

Overcoming the pandemic: Do we need a far-reaching plan?

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The Spanish flu infected about 500 million people in 26 months. Its four-phased outbreaks killed at least 50 million people in the world. Looking at the COVID-19 pandemic, it is not possible to estimate exactly how many waves we have and the total number of deaths. The thing is that standing on the beach, we are counting the waves crashing at our feet.

The SARS-CoV-2 has a proofreading mechanism, which results in a low mutation rate compared to influenza. Recently, it has been reported that the SARS-CoV-2 has been mutating at a rate of about 1-2 mutations per month. Some recent emerging variants, however, have accumulated significantly more mutations in short periods, causing concern around the globe.

Multiple mutations that spread persistently give rise to a new 'variant' of the virus are called 'lineages'. Scientists predict that these mutant lineages of the SARS-CoV-2 strain will not be the only concerning variants that emerge, as the continued uncontrolled transmission of this virus in many parts of the world and selective pressures, such as vaccines, are creating ideal conditions for additional, significant virus evolution.

Multiple variants have recently made headlines, including a UK



variant known as 501Y.V1, VOC 202012/01, or B.1.1.7 lineage, a South African variant known as 501Y.V2 or B.1.351 lineage, a Brazilian variant known as 501Y.V3 or P.1 lineage and many others. Some emerging variants are believed to be more transmissible and therefore have the potential to increase hospitalisations and deaths, especially in areas with already at-capacity healthcare systems.

The Indian experts have theorised that the new wave of infections is driven by the 'double mutant' variant discovered in the country, the B.1.617. Some

of the SARS-CoV-2 variants carry mutations that can escape detection by the immune system and neutralising antibodies, or spread faster, or infect more, causing severe disease, or a combination of these three behaviours.

The B.1.1.7 and B.1.351 variants have been associated with higher viral loads compared with existing variants in preliminary analyses, resulting in lower cycle threshold (CT) values for polymerase chain reaction (PCR) testing. Detection rates with antigen tests may increase due to an increase in

the concentration of antigen in the samples. Some variants have been associated with higher transmission rates compared with others and existing variants. Furthermore, shared mutations with some variants may increase the transmissibility of this virus.

The type of coronavirus is such that the more movement a COVID-19 patient has, the worse the physical condition will be and the greater the prevalence of the infection. Meanwhile, the fact that the strict lockdown approach does not apply to Bangladesh at all is already understood. None of the COVID-19 vaccines

discovered so far have been 100% successful. In other words, it is not known when our waiting hours will end for a successful COVID-19 treatment modality.

Due to lax management, the infection has increased again in many countries. It carries a message that the pandemic is not leaving us easily. At present, COVID-19 patients as well as their families are suffering a lot.

When someone in the family is COVID-19 positive, the sky seems to be falling on everyone's head. People are fighting to arrange a bed or isolated care unit in the hospital routinely. In that case, it should be our main concern now to deal with the current situation and successfully deal with the upcoming wave of the pandemic.

It is better to use a separate community-based health care system rather than the hospital management system assigned for the non-COVID-19 patients in the country to control the current situation. In this way, COVID-19 patients will get service at hand in an isolated way. On the other hand, increased infections and mortality rates due to the rotation complications will be somewhat reduced.

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DIABETES DIET



Diabetes diet lowers blood pressure & reduces need for medication

New research has shown that if people achieve and maintain substantial weight loss to manage their type 2 diabetes, many can also effectively control their high blood pressure and stop or cut down on their anti-hypertensive medication.

A weight management programme, developed by researchers at the Universities of Glasgow and Newcastle for the Diabetes UK-funded Diabetes REmission Clinical Trial (DIRECT), has proved effective at lowering blood pressure and reducing the need for anti-hypertensive medications, as well as bringing remission of type 2 diabetes.

The programme involves an initial 12 weeks on a nutritionally complete formula diet (low calorie soups and shakes) which will induce weight loss of over 15 kg if followed fully. Diabetes and blood pressure drugs were stopped at the start, and only re-started if blood sugar or blood pressure rose.

The weight loss phase is followed by support to choose foods and eat wisely for weight loss maintenance. Maintaining the 15 kg weight loss allowed 8 out of 10 people to become free from type 2 diabetes, without the need for diabetes medications for at least 2 years.

The researchers found that, overall, average blood pressure fell steadily as people lost weight. And blood pressure remained lower after the formula diet period finished.

HEALTH bulletin



SARS-CoV-2 seropositivity is not associated with low vitamin D levels

Several studies, generally small and poorly controlled have suggested that patients with low levels of vitamin D have excess risk for infection with SARS-CoV-2. This prospective cohort study involved 18,000 participants whose vitamin D levels were assessed both a few months prior to the COVID-19 pandemic and in the middle of the pandemic (August–November 2020). SARS-CoV-2 seropositivity was assessed through November 2020; clinical illness was not assessed.

Nine hundred participants (5%) became SARS-CoV-2-positive during the study. On univariate analysis, positivity was associated with low vitamin D levels and with various sociodemographic parameters. However, on multivariate analysis and with other methods of adjustment, seropositivity was not associated with 25-hydroxyvitamin D levels of 20 ng/mL or 30 ng/mL.

These results add to the now generally accepted belief that vitamin D levels are not associated with risk for SARS-CoV-2 infection. This fact, of course, renders moot any discussion of whether supplementation would lower risk.

When should screening start for prostate cancer?

STAR HEALTH DESK

A nationwide study in Sweden estimates the elevated risk of advanced or fatal prostate cancer among relatives of men with the disease, providing new data that could help refine guidelines for the age at which screening should begin. Mahdi Fallah and Elham Kharazmi of the German Cancer Research Centre (DKFZ) in Heidelberg, Germany, and colleagues presented these new findings in the open-access journal *PLOS Medicine*.

Clinical guidelines for the age to start prostate cancer screening aim to ensure that the benefits of identifying the disease early outweigh the risks of diagnosing and treating cancer that will not harm the patient. Current guidelines note that men with a family history of prostate cancer have a greater risk and should begin screening early. However, due to the lack of sufficient data, the age at which early screening should begin has been unclear.

To address this problem, Fallah and colleagues conducted an analysis of all male residents of Sweden born after 1931, as well as their fathers. Between 1958 to 2015, 88,999 out of a total of 6,343,727 men were diagnosed with advanced stage (III or IV) prostate cancer, or died from the disease.

The researchers used these data to calculate the age at which men who had a father, brother, or son diagnosed with prostate cancer reached the "screening risk

threshold," i.e., the same level of prostate cancer risk as at the age of 50 years across the entire population. (Many guidelines recommend that screening begin at 50 years.)

The researchers found that men with a family history of prostate cancer reached the screening risk threshold up to 12 years earlier. However, different men reached this threshold at different ages, depending on how many of their first-degree relatives had prostate cancer and the age at which the relatives were diagnosed.

By comparing their calculations with various guidelines, the researchers determined that men with a family history of prostate cancer reach a high enough risk to start screening anywhere from 2 to 11 years earlier than currently recommended.

These findings could lead to greater personalisation of screening

guidelines. Further research could help validate these results in populations of different ethnicity, while also accounting for genetics and lifestyle.

"The one-size-fits-all policy in medicine belongs to the past; more and more risk-adapted approaches are needed instead to optimize the use of restricted resources in health care", said Dr. Kharazmi, co-leader of this study.

"The aim of our group is to fill this gap (a personalised approach in screening) for various cancers, such as prostate, breast, and colorectal cancer, using long-standing high-quality large-scale register-based data, to provide robust evidence to support screening guidelines", Mahdi Fallah, professor of Medicine (Epidemiology) in the University of Bergen, Norway, and leader of Risk-Adapted Cancer Prevention Group, DKFZ, Germany.



Ways to stop smoking

If you want to stop smoking, you can make small changes to your lifestyle that may help you resist the temptation to light up. Here are a few tips that may help you to resist the urge to smoke or use tobacco when a tobacco craving strikes.

Sip and eat: Sipping cold water through a straw can help replace the act of sucking on a cigarette. It also releases dopamine, a brain chemical that can help ease bad moods. Eating small meals can also help you get past the urge to smoke. Choose lean, healthy foods to avoid weight gain.

Brush your teeth: One of the instant perks of quitting is that your mouth tastes better and your breath smells better. Brush often. That way, you will be less inclined to light up a cigarette and foul that clean, fresh mouth.

Be active every day: Exercise offers a powerful distraction from cravings. When you are active, your body sends out natural chemicals that help your mood and ease your stress. Walking is one of the simplest options.

Limit caffeine: Caffeine helps some people get going in the morning and stay alert when they are tired. But it makes others feel tense, jittery and stressed. Breaking your nicotine addiction can boost those effects. If caffeine makes you jumpy or anxious, cut back on it.

Source: WebMD

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