.

- We're still amid a pandemic. Masks don't just help to flatten the curve; they also help to prevent surges from happening in the first place.



- Your decision should reflect your personal health risks: if you or a member of your family is at increased risk for infection or severe COVID illness, continue masking indoors.
- Your decision should also reflect what's happening on the ground where you live: the level of community transmission in your area, local vaccination rates, amount of COVID transmission occurring in schools, and local hospital and ICU capacity.
- Your decision to mask indoors may change over time, and you may return to wearing a mask indoors after a period of not masking indoors.
- Masking reduces the risk of spread to vulnerable populations: young children who are not yet eligible for vaccines, people with weakened immune systems, older adults who are at increased risk for severe illness, and others who are unvaccinated.

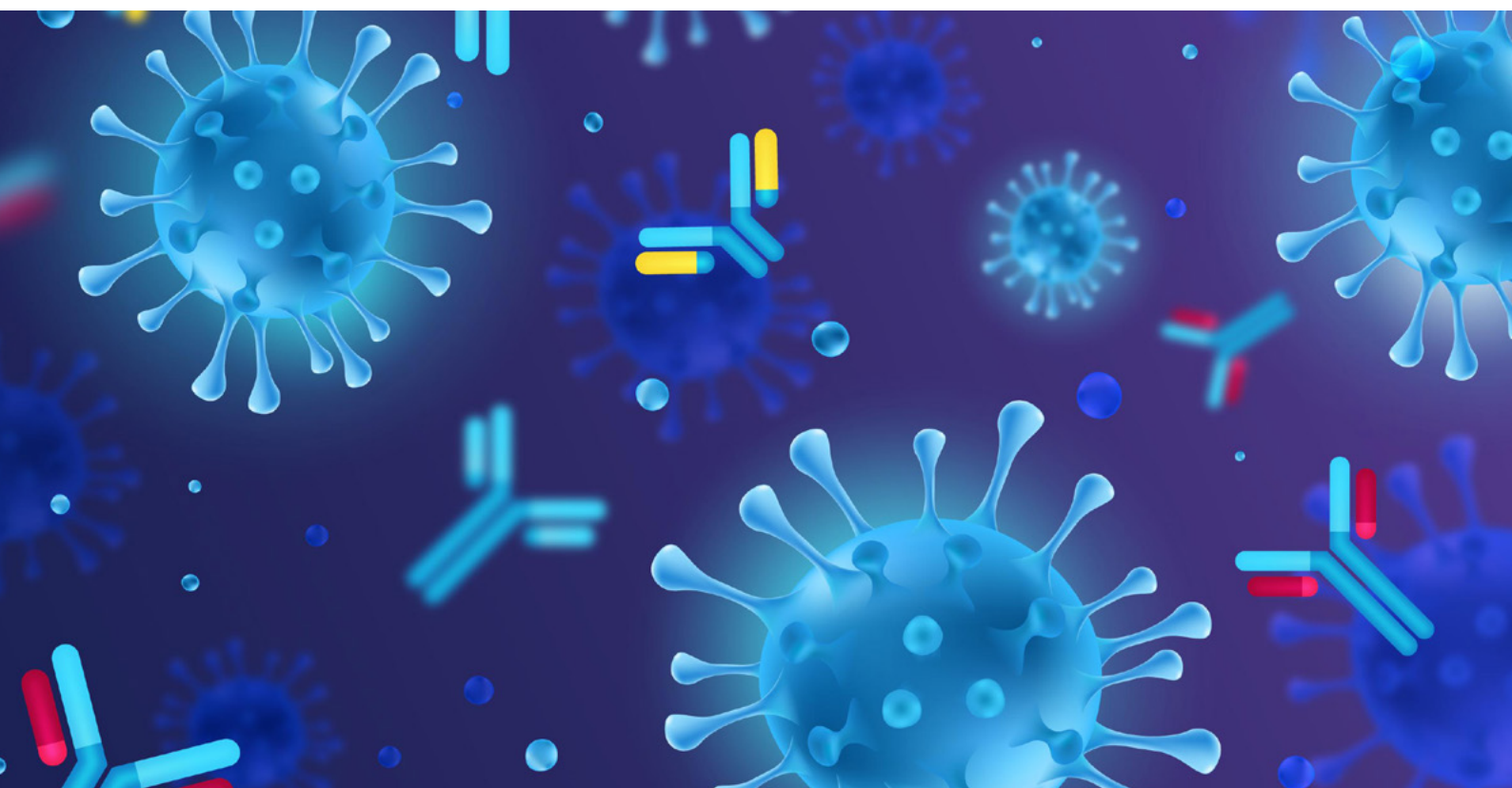
Always wear a high-quality, well-fitting mask indoors if you

- are unvaccinated
- are immunocompromised or have a medical condition that increases your risk of infection or severe illness.

What are monoclonal antibodies? Can they help treat COVID-19?

Monoclonal antibodies are manmade versions of the antibodies that our bodies naturally make to fight invaders, such as the SARS-CoV-2 virus. There are currently two monoclonal antibody treatments that have been granted emergency use authorization (EUA) by the FDA to treat COVID-19.

The FDA-authorized monoclonal antibody treatments are sotrovimab, made by GlaxoSmithKline, and bebtelovimab, made by Eli Lilly. Both may be used to treat non-hospitalized adults and children over age 12 with mild to moderate symptoms who have recently tested positive for COVID-19, and who are at risk for developing severe COVID-19 or being hospitalized for it. EUA for bebtelovimab, which was authorized more recently in February 2022, states that the treatment should be given when “alternative COVID-19





treatment options approved or authorized by the FDA are not accessible or clinically appropriate.” The therapies must be given intravenously (by IV) soon after developing symptoms.

Both sotrovimab and bebtelovimab appear to be effective against the Omicron variant, which was responsible for more than 99% of COVID-19 cases in the US in mid-February. In laboratory tests, bebtelovimab was also effective against the BA.2 omicron subvariant.

As of February 2022, the number of patients who would benefit from monoclonal antibody treatment far exceeds the supply and the infrastructure to deliver this therapy. Once oral antiviral medications are more available, there will be more treatment options for high-risk patients.

A different monoclonal antibody treatment may help to save lives in a specific subgroup of hospitalized COVID-19 patients. Some COVID patients get sicker because of an overreaction of the body’s immune response (a cytokine storm) to the viral infection. When this happens, the body overproduces interleukin-6 (IL-6) — a protein involved in inflammation — in lung cells. For these very ill hospitalized patients, the FDA has granted EUA for tocilizumab (Actemra), a monoclonal antibody that blocks the action of IL-6, and thereby dampens the exaggerated immune system response.

What needs to happen for schools to remain open and for children to remain safely in school?

The CDC recommends that all teachers, staff, students, and visitors to schools wear masks while indoors, regardless of whether or not they are vaccinated. They also recommend that everyone who is eligible for vaccination get the vaccine.

Vaccination, masking, and test to stay are three of several prevention strategies that, when layered together, help to minimize the spread of COVID-19 in schools. Other prevention strategies include physical distancing; screening, testing, and contact tracing; staying home when sick; and frequent handwashing. Schools should also do their best to improve ventilation, by opening windows and doors, for example. Decisions about some of these prevention strategies may depend on levels of community transmission.

I’ve tested positive for COVID-19. How long do I need to isolate?

The most recent CDC guidance states that everyone who tests positive for COVID-19 should

- isolate at home for five days
- if you have no symptoms or your symptoms are improving after five days, you can discontinue isolation and leave your home
- continue to wear a mask around others for five additional days.

If you have a fever, continue to isolate at home until you no longer have a fever. Although not yet officially recommended by the CDC, consider having a rapid COVID test at the end of five days to determine if you should continue to isolate.



I was recently exposed to someone who tested positive for COVID-19. When can I discontinue my self-quarantine?

Whether and for how long you need to quarantine depends on your vaccination status, according to the latest guidance from the CDC.

If you have been boosted OR had your first two Moderna or Pfizer shots within the last six months OR got a Johnson & Johnson vaccine within the last two months, you do not need to quarantine if you've been exposed to someone with COVID-19. However, you should

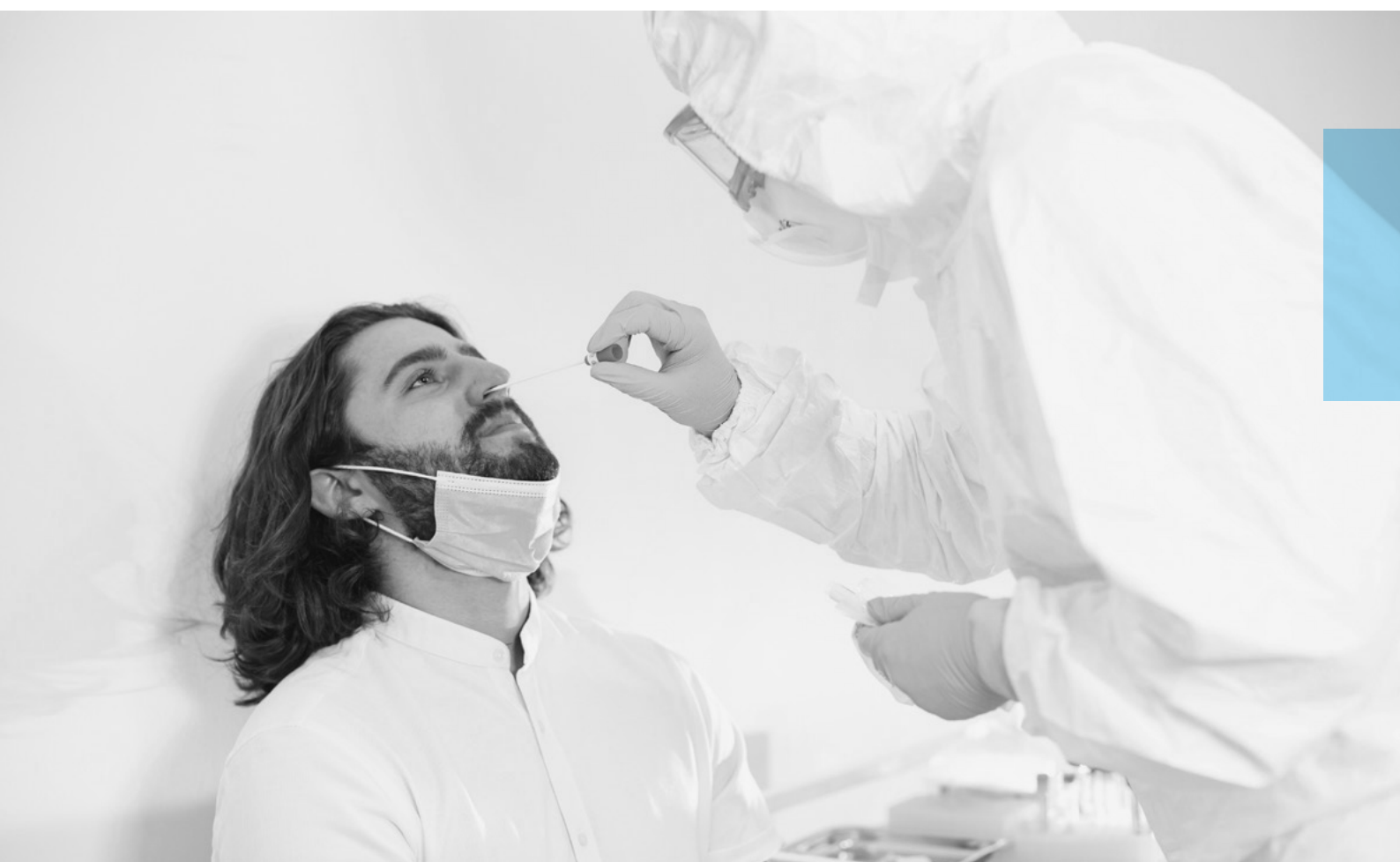
- wear a mask around others for 10 days
- test on day 5, if possible.

If you develop symptoms, get tested and isolate at home.

If you had your first two Moderna or Pfizer shots more than six months ago and are not boosted OR got a Johnson & Johnson vaccine more than two months ago and are not boosted OR are unvaccinated:

- Quarantine at home for five days. After that, continue to wear a mask around others for five more days.
- If you can't quarantine, wear a well-fitting mask around others for 10 days.
- Test on day 5, if possible.

If you develop symptoms, get tested and isolate at home.





LONG COVID



Dr, Tiny

What is long Covid?

Long Covid is a term to describe the effects of Covid-19 that continue for weeks or months beyond the initial illness. The health watchdog the National Institute for Health and Care Excellence (NICE) defines long Covid as lasting for more than 12 weeks, although some people consider symptoms that last more than eight weeks to be long Covid. The World Health Organization (WHO) defines long Covid as “usually 3 months from the onset of Covid-19 with symptoms that last for at least 2 months and cannot be explained by an alternative diagnosis.”

How likely am I to get long Covid?

The Office for National Statistics (ONS) estimates that between 3 and 12 per cent of people who catch Covid will still have symptoms 12 weeks after their initial infection. This is based on data provided by 20,000 people in the coronavirus infection survey (CIS) between 26 April and 1 August 2021.

It's important to note that these estimates were made before Omicron became the dominant variant in the UK. Because Omicron hasn't been around for long enough, we don't yet know whether it is more or less likely to result in long Covid. Because more of the population are now fully vaccinated, it will also be hard to tell whether any differences in long Covid rates are due to the differences between variants or because of the protective effects of vaccination.

How long does it take to recover from long Covid?

We are still learning how long the illness lasts and it varies between people. It's important to note that lasting effects aren't unique to Covid-19 – other viral illnesses can also have lasting effects.

What are the symptoms of long Covid?

Although most people who get Covid-19 recover quickly, for some the effects of the virus can last for weeks or months. This is known as “long Covid”. For some, it can seem like a cycle of improving for a time and then getting worse again.



Lasting symptoms of coronavirus can include:

- fatigue
- breathlessness or shortness of breath
- difficulty sleeping
- anxiety and depression
- heart palpitations
- chest tightness or pain
- joint or muscle pain
- not being able to think straight or focus ('brain fog')
- change to your sense of smell or taste
- persistent cough

Which long Covid symptoms are most common?

According to the ONS, the most common symptoms experienced by people with long Covid are fatigue (51%), loss of smell (37%), shortness of breath (36%), followed by difficulty concentrating (28%).

Is it normal to have chest pain after Covid?
When should I seek urgent medical help?

Chest pain is a common symptom of Covid-19. Some people are experiencing chest pain that lasts beyond their initial Covid-19 infection, or that starts in the weeks after they've had the virus. It's important to remember that even if you have had Covid-19 and are now experiencing chest pain, it may not be related to the virus.

If you experience any new type of chest pain, it's important to get medical advice, as chest pain can be a sign of something more serious, like a heart or lung problem.

- Chest pain that is sudden or severe and doesn't go away
- Sudden chest pain that is accompanied by vomiting, nausea, sweating, or shortness of breath
- Sudden chest pain that is accompanied by a loss of consciousness.

Is it normal to have back pain after Covid?

While joint and muscle problems can occur anywhere in the body during or after Covid-19, back problems are among the most common. You may have had back pain at times before getting Covid-19, and if you were less active while you were ill, this could have made joint or muscle problems come back,

or get worse. Joint stiffness and muscle weakness is also likely to get worse if you weren't moving around as much when you were unwell.

In the weeks after getting Covid-19, some people have back ache or a feeling of pins and needles. As you continue to recover, many of these symptoms may also improve. You can aim for a balance of rest with as much of your normal daily activity you feel you can do, and also exercise to improve your strength and flexibility, such as stretches or yoga.

When should I seek medical help?

If your pain is severe, and interfering with your daily activities, you can talk to your doctor for advice, or if:

- your back pain is getting worse
- fatigue or breathlessness is preventing you from being active
- you develop new symptoms
- your joints and muscle problems haven't improved after three months.

Why do some people get palpitations, feel lightheaded or faint after Covid?

There is emerging evidence that some people who develop long Covid have similar symptoms to people with a condition known as postural tachycardia syndrome, or postural orthostatic tachycardia syndrome (PoTS). This condition can cause dizziness when moving to an upright position and can be triggered by infections. The most common symptoms are feeling lightheaded, palpitations (being aware of your heartbeat) and fatigue.

There have been several case reports in medical journals of people who had continuing symptoms following Covid-19 infection, and some were found to have PoTS. PoTs happens because your body's ways of avoiding a drop in blood pressure when you stand up aren't working properly. Normally when you sit up or stand up, gravity makes some of your blood flow downwards, which can cause a fall in blood pressure. Your body responds to prevent a fall in blood pressure by narrowing your blood vessels





and slightly increasing your heart rate. But if you have PoTS these automatic changes don't happen. When you move to an upright position the supply of blood to your heart and brain drops and your heart starts beating faster to compensate.

While there is no cure for PoTS, it can be managed by diet, exercise and medication, and the researchers say it is important to get an accurate diagnosis so patients can be treated and advised on how to manage their symptoms.

Tips for managing long Covid symptoms

Fatigue and breathlessness

- Pace yourself - plan what you're going to do and don't over-exert yourself.
- Try to break tasks which feel difficult down into smaller chunks, and alternate easier and harder activities.
- Consider the best time of the day to do certain activities based on your energy levels.
- Frequent short rests are better than a few longer ones, so rest before you become exhausted.
- Don't stop doing things that make you feel breathless. If you stop using your muscles, they'll get weaker, which can make you more breathless when you try to use them.
- Try to gradually increase the amount of exercise you do. Try going for short walks or doing simple strength exercises and build up from there.
- If you use a walking stick or a frame, lean forward on it when you feel breathless.

Boost your mood and mental health

- Be kind to yourself during your recovery – be prepared that some days will be worse than others
- Connecting with other people can help you feel happier – make sure to keep in touch with family and friends.
- Having a daily routine can be good for your mood and sense of stability.
- Stay active – continuing to move will help release endorphins and improve your mood.

Tips for thinking or memory problems

- Make notes to help you remember things – whether it's in work meetings or medical appointments.
- Try to reduce distractions.
- It can help to make a clear plan before approaching any new or complicated problem or situation. Break it down into steps, and keep checking your plan as you follow it.

Relieving joint or muscle pain

- Flexibility exercises (like stretches, yoga and tai chi) and strength exercises (like climbing stairs, lifting weights and working with resistance bands) can be useful. Check with your doctor before starting a new exercise regime.

What tests and treatments are available?

Is there a test for long Covid?

There isn't one single test to diagnose long Covid. It's a condition that isn't fully understood yet. Tests could include:

- blood tests
- heart rate and blood pressure checks
- a sit-to-stand test
- an ECG
- a chest X-ray



Is there a treatment for long Covid?

Unfortunately, there isn't one single treatment or medication to treat long Covid.

Does getting vaccinated reduce the risk of long Covid?

Yes – there is lots of evidence that having the vaccine reduces your risk of developing long Covid. Experts found that people who caught Covid after having two doses of Pfizer, AstraZeneca, or Moderna, or one dose of the Janssen vaccine, were half as likely to develop lasting Covid symptoms (lasting 28 days or more from the original infection), compared to those who were unvaccinated, or only had one dose. Research also found a reduction in longer-term long Covid symptoms (up to six months). This review only looked at people who caught Covid – given that vaccination also reduces your risk of catching Covid, the actual reduction in long Covid risk from the vaccine is significantly bigger.

Who is most at risk of developing long Covid?

Researchers found that older people, women, and those who had a more severe infection (with five or more symptoms in the first week of becoming ill with Covid-19) were more likely to develop long Covid. The researchers also found people with asthma were also more likely to develop long Covid. Their research also found that people with low levels of certain antibodies (IgM and IgG3) in their blood may be more likely to develop long Covid. When they combined this antibody data with the other factors (such as the person's age, number of initial Covid symptoms, and history of asthma), they were better able to predict who would go on to have long Covid.

Is long Covid contagious?

Long Covid is not contagious. Long Covid symptoms are caused by your body's response to the virus continuing beyond the initial illness.

If I have long Covid, will I test positive?

No, having long Covid symptoms won't cause you to test positive. If you get a positive Covid test result it's most likely to be a new infection from the one that caused your long Covid symptoms.



Covid 19 and its impact on Orthodontic Practice



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The coronavirus disease 2019 (COVID-19) will have a long-lasting impact on orthodontic practice. The pandemic has posed such a threat to public health around the world, that even while we have managed to defeat the infection through effective treatment and/or vaccination, dramatic and long-lasting changes are expected to affect the way we live, work, and relate to each other.¹ Some of the adaptations needed will improve the orthodontist's line of work, but others will not be sufficiently cost-effective.²

Some of the problems encountered during the initial phases of pandemic or maybe encountered in the foreseeable future in orthodontic practices are:

1. Fear: Undoubtedly there is a fear in both doctor and patient, not only about getting infected by Covid-19, but also the uncertainty about whether a new and even more lethal variant of the Coronavirus will emerge and if the economy would be affected again.

2. Missed appointments and increased treatment duration: During the initial stages of Covid-19, clinics were closed and even after they reopened, patients avoided visiting dentists due to the fear of getting infected at the clinic. Both the factors invariably increased treatment duration.

3. Broken modules, debonded brackets, molar tubes, appliances trauma : Ulcerations and mucosal tear due to extended wire ends and debonded brackets/molar tubes were commonly reported. Since rebonding of debonded brackets required use of airtor which produced aerosols, their use was avoided completely or were used very cautiously with high standards of precautions and measures.

4. Covid 19 disease's effects on oral mucosa, periodontium and tooth movements: Various oral manifestations of the disease were evident in infected individuals. Covid tongue as a sign of disease was established and also there was an exponential rise in the number of cases of black fungus being reported in infected patients. Their effect on tooth movement and weakening of periodontium and other similar effects, jeopardizing orthodontic treatment are still being researched.

5. Covid 19 drugs and its effects on root resorption : The inflammatory mechanism promoted by immune cells that precede tooth movement can influence the magnitude of root resorption. Orthodontists have to be more cautious and evaluate root morphology radiographically during treatment more frequently in patients previously infected by Covid-19 patients on medication.

6. Anchor loss due to unsupervised treatment with power chains elastics: After the initial phase of lockdown and curfew, many orthodontic patients (in whom space closure of extraction spaces were in progress using elastic power chains) reported to orthodontic clinic with unwanted or unplanned tooth movements. Anchor loss (unwanted movement of anchor tooth), rotations, tipping of teeth and unwanted closure of implant space were commonly encountered. Many of these unwanted teeth movements had to be accepted as compromised treatment results.

7. Iatrogenic errors due to orthodontic emergency being attended by different orthodontist/dentist: Many patients, who had travelled to their home country and could not return due to airport closure, had to visit local dental clinics for attending orthodontic emergencies like broken bracket, elastic modules. In some cases, the clinician would carry out treatment which was not intended in orthodontic treatment plan. Adverse effects of this were reported during



the initial phases after the restrictions were eased. Some errors could be corrected, others had to be accepted as they presented.

8. Poor oral hygiene maintenance leading to dental caries, cervical abrasions and white spot lesions around orthodontic brackets: Since oral prophylaxis in dental office was banned during initial phases of lockdown. It led to poor oral hygiene maintenance by some orthodontic patients. Plaque and calculus accumulation due to presence of orthodontic appliance (brackets and wire) was inevitable. Demineralization of enamel surface led to surface erosions and abrasions which in turn required removal of brackets for its restorations leading to increased workload for orthodontists and also increased orthodontic treatment duration.

9. Offline to Online transition of Continuing Orthodontic Education: Many professionals and academicians faced challenges initially with cancellations of conferences and meetings but later with online lectures and webinars, interactions between students and researchers with national and international speakers and laureates at the convenience of their smart devices came as boon. Educators could now address a far larger enthusiastic audience at the convenience of their offices and home without the hassle of long flights and tedious schedules. Similarly, students can attend different lectures happening in different parts of the world and understand the various modalities of treatment.

To conclude, As we slowly enter into the post covid era, need of the hour is to create a safe working environment for everyone, provide encouragement, and direct help to anyone who needs it. As stabilization takes place and a new equilibrium is established, all need to be resilient, grateful, and aware that the old and new normal must go hand-in-hand, and the only way forward is together.

