Balance Euphoria over Corona Vaccine with Rationalism Shots

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THE political narrative on India's war against Covid-19 continues to sustain new hopes. Every morning starts with positive dose of feel-good news on vaccines or how lockdown saved crores of lives.

The spindle of hope has turned many times over from Prime Minister Narendra Modi's stunning resolve on 25th March 2020 to win the Corona war in 21 days to solemn promise to give vaccine for each and every citizen.

This optimism must be balanced with basics and the history. It is replete with frantic efforts to develop and inject people with wrong vaccines during 1918 pandemics & vaccine developers getting shock at fast disappearance of virus as happened in 1957 pandemic and 2003 SARS epidemic.

It is not anyone's contention that vaccine against novel corona viruses should not get highest priority. The efforts should lead to grand illusion and false hope about corona vaccines serving as panacea.

It is here pertinent to quote Washington-based vaccine developer Sabin Institute (SI), which has been working vaccines against these viruses for several years. In a pre-covid write-up on its website, SI stated:
"Past and ongoing pandemic threats from coronaviruses have prompted a new urgency to develop a pan-coronavirus vaccine as a global countermeasure".

The plain truth is viruses causing influenza and its ilk keep mutating. Hence the composition of seasonal vaccines is decided at the start of season in cold countries. Public is encouraged to take shots of such vaccines at the start of flu season in developed countries. Efficacy of seasonal vaccines is an issue that puts off many from taking shots.

The gullible public should also be told about distinction between the normal vaccine that prevents disease through immunization to one that cures an infected person (therapeutic vaccine). The latter are frontier areas of research. There is no FDA-approved, commercially available therapeutic vaccine for any viral disease.

The medical science's limitations to grapple with mutating viruses has also to be reckoned to moderate hype over Covid vaccine. More important is to realize that vaccine developers are pitted against natural herd immunity (NHI), which is acquired through mild infection without persons realizing it.

If NHI succeeds as it has in the past influenza pandemics, vaccine developers & their political spin masters would hardly find any takers for vaccination. Such hard realities are important for all stakeholders including the ones making business and tax revenue forecasts.

The possibility of masses acquiring immunity through a combination of vaccination and natural immunity appears a possibility in the emerging covid scenario.

This subject has attracted even the attention of America's Supreme Auditor named U.S. Government Accountability Office (GAO).

In a note published in July 2020, GAO observed:
"If an effective vaccine is available for a virus, achieving herd immunity can require a high rate of vaccination in the community. For diseases that spread more easily, more people must have vaccine-induced or natural immunity to achieve herd immunity"

The Note adds:
"However, if a virus mutates quickly, the community's herd immunity may be relatively short-lived because the immunity from prior infection or vaccination may no longer be effective. Also, the disease can still circulate in segments of the population that are not immune, such as those with weakened immune systems who cannot effectively form immunity".

Before discussing further influenza & related epidemics, let us briefly know how Indian optimism compares with the situation elsewhere.

In his magnetic address to the Nation on 20th October 2020, Prime Minister Narendra Modi disclosed:
"The Government is also preparing a detailed road map to reach the vaccine to every single citizen as soon as it is readily available".

He also urged the people ***"not to be negligent until a vaccine against the pandemic is found "***
. The number of people indulging in negligence has swelled since then due to a combination of factors.

The notable ones are: festival season, growing political and social protest rallies and Bihar elections where mask-free people jostle to speak for or against one leader or the other.

It is anybody's guess how many people have let their guard down with the belief that Mr. Modi's vaccine is round the corner as a magic injection.

Mr. Modi's Cabinet colleagues, especially Health Minister Dr Harsh Vardhan, have kept the pot of optimism simmering with projected timelines for vaccines. Earlier this month, Dr. Vardhan said that 1 out of 5 Indians might get vaccinated by July 2021 with a double-dose vaccine.

In his weekly social media interface, he reportedly stated:
"The Centre is working on plans for building capacities in human resources, training, supervision etc. on a massive scale and roughly estimates to receive and utilise 400-500 million doses covering approximately 20-25 crore people by July 2021."

He added: ***"All this is under various stages of finalisation."***
Dr. Vardhan has time and again stated that vaccine is expected to be available early next year.

Compare this exuberance with cautious signals received from abroad. The other day British PM, Boris Johnson quipped, ***"There is a good chance of a vaccine, but it cannot be taken for granted."***

Asked by an MP for timeline for vaccine availability in House of Commons on 12th October, Mr Johnson stated:
"Alas, I can't give him a date by which I can promise confidently that we will have a vaccine".

Last month, World Health Organisation (WHO) chief Tedros Adhanom Ghebreyesus stated that WHO has no guarantee whether any vaccine in development for the coronavirus disease will work.

According to Policy Paper (PP) from Washington-based Center for Global Development (CGD),
"Our modelling suggests that it will probably take more than a year to produce enough vaccines to inoculate the world's 50 million medical staff, and that it could be September 2023 before we have enough doses for the whole world. It is not clear that these early vaccines will be efficacious enough to end the COVID-19 crisis".

PP, issued in October, says:
"The vast majority of experts we spoke with predict that first-generation vaccines will not be effective enough to end the pandemic on their own, and that it will take longer to develop vaccines that fully prevent infection. This means that the world must be prepared to commit to other public health measures to control the spread of the virus for years, and should invest in a wider, more diversified portfolio of vaccines through better international collaboration and market incentives, as well as focus on diagnostics and treatments. All this while carefully managing the collateral damage from the ongoing policy response".

The most sobering dose of pragmatism was administered by three Indian associations of medical professionals, IPHA, IAPSM and IAE. They have a joint task force on containment of Covid.

In their 3rd Joint Statement on COVID-19 Pandemic in India issued on 25th August, it noted:
"Vaccine have no role in current ongoing pandemic control.... While being optimistic the prevention and control strategy should also prepare for the worst. It must assume that an effective vaccine would not be available in near future. We must avoid false sense of hope that this panacea is just around the corner".

Consider now basics. WHO & other global health entities have made taxonomical distinction between Covid-19 and influenza viruses. They have put Covid and two other animal-origin corona viruses - Severe acute respiratory syndrome (SARS) and Middle East Respiratory Syndrome (MERS) in a separate category - SARS-associated coronavirus (SARS-CoV).

The trio cause severe, respiratory diseases similar to the ones caused by influenza pandemic or seasonal viruses. They too are corona viruses. Leave aside technicalities, the fact is the world failed to develop vaccines to prevent the spread of SARS-CoV infections. Remember SARS was first reported in Asia in February 2003. It disappeared in 2004 before start of clinical trials of vaccine.

Similarly, MERS was first reported in Saudi Arabia in 2012. It has so far spread to 27 countries. There is no vaccine against either of Corona viruses.

There are both scientific and commercial reasons for lack of success on this front that need not be elaborated here.

The need for realism is driven well by case of the human immunodeficiency virus (HIV), which was detected in 1984. No vaccine has yet got US FDA's nod for commercial launch of preventive or therapeutic HIV vaccines.

Going back further back into past, Government's efforts to develop vaccine against 1957 pandemic deserve recall. The pandemic, popularly known as Asian Flu, spread like wildfire in India during summer with 4.46 million cases, resulting in 2,185 deaths.

Health Minister late Dr. D.P. Karmarkar told Parliament in August 1957:
"People should not be in that confusion and I may tell the House that we should not rely upon that vaccine because we are not sure of the new epidemic that might come and we cannot rely upon the vaccine that we might prepare now to combat that new epidemic and the strain may not be the same strain. Otherwise the disease will be one and the vaccine will be another".

He stated this in response to concern voiced by an MP Dr. R. B. Gour. Dr. Gour observed that
"In view of the infection that is caused by a number of strains of influenza virus and in view also of the fact that it is absolutely illusory to think that a proper influenza vaccine could be prepared in the immediate course of time, will the Ministry make a clear declaration that the people need not bank on such a vaccine from Coonoor so that the people may seek alternative methods to try to spare themselves from its spread? There is a lot of illusion about it that the vaccine is coming from Coonoor".

Let us now take the case of most dreaded pandemic in modern history - the 1918 pandemic/Spanish Flu, which wiped out an estimated 2% of India's population. It triggered lot of vaccine research across the world.

Many Researchers believed it was caused by bacteria and thus developed bacterial vaccines. In British India, lakhs of does of mixed bacterial vaccines were produced and administered to patients. The details about bacterial vaccines are recorded in Sanitary Commissioner of India's annual report for 1918.

The damage wreaked by bacterial vaccines administered to flu patients is mentioned by US doctor Dr George Starr White in his 1920 book captioned '***Think; Side Lights, What Others say, clinical Cases***'.

Dr White wrote:
"I wish to call my readers' attention to the fact that the recent epidemic of influenza was much more severe among the vaccinated men in the military camps and hospitals than among the rest of the population, and it now begins to look as if the great flu epidemic was largely due to vaccination and serums as well as to other misdirected advice given out by the medical authorities".

He noted:
"The history of the 1918-19 flu panic, and the remedies advocated by the Political Health Department should teach the public a lesson for a whole generation. If politics would only learn from these errors to reform, it would help the future generations, but they do not".

It is worth pointing out that he referred to herd immunity without referring to it as the term was not coined at that time. Dr. White wrote: ***"The flu will come to a standstill after the susceptible ones are killed off or after the people have acquired a suitable resistance".***

Would Covid-19 pandemic go the 1918 pandemic way?