# Vaccines for Covid-19 by US Election Day

### Can we please get a straight answer?



**¬** OR future → historians, the most memorable event of the year 2020 is certainly likely to be the Covid-19 pandemic, followed by the US Presidential elections. One does not have to stretch one's imagination to see how intertwined these two phenomena

are since the question on everyone's mind is, "Are we getting the vaccine before Election Day?" This question, which epitomises the crux of the current national debate in the realms of politics, economics and social discourse, is also the trigger point for all sorts of uncertainty and hopelessness about the

The answer to the question I pose in the title of this commentary is not just a matter of speculative fantasy but will shape the future of both US politics as well as the path of the war against Covid-19.

If you were to ask, "When do we get the Covid-19 vaccine?", the average person might respond, "who knows?" However, most epidemiologists would say, "I am not sure we'll have one soon! But, before Election Day, November 3, it is possible but not likely." What does that mean? When I asked this question to Imran Hussain Chowdhury, MD, an infectious disease specialist, he was skeptical about the prospect of having a safe and proven vaccine before the end of the year. As a physician with the Infectious Disease Care Center, he is preoccupied with treating his patients in the Greater Washington DC area and is trying to focus on the job at hand: testing and treating the sick. Dr Chowdhury cautions that the vaccine development process takes time and while modern technology can help, the safety and efficacy of a vaccine must be given the highest priority.

The complexity surrounding the development and deployment of the Covid-19 vaccine is quite significant and to make matters worse, the political leaders and policymakers have thrown in a mish-mash of terminology that baffles even the experts, not to speak of the non-specialists. Public officials are often reluctant to give straight answers and use words such as "likely", "possibly", and "probably", which are vague and not helpful.

There is already some bad news from the frontline. On September 8, AstraZeneca announced that it had temporarily stopped Covid-19 vaccine Phase III trials due to illness of one or more participants. The AstraZeneca vaccine, developed in conjunction with Oxford University, has been described by the World Health Organization as probably the world's leading candidate and the most advanced in terms of development. According to news sources, "The suspension dims prospects for an early rollout amid some reports that the United States was aiming for an October or November delivery.

In economics, which is adept with dealing with risk and uncertainty, we can handle any forthcoming event that has more than one possible outcome as long as we know the probability of the outcomes. However, for the man in the street, nothing is more baffling than the concept of probability. For example, if you know that the vaccine against flu is only 40 percent successful, would you take the flu shot? The answer is no, as reflected in the statistics for last year, which shows less than half the population in the USA got vaccinated. Nonetheless, the Center for Disease Control (CDC) strongly recommends that everyone should get a flu shot every year regardless of the statistics.

The CDC estimates the burden of flu and the impact of annual flu vaccination in the US using a model that estimates the numbers of flu illnesses, medical visits and hospitalisation prevented by vaccination. One control trial conducted with adults aged 60 years and older reported a vaccine efficacy of 58 percent. According to the latest data for the entire population, vaccine efficacy is 29 percent in

Coming back to the topic of Covid-19 vaccines, President Trump officially launched Operation Warp Speed (OWS) on May 15, 2020 to develop and deliver 300 million doses of a vaccine for Covid-19 by January 2021. Dr Moncef Mohamed Slaoui, a Moroccan-born Belgian-American researcher, is the chief adviser for OWS. He called the time frame given for the vaccine development "very aggressive" but "achievable". On September 3, when asked if he thought that there would be a vaccine before Election Day, which was then less than

whatever tomorrow may bring. Is the weather tomorrow going to be good? No one can tell with certainty, but that does not prevent us from planning for our day tomorrow. Who could have predicted even six months ago that we would still be in the midst of the pandemic in mid-September? Therefore, the bottom line is, we manage to live with

As we navigate the Covid-19 quagmire, what can we expect tomorrow? We are all unanimous about our national goals: vaccine,



PHOTO: AFP

eight weeks away, he said, "I think it's extremely unlikely but not impossible, and therefore it's the right thing to do to be prepared in case." Slaoui's careful choice of words, "unlikely but not impossible" has added a lot of fire to the political debate on Trump's election strategy. As expected, the Democrats are crying foul and taking all possible precautions for the three possible outcomes of the "vaccine lottery": an announcement in October that the vaccine is ready, an announcement that the vaccine is ready but not for immediate use, or that vaccination will proceed on a very limited scale.

The future is always uncertain. You take

tests, therapeutics, jobs and income. If we do not have a vaccine that is 100 percent effective, we can't have faith in it. But can we be certain that even a simple test is 100 percent accurate? No drug company will claim that theirs is.

In any basic undergraduate class in statistics, we learn the concepts of false positive and false negative results. These terms have now become part of everyday lingo. Patients die even after testing negative (a case of false negative). And there is an abundance of false positive cases too. On September 8, my home state, Massachusetts, suspended a coronavirus testing lab after 400 false positive cases were identified.

Professor Nassim Taleb of New York University popularised probability and helped the average person to start living with the concept of uncertainty, particularly low probability events which do happen. An example of this is the economic slowdown in 2008 and the current pandemic. Probability as we all know is not a black and white sphere. Events are both possible and impossible at the same time, depending on what the probability is and the nature of the event is. If you get a flu shot, are you likely to get the flu? Of course, you are. The flu shot is not 100 percent effective and that means that even if you are vaccinated for the common flu, you still might catch the flu. At least the CDC is candid-"Everyone can make their own decision based on available information.

During my graduate studies at Boston University, I took courses with a world-famous economist, Paul Rosenstein-Rodan. He gave us a very entertaining example to hammer in the distinction between probable and possible outcomes, or rather the impossible and the improbable. Paraphrasing Dante's Divine Comedy, Prof Rosenstein-Rodan told the story of a king in Greek mythology, who after being overthrown by a mass uprising, was offered two options: Be hanged by the neck or commit a harakiri by self-guillotining using a sword. The king went for the second option and walked for 2,000 yards with his severed head in his hands. Prof Rosenstein-Rodan told us that while self-execution was not impossible (non-zero probability), there was a zero probability that the king could walk holding his head.

Enough of this doom and gloom. Let me end this note with some good news. The chances that we will have a vaccine by the end of next year is high, i.e. the probability of success is 100 percent. Moreover, the grip of the virus will be substantially diminished by then.

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## The pandemic cannot stop joint efforts for adaptation, resilient societies



**У**ино Науакаwа

a milestone event to tackle climate change

in the region, accomplished by GCA and the

Government of Bangladesh, particularly the

Ministry of Forest, Environment and Climate

Change, and various stakeholders, in spite of

constraints caused by the spread of Covid-19.

Participants attending the partnership forum

held after the launching ceremony of this

regional hub also acted as proof of the rich

academics, governments, civil societies and

Adaptation is one of the focal areas of

development partners in the region.

cooperation of the Japan International

Cooperation Agency (JICA) worldwide,

human security and quality growth—and

In addition, we have been urged on by a

prior to calamities is usually much more

response *after* disasters. The importance

of investment was also highlighted by the

Sendai Framework 2015–2030, adopted at

the Third UN World Conference on Disaster

Challenges caused by different climate

belief gained from evidence-based research

as well as our own experiences—investment

cost-effective than emergency and recovery

responses to climate change. Experiences and

knowledge of Japan, a disaster-prone country,

have effectively contributed to this approach.

as it is directly linked to its missions—

human networks that have been built among

natural and socioeconomic conditions, 8, the South Asia regional office of Global Center on Adaptation (GCA) was inaugurated in Dhaka with the attendance of Prime Minister Sheikh Hasina and the 8th Secretary General of the United Nations Ban Ki-moon. This is

are various in South Asia. Accordingly, in this region, JICA has tackled a variety of issues related to adaptation, together with relevant governments, academic researchers and development organisations, such as research and development of early warning mechanisms for glacial lake outburst floods in Bhutan, institutional strengthening of disaster management agencies and meteorological observations in Sri Lanka, a wide range of activities from

construction in Maldives and so forth. For promoting adaptation in Bangladesh,

JICA has closely collaborated with the government of Bangladesh mainly in three pillars: reduction of water-related disasters such as floods and waterlogging through strengthening of flood control and river management infrastructure and relevant capacity building; minimisation of damages caused by floods, cyclones and tidal surges, including development of meteorological radar systems for early warning and



Looking for fodder from a raft made out of banana trees in Companiganj upazila of Sylhet.

PHOTO: SHEIKH NASIR

urban sewerage to mangrove afforestation in India, digitalisation of geographic maps with accurate elevation data in Nepal, capacity building of relevant officials and awareness raising at the community-level in disaster management in Pakistan, sea wall

construction of 117 multipurpose evacuation shelters in the coastal areas; and agricultural responses, such as small-scale water management system and diversification of agriculture for farmers. During these collaborations, attention has been paid on

a combination of infrastructure investment, knowledge sharing and technological transfer; connecting policies, planning and practical actions on the ground; multi-tier partnership with central ministries, municipalities and communities; and utilisation of multiple instruments including grants, loans and technical cooperation. This is also our mutual-learning process together with Bangladeshi colleagues.

Looking ahead in Bangladesh, the government and development partners have a common platform to tackling climate change—a visionary long-term plan called Bangladesh Delta Plan (BDP) 2100. JICA has decided to join with Bangladesh and other partners to materialise the BDP 2100. As the first response to this plan, the agency just initiated a technical cooperation project called NODI, which will promote a tailor-made river engineering methodology in Bangladesh for better control of ever-changing river flows by mobilising knowledge of domestic and international researchers and engineers.

Adaptation needs a comprehensive multi-sectoral approach. It is essential to mainstream adaptation elements into a broad range of activities, sectoral and spatial planning, and each investment. Education, academic research and technological development will be also key factors. It will be a long and difficult journey—to find out an optimal or better solution between calamity risks and economic burdens. Actually, this dilemma has a substantial similarity with the world's current struggle against the pandemic—to seek the delicate balance between health threats and pains of societies and individuals.

Global endeavours to combat the present health threats have made people worldwide vividly aware of important but oft neglected facts, such as technology and innovation really matter to save our own lives; education, and sharing and dissemination of correct

knowledge based on scientific evidence and analysis are essential for policymaking, research and development, and sustainable change of individual behaviours; risk reduction needs cost and burden-sharing; and policy decisions should be made through open, careful and participatory dialogue among not only policymakers and scientists but also with other broad stakeholders because all of us, more or less, shoulder risks as well as burdens such as tax and loss of income (the old slogan of "no taxation without representation" may be recalled). It seems all of these points are applicable to adaptation efforts as well. Of course, the spread of the novel coronavirus is a new and additional threat to people's lives and social safety, but the change in people's way of thinking under the pandemic might also become an opportunity to accelerate climate actions.

Bangladesh is a country on the largest river delta in the world, created by transborder river flows. The history of the country has been built on fights against natural disasters as well as on coexistence with them; it can be said that resilience and adaptation are national culture. And now, the government of Bangladesh is decisively committed to the climate issues and its role within the international community is remarkably expanding. Against this backdrop, the region welcomes the timely opening of the regional office of GCA in Dhaka-this is exactly the right place to be a great nexus for regional collaboration. This progress demonstrates that even the present health crisis cannot stop surging needs for knowledge sharing worldwide and joint endeavours for adaptation. Even amid the pandemic, we need to, and will, keep moving forward and faster together towards resilient societies.

Yuho Hayakawa is the Chief Representative of Japan International Cooperation Agency (JICA) Bangladesh

## QUOTABLE Quote

and geographic features, as well as

Reduction in 2015.



**NADINE GORDIMER** (1923-2014)South African novelist and short-story writer.

The truth isn't always beauty, but the hunger for it is.

### **CROSSWORD** BY THOMAS JOSEPH

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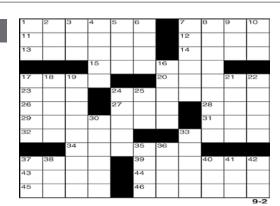
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YESTERDAY'S <b>Answers</b>										
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### **BEETLE BAILEY**





BY MORT WALKER

