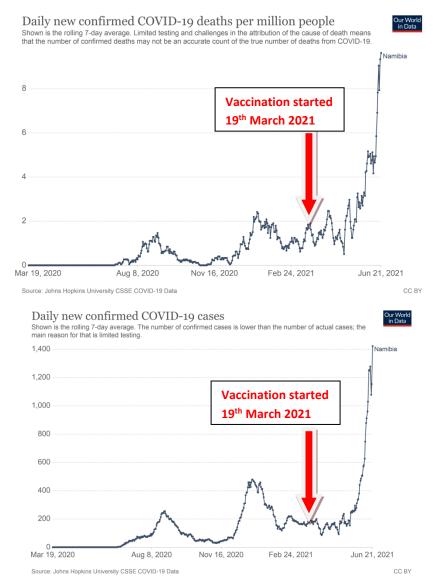
VACCINATION INDUCED COVID WAVES

Namibia is currently experiencing the most serious wave of COVID19 infections, hospitalizations and deaths, ever since the beginning of COVID-19 pandemic. Hospitals are full, there are no beds in private and state hospitals for patients suffering from severe COVID-19 pneumonitis, COVID-19 death toll is rising rapidly.

When analysing the pattern of COVID19 spread in Namibia, using https://ourworldindata.org/coronavirus it is easy to notice that vaccination roll-out has been followed by exponential surge of COVID cases & deaths that we never had before.



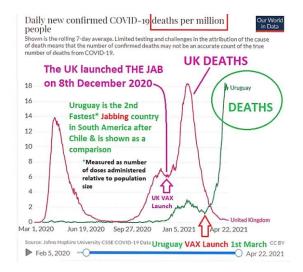
When researching the literature one came across reports and articles written by various scientists, statisticians and doctors, pointing to the strange phenomenon of significant COVID-19 deaths waves following the roll-out of mass vaccination in different countries (including Israel, UK, India).

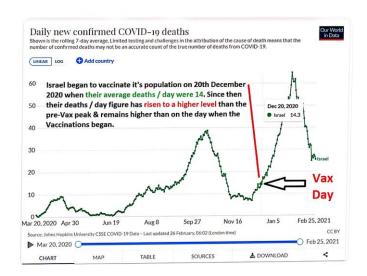
After analysing data from multiple countries, using https://ourworldindata.org/coronavirus the following observations are made:

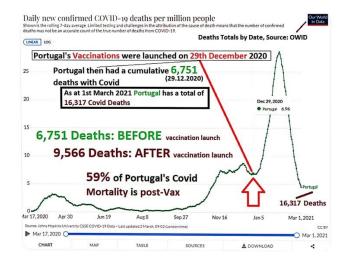
1. In 90 countries, there is a close and timely correlation between the roll-out of COVID19 vaccination and subsequent significant surge of COVID cases & deaths (see the attached document VACCINATION vs COVID Morbidity Mortality

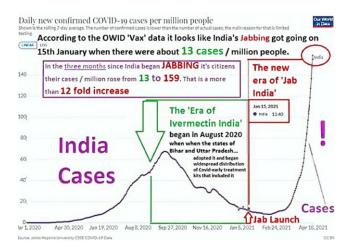
Correlation). Data are available to anyone to verify by correlating vaccination roll-out with COVID-19 deaths/cases curves. On the above database one can simply pick-up the country of interest, determine the start of COVID19 vaccination and follow the curves of deaths or cases from then on. The pattern of post-vaccination COVID augmentation will quickly become obvious.

- 2. The countries, that had a major first and second COVID waves (e.g. Dominican Republic on page 2, Mauritania on page 3, USA on page 4 of the attached country review) have relatively small post-vaccination COVID waves but the close correlation between vaccination and surge of COVID-19 deaths/cases is still clearly demonstrable.
- 3. The countries with relatively small first and second waves (large segment of population has not been exposed to COVID yet, the population is relatively COVID naive) experienced a major COVID-19 wave within a few weeks from the start of vaccination. Namibia falls into this category. Countries with similar post-vaccination COVID dynamics are, for example, Thailand (page 4), Uruguay (page 5), Bahrain (page 7), Mongolia (page 13), Taiwan (page 15), Vietnam (page 25).
- 4. The phenomenon of post-vaccination surge of COVID19 infections and deaths is not vaccine-specific (vaccines used in different countries are listed in the attached document). It is not region or climatic zone specific (thus seasonal triggering of COVID does not apply). The only processes that correlate closely are the vaccination and the subsequent COVID-19 wave.
- 5. In most countries vaccines with 2 dose regimen have been used. The above described phenomenon of post-vaccination COVID surge clearly occurs after the first doses of vaccines have been administered. The spike of COVID deaths appears to be rapidly going up and then, fairly rapidly, going down again (see the examples below).
- 6. On https://ourworldindata.org/coronavirus we can find graphs relating vaccination to various demographic data, how many vaccines have been administered in which country and continent, attitude towards vaccine, vaccination according to age, etc. However, quite surprisingly, there are no graphs correlating vaccination intensity with COVID mortality and morbidity. Mass vaccination is a population-wide intervention and we need to asses the impact of the intervention by reviewing post-vaccination, population-wide COVID data. Hence, the omission of this metric from one of the most frequently used public COVID databases is difficult to understand to say the least.









The finding that COVID-19 mass vaccination roll-out is almost invariably followed by a major surge in COVID infections and deaths is alarming. Indeed, many people (doctors included) when confronted with this phenomenon simply refuse to accept it and dismiss it as "anti-vax conspiracy theory". Yet, data show this phenomenon clearly, the correlation between mass vaccination and COVID surges is undeniable.

It should have been noticed, analysed and explained by national and international bodies (such as WHO, CDC, FDA, MHRA). Some scientists, doctors and others have been raising alarm about this but were ignored, censored or even persecuted!

If mass vaccination somehow accelerates the velocity of COVID illness and death in the vaccinated community, we need to urgently review and perhaps alter the intervention. Unfortunately, the response has been the opposite: "COVID is spreading fast - so we need to vaccinate faster". Vaccines may be an effective tool to fight COVID but perhaps the process of administering them may be flawed, hence the subsequent spikes of infection.

Trial data showed that the individual risk reduction by vaccination = Absolute Risk Reduction (ARR) of the current COVID vaccines is around 1% (Pfizer 0.8%, J & J 1.2%, Moderna: 1.2%, AstraZeneca: 1.3%). Numbers needed to vaccinate (NNV) to prevent 1 severe COVID case are reported between 88 – 700 (depending on . In the UK, the probability of a child of school age dying of COVID in a 12 month period (the time vaccine antibodies might be expected to last) is about 1 in 700,000. Other things being equal, this means 700,000 children need to be vaccinated in order to prevent 1 child COVID death. Leaving aside the cost of 700,000 vaccines, just one blood clot or other vaccine-induced death in 700,000 vaccinations would cancel out the benefit.

https://www.bmj.com/content/370/bmj.m3259 https://www.bmj.com/content/371/bmj.m4347/rr-4 https://www.bmj.com/content/371/bmj.m4471/rr-0 https://www.bmj.com/content/372/bmj.n167/rr-8

POSSIBLE MECHANISMS BY WHICH MASS VACCINATION CAN CAUSE RAPID RISE OF COVID19 DEATHS/INFECTIONS

Vaccines are prophylactic therapies. We vaccinate people to induce immune response, production of antibodies and other immunity boosting processes. By definition, people should be vaccinated well before the risk of exposure (before the flu season or before entering the region where the infection is endemic). This is to allow the vaccine recipient to develop protective levels of antibodies (usually 2-3 weeks) and , to elicit T-cell response that will ensure immune "memory". Another reason for vaccinating well before the exposure is that vaccination does cause transient immune-suppression, lasting usually a few days (up to 2 weeks). Post vaccination neutrophil depletion and lymphocyte depletion has been shown for many vaccines and has been known about since 1981.

- Muturi-Kioi V, Lewis D, Launay O, et al. Neutropenia as an Adverse Event following Vaccination: Results from Randomized Clinical Trials in Healthy Adults and Systematic Review. PLoS One 2016;11:e0157385. doi:10.1371/journal.pone.0157385
- Munyer TP, Mangi RJ, Dolan T, et al. Depressed lymphocyte function after measles-mumps-rubella vaccination. J Infect Dis 1975;132:75–8. doi:10.1093/infdis/132.1.75
- Faguet GB. The effect of killed influenza virus vaccine on the kinetics of normal human lymphocytes. J Infect Dis 1981;143:252–8. doi:10.1093/infdis/143.2.252
- Rikin S, Jia H, Vargas CY, et al. Assessment of temporally-related acute respiratory illness following influenza vaccination. Vaccine 2018;36:1958–64. doi:10.1016/j.vaccine.2018.02.105

Mass COVID vaccination has been implemented amidst the pandemic, when the virus is circulating in the populations (or being present and dormant in people, e.g. summer decline of COVID in Northern Hemisphere). To vaccinate millions or billions of people in the middle of pandemic is indeed a risky strategy, that has never been attempted prior to COVID19.

3 mechanisms could explain post-vaccination COVID spikes:

- 1. Transient immune-suppression of COVID vaccines recipients and immediate exposure to COVID virus in the community.
- 2. Antibody-dependent enhancement of Coronavirus (ADE)
- 3. Immune-escape of highly mutable virus.

Ad 1. TRANSIENT IMMUNE-SUPRESSION CAUSED BY COVID VACCINATION

COVID19 vaccination makes the vaccinated people immune-suppressed for a period of 1-2 weeks. They are then inevitably exposed to COVID (or COVID19 is already in them, dormant) and therefore more likely to acquire symptomatic COVID19 illness and also, to shed and transmit the virus more avidly. They become "super-spreaders". They infect others (relatives, co-workers, hospital staff). Each round of vaccination may push more potential "super-spreaders" into the population. Even if it is only 10% of all the vaccinated who contract COVID after the vaccination, they still can significantly increase the velocity of COVID spread through the population. R (reproduction number) increases from the usual 1-1.5 to > 2 and an exponential growth of COVID19 infections (and deaths) follows. Both vaccinated and unvaccinated are affected. The vulnerable people are dying of severe COVID, not as a direct result of vaccination, but simply because of markedly increased exposure to the virus. A rapid spike of COVID deaths occurs. The disease quickly "consumes" the susceptible people. When they are gone, the death rate goes rapidly down (as the remaining population would not die of COVID anyway, with or without vaccination). Large percentage of population have had symptomatic disease by now. For every symptomatic patient there are 3-5 asymptomatic (or minimally symptomatic) people, who had the virus and are therefore also immune. Herd immunity is achieved by "clearing-off" the vulnerables and by immunity of the remaining population induced by COVID itself. In most countries the post-vaccination COVID spike is relatively short and death rate starts dropping before a significant percentage of population had been fully vaccinated (2 doses).

Do we have any supportive evidence to suggest this mechanism being behind the post-vaccination COVID spikes?

There is evidence of neutrophil/lymphocyte depletion post COVID vaccination. The Pfizer vaccination causes a transient fall in lymphocytes for the first three days after vaccination. The phase 2 trials of AstraZeneca similarly showed a fall in neutrophils. A Danish study showed a 40% increase in infections in the first two weeks after Pfizer-BioNTech vaccination, despite not vaccinating in homes with recent outbreaks. Indeed, the original Pfizer trial demonstrated a statistically significant 40% increase in 'suspected COVID', with 409 cases in the vaccination arm in the first week of the trial, compared with 287 in the placebo arm. Other publications have omitted mention of the period immediately after vaccination. There is substantial anecdotal evidence of people who had tested negative prior to vaccination, becoming infected shortly afterwards, invariably attributed to exposure just before vaccination. Others have raised concerns about this.

- Moustsen-Helms IR, Emborg H-D, Nielsen J, et al. Vaccine effectiveness after 1st and 2nd dose of the BNT162b2 mRNA Covid-19 Vaccine in long-term care facility residents and healthcare workers – a Danish cohort study. bioRxiv. 2021. doi:10.1101/2021.03.08.21252200
- U.S. Food and Drug Administration. Emergency Use Authorization (EUA) for an Unapproved Product Review Memorandum. https://www.fda.gov/media/144416/download
- Chodick G, Tene L, Patalon T, et al. The effectiveness of the first dose of BNT162b2 vaccine in reducing SARS-CoV-2 infection 13-24 days after immunization: real-world evidence. bioRxiv. 2021. doi:10.1101/2021.01.27.21250612
- Voysey M, Clemens SAC, Madhi SA, et al. Safety and efficacy of the ChAdOx1 nCoV-19 vaccine (AZD1222) against SARS-CoV-2: an interim analysis of four randomised controlled trials in Brazil, South Africa, and the UK. Lancet 2021;397:99–111. doi:10.1016/S0140-6736(20)32661-1
- HM Government of Gibraltar. https://www.facebook.com/gibraltargovernment/posts/3958089680902965 (accessed 25 Mar 2021).
- Re: Will covid-19 vaccines save lives? Current trials aren't designed to tell us. Published Online First: 23 March 2021. https://www.bmj.com/content/371/bmj.m4037/rr-20 (accessed 26 Mar 2021).
- REACT-1: real-time assessment of community transmission of coronavirus (COVID-19) in January 2021. https://www.gov.uk/government/publications/react-1-study-of-coronavirus-... (accessed 25 Mar 2021).
- Littleboy K. Coronavirus and vaccine attitudes and behaviours in England Office for National Statistics. 2021.https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/...
- Walsh EE, Frenck RW Jr, Falsey AR, et al. Safety and Immunogenicity of Two RNA-Based Covid-19 Vaccine Candidates. N Engl J Med 2020;383:2439–50. doi:10.1056/NEJMoa2027906
- Folegatti PM, Ewer KJ, Aley PK, et al. Safety and immunogenicity of the ChAdOx1 nCoV-19 vaccine against SARS-CoV-2: a preliminary report of a phase 1/2, single-blind, randomised controlled trial. Lancet 2020;396:467–78. doi:10.1016/S0140-6736(20)31604-4

See the data from Pfizer trial in the table below. Notice **47% higher infection rate 7-9 days post-vaccination** (48% higher after adjustments). Observe also that the odds ratio after the second dose is elevated compared to the later odds ratios after the first dose – 45% lower (the 0.55 at days 0-3 after second dose) compared to 66% lower (the 0.34 at over 42 days after first dose, looking at the unadjusted figures) – perhaps suggesting a similar effect.

Table 2 Adjusted odds ratios for confirmed cases of covid-19 by interval after vaccination with the Pfizer-BioNTech BNT162b2 vaccine before 4 January 2021 in those aged 80 years and older

	No of controls	No of cases	Odds ratio* (95% CI)	Adjusted odds ratio† (95% CI)	Odds ratio v post dose days 4-9† (95% CI)
Unvaccinated	15 718	8988	Base	Base	
First dose			11		
Interval after dose (days):					
0-3	277	167	1.17 (0.96 to 1.42)	1.22 (1.00 to 1.48)	
4-6	241	179	1.26 (1.03 to 1.54)	1.28 (1.05 to 1.56)	
7-9	252	257	1.47 (1.23 to 1.76)	1.48 (1.23 to 1.77)	
10-13	361	284	1.12 (0.95 to 1.31)	1.13 (0.96 to 1.33)	0.82 (0.67 to 1.01)
14-20	462	336	1.03 (0.89 to 1.19)	1.06 (0.92 to 1.23)	0.77 (0.63 to 0.94)
21-27	288	118	0.60 (0.48 to 0.75)	0.64 (0.51 to 0.79)	0.46 (0.35 to 0.60)
28-34	290	72	0.40 (0.30 to 0.52)	0.41 (0.32 to 0.54)	0.30 (0.22 to 0.41)
35-41	274	65	0.45 (0.34 to 0.60)	0.49 (0.37 to 0.66)	0.36 (0.26 to 0.49)
≥42	396	59	0.34 (0.25 to 0.47)	0.39 (0.29 to 0.55)	0.28 (0.20 to 0.40)
Second dose					100
Interval after dose (days):					
0-3	116	45	0.55 (0.39 to 0.77)	0.59 (0.41 to 0.83)	0.42 (0.29 to 0.62)
4-6	80	30	0.52 (0.34 to 0.80)	0.57 (0.37 to 0.88)	0.41 (0.26 to 0.65)
7-13	201	28	0.20 (0.13 to 0.29)	0.21 (0.14 to 0.32)	0.15 (0.10 to 0.23)
≥14	634	41	0.13 (0.09 to 0.18)	0.15 (0.11 to 0.21)	0.11 (0.07 to 0.15)

^{*} Odds ratio period adjusted by week of onset.

Ad 2. ANTIBODY DEPENDENT ENHANCEMENT OF CORONAVIRUS (ADE)

COVID vaccines showed good protection against the Virus when high titres of antibodies against spike protein are achieved. However, at low titres the antibodies can paradoxically promote viral entry into the cell, increase the risk of infection and disease severity. Lower titres of antibodies are typical in the first few weeks after vaccination, hence ADE could promote COVID in the first 2-3 weeks after vaccination. ADE could also be a problem when the titres of antibodies are dropping months to years after vaccination. Indeed, ADE was one of the main reasons why we did not have vaccines against SARS and MERS - in animal models ADE caused more disease post-vaccination.

Dr Fleming explanation of Antibody Dependent COVID enhancement

https://youtu.be/t9Dbfdh_lno +

Osaka University Study documenting the mechanism

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SARS-CoV-1 ADE is mediated by spike protein antibodies. Antibodies to the SARS-CoV-1 spike protein can mediate viral entry via Fc receptor-expressing cells in a dose-dependent manner. Jaume et al. point out the potential pitfalls associated with immunizations against SARS-CoV-1 Spike protein due to Fc mediate infection of immune cells. This leads to the prediction that new attempts to create either SARS-CoV-1 vaccines, MERS-CoV vaccines, or SARS-CoV-2 vaccines have potentially higher risks for inducing ADE in humans facilitated by antibody infection of phagocytic immune cells. This potential ADE risk is independent

[†] Adjusted for age, period, sex, region, ethnicity, care home, and index of multiple deprivation fifth.

of the vaccine technology or targeting strategy selected due to predicted phagocytic immune cell infections upon antibody uptake. For MERS patients, the seroconversion rate increased with disease severity. Severe clinical worsening for SARS patients occurs concurrently with timing of IgG seroconversion. Clinical evidence of early high IgG responses in SARS patients is correlated with disease progression and severity. Antibody treatments for critically ill COVID-19 patients have been halted due to a potential safety signal and unfavorable risk-benefit profile. Current SARS-CoV-2 vaccines appear to be providing protection with high antibody titers; the possibility of ADE risks associated with waning titers of antibodies over time remains unknown.

Given past data on multiple SARS-CoV-1 and MERS-CoV vaccine efforts have failed due to ADE in animal models, it is reasonable to hypothesize a similar ADE risk for SARS-CoV-2 antibodies and vaccines. ADE risks may be associated with antibody level (which can wane over time after vaccination) and also if the antibodies are derived from prior exposures to other coronaviruses. In addition, ADE with mast cells likely plays a role in MIS-C for infants and possibly older MIS-C and MIS-A patients. While expanded trophism of SARS-CoV-2 represents a possible ADE risk in the subset of COVID-19 patients with disease progression beyond the mild disease stage.

- https://www.nature.com/articles/s41564-020-00789-5?utm_source=pocket-app&utm_medium=share
- Van Erp EA, van Kasteren PB, Guichelaar T, Ahout IML, de Haan CAM, Luytjes W, et al. . In vitro enhancement of respiratory syncytial virus infection by maternal antibodies does not explain disease severity in infants. J Virol. (2017) 91:e00851–17. 10.1128/JVI.00851-17 [PMC free article] [PubMed] [CrossRef] [Google Scholar]
- Smatti MK, Al Thani AA, Yassine HM. Viral-induced enhanced disease illness. Front Microbiol. (2018) 9:2991.
 10.3389/fmicb.2018.02991 [PMC free article] [PubMed] [CrossRef] [Google Scholar]
- Jares Baglivo S, Polack FP. The long road to protect infants against severe RSV lower respiratory tract illness.
 F1000Res. (2019) 8:F1000 Faculty Rev-610. 10.12688/f1000research.18749.1 [PMC free article] [PubMed]
 [CrossRef] [Google Scholar]
- Winarski KL, Tang J, Klenow L, Lee J, Coyle EM, Manischewitz J, et al. . Antibody-dependent enhancement of
 influenza disease promoted by increase in hemagglutinin stem flexibility and virus fusion kinetics. Proc Natl Acad
 Sci USA. (2019) 116:15194. 10.1073/pnas.1821317116 [PMC free article] [PubMed] [CrossRef] [Google Scholar]

Ad 3. IMMUNE ESCAPE OF HIGHLY MUTABLE COVID19 VIRUS

Of all the 3 mechanisms by which mass vaccination can accelerate COVID pandemic, immune escape may be the most detrimental in the long-term. The explanation of the mechanism is rather complex (see below). Essentially, mass vaccination in the middle of pandemic (caused by highly mutable COVID19) may promote the development of more virulent variants. Inadequate titres of antibodies, inadequate innate immunity response & training as a response to vaccine, development of highly specific antibodies (out-competing innate immune response and "broad spectrum" natural antibodies) will exert pressure on the virus and stimulate the development of more aggressive variants. These variants will cause subsequent waves of COVID19 in younger populations as well as waves of re-infections and deaths in previously vaccinated people.

In the clinical practice, viral immune escape is known to occur when the neutralizing capacity of serum antibodies (Abs) does not suffice to fully eliminate highly mutable viruses (e.g., COVID) for lack of their concentration or affinity. In COVID pandemic setting, sero-conversion occurs against a background of high infectious pressure and is, therefore, prone to promote viral immune escape.

The first wave of disease (and mortality) primarily affects elderly people (or otherwise immuno compromised subjects). Selective (i.e., adaptive) immune escape is expected to cause this wave to transition into a more severe, second wave in younger age groups. Subsequently, non-selective (i.e., innate) as well as selective immune escape operated by increasingly infectious viral variants will trigger a third wave.

The latter would primarily affect subjects who recovered from disease they contracted during the first wave as their sero-neutralising antibodies do no longer properly match the new circulating viral variants. This third wave of disease (and mortality) would come to an end when those who recovered from the disease will have mounted new functional antibodies against these immune escape variants. As sero-conversion in this population will now occur much faster (due to recall of cross-reactive T helper memory cells) and as the majority of the young and middle-aged population will either be sero-negative or have sero-converted already by the time the third wave starts to expand, chances are slim forthe virus to escape the host's Ab response.

Asymptomatic, sero-negative individuals (i.e., the vast majority of young and middle-aged people) may spread virus upon (re-)infection and hence, constitute a relevant source of viral transmission. However, COVID infection in these asymptomatic carriers is abrogated after a short period of viral shedding. Viral clearance in these subjects is likely to occur through activation of NK (natural killer) cells. The latter are capable of recognizing COVID-associated, antigen (Ag)- nonspecific patterns on the surface of COVID-infected epithelial target cells. As killing by NK cells is, therefore, not Ag-specific and as sero-conversion in asymptomatically infected subjects is only short-lived, viral immune escape does not normally occur. Consequently, new, more infectious, variants are unlikely to emerge from this population as long as viral infectiousness does not dramatically increase.

At the point of 'no immune escape', the pandemic will be under control and merge into an endemic infection. However, as long as the point of 'no immune escape' isn't reached, any additional immune selection pressure, for example as a result of suboptimal concentration or affinity of Ag-specific (e.g., spike protein-specific) antibodies, will allow the virus to rapidly unfold more infectious, immune escape variants. Additional immune selection pressure, especially when exerted during the second wave of a COVID pandemic, is likely to precipitate and amplify viral immune escape. This might even cause the second and third wave to merge into a single huge wave of mortality and disease that affects all layers of the population (possibly, with the exception of small children).

Especially mass vaccination campaigns, particularly when conducted in the midst of a pandemic, are prone to exerting enormous immune pressure on circulating virus strains. This is because the vaccine is used in an increasingly infectious context (as escape variants are more infectious). Mass vaccination campaigns will accelerate the emergence of even more infectious immune escape variants. This is because the number of vaccine recipients who seroconvert within a given time period will dramatically increase

In addition, Ag-specific, high affinity Abs induced by any of the current vaccines will outcompete natural, broadly protective mucosal IgM antibodies as the latter only bind with low affinity to the receptor binding domain of COVID (RBD). This will particularly affect natural resistance of younger age groups which - thanks to a well-trained innate immune system- resisted disease during the first wave. The new circulating COVID variants may now even be able to escape the host's COVID variant-nonspecific line of immune defense at the mucosal portal of entry. These age groups may, therefore, become more susceptible to symptomatic infection and shedding caused by more infectious variants.

But mass vaccination campaigns will also have severe consequences for those who got vaccinated first (mostly the elderly or people with underlying disease or those who are otherwise immune-compromised). In the highly likely event that mass vaccination will soon result in viral resistance (see below), these people will have no single bit of immunity left to rely upon. In contrast to the infectious circulating virus, current vaccines do either not contain any critical killer cell motif or fail to activate dedicated killer cells. It goes, therefore, without saying that vaccine-induced immune responses will inevitably result in a dramatic enhancement of morbidity and mortality rates in all of the human population (except for small children?).

Further to all of the above, low exposure to circulating CoV strains (e.g., due to stringent containment measures) will increasingly weaken innate mucosal immunity for lack of training. Again, this is particularly relevant for those who - thanks to their sufficient and adequate innate immune defence – got away with asymptomatic infection during the first wave. Stringent and widespread infection prevention measures are now increasingly compromising their innate immunity and rendering them more susceptible to symptomatic infection. Especially the younger age groups may, therefore, end up with relatively higher morbidity and mortality rates, even regardless of the emergence of more infectious viral variants. This is to say that broadly implemented infection prevention measures will only amplify the already detrimental consequences of ongoing mass vaccination campaigns. It is reasonable to assume that the combination of non-selective and selective immune escape will cause morbidity and mortality rates in younger age groups to explode. The more Covid-19 vaccination campaigns in the young and middle-age groups will be delayed (i.e., relative to their initiation in the elderly), the more they will enhance morbidity and mortality rates in this group: By the time mass vaccination campaigns are about to start in the young and middle-aged groups, a substantial number of these people will already have been infected with Covid-19. Enhanced rates of infection by highly infectiousness viral variants have now significantly increased the likelihood for them to become re-infected while being in the process of sero-converting.

So, by the time vaccinations will be initiated, viral immune escape in this group may already be fuelling a vicious circle of enhanced viral infectiousness resulting in more sero-conversion and hence, more immune escape. Mass vaccination campaigns in this group will only dramatically deteriorate the situation as they will lead to a fast and massive increase in the number of asymptomatic subjects that are in the process of sero-converting against a highly infectious background and, therefore, are prone to promoting viral immune escape. As there is naturally no reason for them to isolate, there will be plenty

of opportunity for the highly infectious circulating strains to replicate in the presence of suboptimal Ab titers and, therefore, to escape the host's immune control. Hence, the more vaccination campaigns in this group get delayed, the more selection of even more infectious viral variants will be expedited.

The ensuing exponential increase in viral immune escape rates will ultimately enable viral variants to even break through vaccine-mediated protection in the vaccinated elderly. As their Abs increasingly mismatch the ever more infectious emerging variants, they will no longer manage to control viral replication and shedding and rapidly allow for massive viral immune escape. Because sero-protective Abs primarily confer protection through targeting Covid-19's RBD, the virus will now increasingly select mutations in this particular part of the spike protein as those most readily enable the virus to escape vaccine-induced Abs. This will inevitably precipitate resistance to the vaccine. As a result of mass vaccination, people who got the vaccine first will suddenly no longer be protected and, despite vaccination, fall prey to a wave of catastrophic morbidity and mortality.

There can, therefore, be no doubt that current vaccination strategies are rendering the impact of mass vaccination campaigns even more catastrophic and only adding to the magnitude of a pending global health disaster. However, mass vaccination also harms individual health as vaccine-induced variant-specific Abs will outcompete natural variant-nonspecific mucosal Abs for binding to CoV variants and thereby deprive individuals from their broadly protective natural (life)line of immune defense.

As large scale vaccination campaigns combined with the sustained implementation of several containment measures will only expedite the occurrence of viral escape mutations, the illusory hope that current Covid-19 vaccines could generate herd immunity should once and for all be thrown overboard.

EXAMPLES OF INCREASED COVID MORTALITY & MORBIDITY AFTER MASS COVID VACCINATION

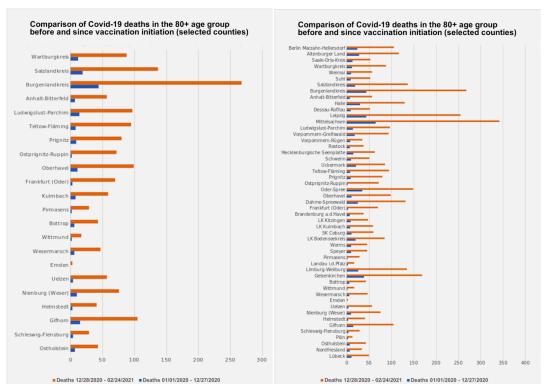
Example 1.

A number of mainly frail, elderly COVID-19 patients are being hospitalised and dying even after having a first dose of Pfizer's or AstraZeneca's vaccines, but this does not mean the shots aren't working, UK researchers said. Presenting real-world data on a subset of hospitalised COVID-19 patients in the UK, the researchers said the findings showed some level of "vaccine failure". "It's mostly occurring in the group which are most at risk of severe disease anyway, which is the elderly. These people are very frail and very elderly," said Calum Semple, a University of Liverpool professor of child health and outbreak medicine, who co-led the research. The data, presented to the UK's Scientific Advisory Group on Emergencies last week and published online by SAGE on Friday, showed that among just over 52,000 hospitalised COVID-19 patients studied, 526 had been vaccinated with a first dose of either the AstraZeneca or Pfizer shot at least three weeks earlier. Of those, 113 died. This represent 21% mortality after the 1st dose of vaccination in this cohort of patients. These patients got the vaccine at least 3 weeks before their death, therefore COVID19 could not be already present by the time of vaccination as the incubation period is 5-7 days!

- https://bit.ly/3ublNYC UK Scientific Advisory Group for Emergencies, online April 30, 2021
- https://www.medscape.com/viewarticle/950270?src=WNL mdpls 210504 mscpedit card&uac=80539AK&spon= 2&implD=3352888&faf=1

Example 2.

Comparison of the number of so-called Covid-19 deaths in the age group over 80 for almost the entire year 2020, from 01/01/2020 - 12/27/2020, with the number of deaths in the period from 12/28/2020 - 02/24/2021 (period of COVID vaccination aimed at elderly and care homes in Germany). The number of Corona-related deaths in the "2 months of vaccination period" was at least as high as it was in the previous 12 months! In 51 counties, mortality is more than four times higher, and in 22 of those counties, it is more than six times higher.



<u>https://corona-blog.net/2021/03/02/dramatischer-anstieg-der-todesfaelle-unter-senioren-seit-beginn-der-corona-schutzimpfungen/</u>

<u>https://telegra.ph/Dramatic-increase-in-deaths-among-seniors-since-corona-vaccinations-began-03-30?utm_source=pocket-app&utm_medium=share</u>

So the elderly and vulnerable, the very people that were supposed to be protected by mass vaccination in the first place, seem to have the higher mortality after mass vaccination compared to the pre-vaccination duration of COVID pandemic.

Example 3 (other doctors, scientists rising the same concern over the post-vaccination rise of COVID infections and deaths)

BMJ Rapid Response:

Re: Will covid-19 vaccines save lives? Current trials aren't designed to tell us

Dear Editor,

Trial experiments and protocols set for COVID-19 vaccination did not take into consideration of many direct and indirect consequences of mass vaccination.

Here I would like to bring attention to an urgent and very important issue of its indirect effect. Apart from the direct side effect after vaccination, if any; the secondary effect that might be caused due to mutation of the virus after mass vaccination needs attention too. After the initiation of vaccine programme, almost all countries experienced a sudden surge of transmission and most countries had to impose strict lockdown measures.

Professor Paul Bieniasz from Rockefeller University, USA, expressed his concern that vaccines themselves can also drive viral mutations and hence COVID-19 vaccines can add fuel to the evolution of mutation of Coronavirus. According to him the time between initial vaccination and the time of second shot to maximize the immune response might serve as a sort of breeding ground for the virus to acquire new mutations [1].

A highly populated country India was having a steady decrease for five months. India did not have any lockdown. Though neighbouring countries Pakistan and Bangladesh experienced the 2nd wave this winter but India did not. India passed major

festive seasons where social distancing was very difficult to be maintained, still cases and deaths continued to decline. Surprisingly, vaccination started on 16th January and from around 16th February, India started showing a rise in cases. Now there is a steep rise in deaths too [2]. As India nearly managed the disease without any vaccine or lockdown, it attracted global attention. However, scientists failed to associate any obvious cause for the sudden surge in the recent period when winter passed. India's neighbouring countries Pakistan and Bangladesh also started a rise in cases in recent period, after vaccination started, though they already experienced a 2nd wave last winter.

For Brazil, vaccination started in mid-January and a sharp rise in cases is observed since mid-February. Such a steep rise in deaths in Brazil that happened for the last one month never happened in the whole period of pandemic. It already reached twice the height of previous peaks [3]. Globally, the cases started increasing after 5 weeks of a steady decline and coincidentally, the period of rise matches when major vaccination programmes were initiated worldwide. Some countries are now showing a decline, where lockdown and seasonal temperature are playing strong roles. Even for the UK and Israel, where massive vaccination took place, the total deaths in the last three months after vaccination now reached the overall death of the past 10 months before vaccination [2].

Such observation and analysis raises major worries especially for highly populated developing countries like India, Pakistan, Bangladesh, Brazil and the African continents among others and needs urgent attention.

- https://www.npr.org/sections/health-shots/2021/02/10/965940914/covid-19-...
- https://www.worldometers.info/coronavirus/
- https://www.worldometers.info/coronavirus/country/brazil/
- https://www.bmj.com/content/371/bmj.m4037/rr-20

Example 4 (other doctors, scientists rising the same concern over the post-vaccination rise of COVID infections and deaths)

Dr. Delépine's careful analysis of the pre and post vaccine trends for 14 countries around the world

The latest official figures for the European Union, which are rarely acknowledged by the mainstream media, indicate that from late December 2020 to May 22, 2021:

- 1. **12,184 deaths and 1,196,190 injuries** following injections of four experimental COVID-19 shots (Moderna, Pfizer-BionTech; AstraZeneca and Johnson & Johnson's Janssen). Serious injuries are of the order of 604,744 (i.e more than 50% of total injuries)
- 2. The Pfizer-BioNTech mRNA gene-edited vaccine has resulted in the largest number of fatalities: **Total reactions** for its mRNA vaccine **Tozinameran: 5,961 deaths** and **452,779** injuries to 22/05/2021

While Pfizer has the largest numbers of deaths and injuries, the EU Commission has largely placed the blame on AstraZeneca. *Michel Chossudovsky, Global Research, May 27, 2021*

Two months ago, we tried to alert people to the paradoxical results of the COVID-19 vaccines by publishing the pre- and post-vaccination mortality curves for Israel and Great Britain, [1] which already showed that these vaccinations were followed by a considerable increase in contamination and mortality lasting 6 to 8 weeks after the start of vaccination. [2]

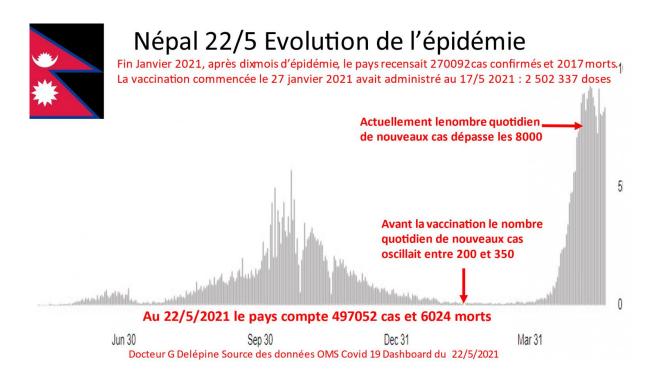
Since this period, vaccination campaigns have spread worldwide even to countries where COVID was not present. And everywhere they have been followed by a dramatic rise in new infections and mortality for several weeks or months. [3]

Reminder of the proven facts published by the WHO (We present below the epidemic curves of the most vaccinated countries as published by the WHO, with our comments in red).

<u>ASIA</u>

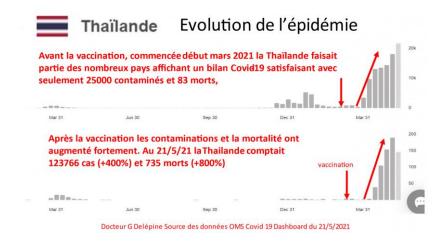
NEPAL, a country of 28 million inhabitants

The vaccination campaign, using the Chinese vaccine and the Indian AstraZeneca, began at the end of January 2021. Until that point, after ten months of the epidemic, the country had 270,092 confirmed cases and 2,017 deaths and the daily average of new cases amounted to 350. Four months after vaccination began, the epidemic has exploded with a current average of 8,000 new cases daily. As of May 22, Nepal had 497,052 confirmed cases (+ 90%) and 6,024 deaths (+ 200%.)



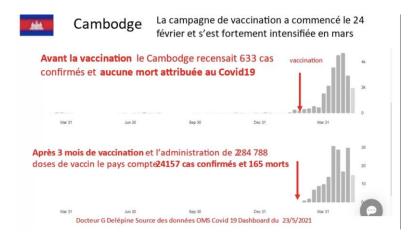
THAILAND, a country of 70 million inhabitants

The vaccination campaign using the Chinese vaccine began in the first week of March. So far, since the start of the epidemic, the country had only recorded 25,000 infected and 83 deaths attributed to COVID-19.

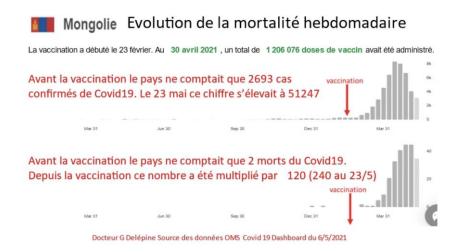


Since the start of vaccination, in 2 months, the number of recorded infections has multiplied by 5 (123,066 on May 22) and that of deaths by 9 (735 on May 22).

CAMBODIA, a country of 27 million inhabitants



MONGOLIA, a country of 3.3 million inhabitants

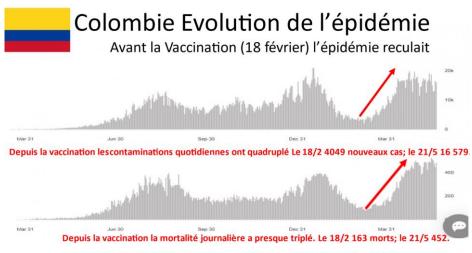


SOUTH AMERICA

COLOMBIA

- country of 50 million inhabitants .

A country severely affected by the disease, the epidemic began to decline sharply until the start of the vaccination campaign on February 18, 2021. Since then, the number of daily infections has quadrupled and daily mortality has multiplied by 3.

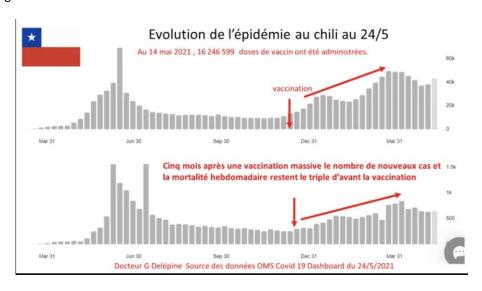


Docteur G Delépine Source des données OMS Covid 19 Dashboard du 23/5/2021

CHILE

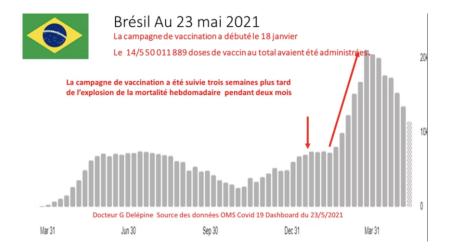
- country of 18 million inhabitants

Vaccination began on December 24 and a total of nearly 17.1 million doses of the vaccine have been administered to less than 20 million people. But despite the highest vaccination coverage rate in South America and harsh confinements, the number of daily infections and the number of deaths remain close to triple what they were before the start of the vaccination campaign.

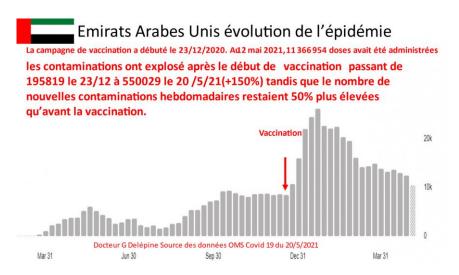


BRAZIL, a country of 217 million inhabitants

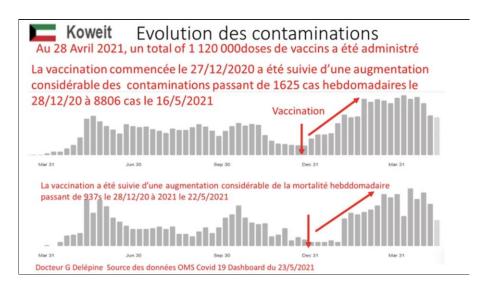
Vaccination began on January 18 as weekly mortality stabilized around 7,000



UNITED ARAB EMIRATES, a country of 10.5 million inhabitants



KUWAIT, a country of 4.2 million inhabitants

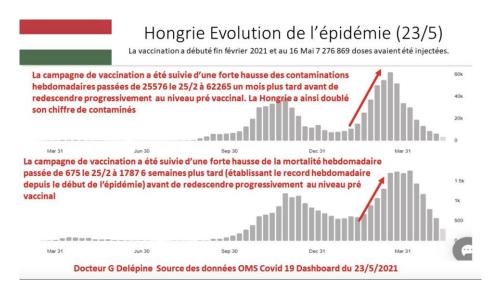


EUROPE

HUNGARY

a country of 9.8 million inhabitants

The vaccination campaign, which began at the end of February, was followed by a sharp increase in weekly contaminations, which rose from 25,576 on February 25 to 62,265 a month later, before gradually falling back to the pre-vaccination level. In two and a half months, Hungary has doubled its figures of recorded infections (400,000 to 800,000) and deaths (from 14,000 to 29,000) reached after 11 months of the epidemic.



ROMANIA

a country of 20 million inhabitants

The vaccination campaign began at the end of December at a time when the epidemic was waning, and according to official data from May 4, 2021, Bucharest has the highest vaccination rate in the country with 31.2% of its eligible population vaccinated. But shortly after the start of vaccination, the number of daily infections and mortality increased.

Before vaccination began, and after ten months of the epidemic, Romania had 618,000 infected and 15,000 dead. After five months of the vaccination, she counts twice as much.

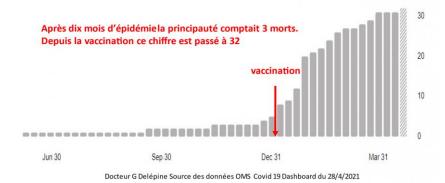


MONACO, country of 38,000 inhabitants.

Had only 3 deaths before vaccination and 32 since vaccination began.

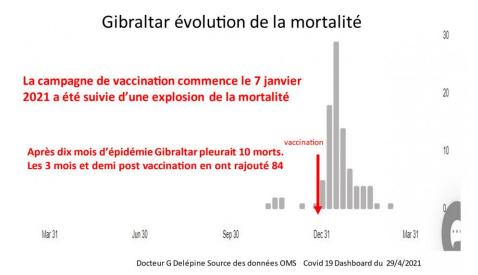
Monaco Evolution de la mortalité au 28 4 2021

A Monaco la campagne de vaccination a été suivie d'une explosion de la mortalité.



GIBRALTAR, 34,000 inhabitants

Vaccination of the entire population was followed by an 800% increase in mortality (from 10 to 94).



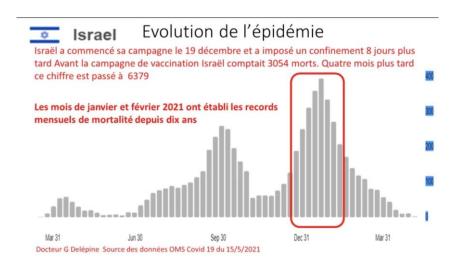
What can be deduced from the official data?

The Israeli and British Pyrrhic victories [4]

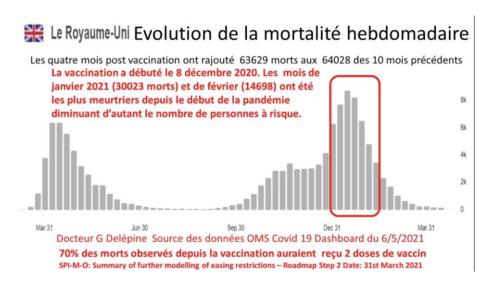
Vaccination advocates claim vaccinations in Israel and Britain have been successful, as current, daily contaminations and mortality are low. But these apparent successes correspond in fact to the *disappearance of a large part of the people at risk* (the "harvesting") achieved by vaccination and to the spontaneous regression of the disease observed also in countries with little vaccination.

Vaccination "harvesting"

In Israel and Britain, the mortality attributed to COVID increased sharply for 4 to 6 weeks, equaling all the deaths in 2020. The COVID per vaccination mortality curve in Israel is demonstrative.



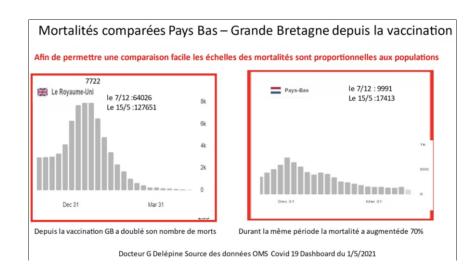
The "harvest" of 1,404 people in January and 949 others in February, the equivalent of a full year of COVID mortality without a vaccine (the year 2020) sharply reduced the number of Israelis at risk, resulting in de facto probably a decrease in the apparent risk of mortality in the coming year, in this age group. But along with this decrease in its original target, the virus has mutated to attack other segments of society and especially younger age groups. In November 2020, data from the Israeli Ministry of Health revealed that Israel had detected 400 cases of the coronavirus in children under the age of two. In February 2021, that number increased to 5,800. The same "harvesting" has been observed in Great Britain. As COVID-19 threatens only a small part of the population (the elderly with co-morbidities), the peri-vaccination disappearance of a large part of this population at risk (as much as the deaths of the year 2020), mathematically reduces mortality observed, at least transiently.



Since the British vaccination campaign, the average mortality per million inhabitants in Great Britain (934 per million) is more than double that of the Netherlands (411 per million).

The natural regression of the epidemic

The natural regression of COVID-19 also explains the drop in mortality, as shown in the comparison between the highly-vaccinated Great Britain and the very poorly-vaccinated Netherlands.



The mortality curves per million inhabitants follow the same temporality in these two neighboring countries. That of the United Kingdom suffers from a much higher peri-vaccination peak, the current mortality in the Netherlands is slightly higher, reflecting the absence of the English "harvest."

The current vaccination, accelerator of the epidemic and mortality?

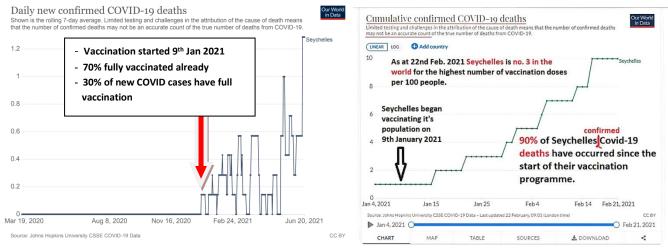
The review of the main countries which have adopted broad vaccination shows that in real populations, generalized vaccination behaves more as an accelerator of the epidemic and of mortality than as a prevention thereof. [5] In all highly vaccinated countries, the mortality recorded during the two months after vaccination is equal to or exceeds that of the whole of 2020

- [1] Great Britain: actual results of the anti-Covid-19 vaccination as of March 29 (ripostelaique.com)
- [2] Analysis of the results of the anti-Covid19 vaccination in Israel as of February 23, 2021 Nouveau Monde (nouveau-monde.ca)
- [3] https://nouveau-monde.ca/et-surgit-une-hecatombe-post-vaccinale/
- [4] A Pyrrhic victory is a tactical victory, achieved at the cost of losses so heavy to the winner that they compromise his chances of final victory.
- [5] F Gobert Since we were vaccinated (anticovid), the average daily mortality has increased in 13 countries out of 14 Agoravox https://www.agoravox.fr/actualites/sante/article/depuis-qu-on-vaccine-anticovid-la-233252 [
- [6] https://www.francesoir.fr/societe-sante/boris-johnson-veut-un-traitement-precoce-contre-la-covid-dici-lautomne

Example 5.

SEYCHELLES

Aggressive mass vaccination has been initiated in January 2021 in order to achieve vaccine-induced herd immunity and to resume tourism - the main source of income for the country. Following the same pattern of post-vaccination COVID wave, Seychelles experienced a crisis similar to Namibia. Despite achieving one of the highest rate of full-vaccination (almost 70% of population have received both doses) in the world, COVID19 deaths are still rising to this day !! More than 30% of current new COVID cases had full prior vaccination.



VACCINE INDUCED IMMUNITY versus IMMUNITY INDUCED BY COVID19 INFECTION ITSELF

We now have good scientific evidence to suggest that people who had symptomatic COVID19 infection do not benefit from vaccination. The Cleveland Clinic study was published recently. The study was conducted on 52,238 employees of the Cleveland Clinic. A positive RT-PCR test or symptomatic COVID infection were considered to define prior SARS-Cov-2 infection. A participant was considered to have been fully vaccinated 14 days after 2nd vaccine dose. A participant who tested positive at least 42 days before the 1st dose of vaccine was considered previously infected. 59% paricipant were previously not-infected. 47% of previously infected participants were subsequently fully vaccinated as per protocol.

- 99.3% infections occurred in unvaccinated participants, who were not previously infected.
- 0.7% of infections occurred in fully vaccinated participant who were not previously infected
- 0% infections occurred in unvaccinated participants, who were previously infected.
- COVID infection or COVID Vaccine provides good protection against COVID infection up to 10 months after vaccination, infection or positive test, there were no signs of post-COVID immunity reduction in the 2nd half of the study

The conclusions of the study were as follows:

- 1. We should consider symptomatic COVID19 to be as good as having received a vaccine
- 2. People who have had COVID19 confirmed by a reliable laboratory test do not need the vaccine
- 3. Vaccine provide good protection to COVID 19-naive individuals and vaccination should be prioritize to them.

The conclusion of the study are supported by other peer reviewed papers. Of note, the post-COVID or post-Vaccine immunity should not be tested by measuring the antibodies levels. FDA recently issued a brief: "FDA Advises Against Use of SARS-Cov-2 Antibody Test Results to Evaluate Immunity or Protection From COVID19, Including After Vaccination" This is reasonable as T-cell immunity (not antibodies) may play a key role in long-term protection against COVID19.

- https://www.medrxiv.org/content/10.1101/2021.06.01.21258176v2.full-text
- https://www.medrxiv.org/content/10.1101/2021.04.19.21255739v1.full?s=08
- https://www.news-medical.net/amp/news/20210608/No-point-vaccinating-those-whoe28099ve-had-COVID-19-Findings-of-Cleveland-Clinic-study.aspx? twitter_impression=true
- https://www.medrxiv.org/content/10.1101/2021.06.01.21258176v3.full.pdf+html

CONCLUSIONS

- 1. Data from COVID databases show clear correlation between mass vaccination and subsequent waves of COVID19 deaths and infections in more than 90 countries of the world.
- 2. Namibia is following the same pattern of a massive COVID wave following vaccination roll-out and we are experiencing the worst COVID crisis here since the beginning of the pandemic.
- 3. COVID vaccines are effective in inducing good immunity against COVID19 infection. Unfortunately, the immunity is short-lived, and vanes quickly, within 4-6 months. The Achilles tendon of vaccination (for the majority of current COVID vaccines) is that 2 doses are required, separated by an interval of 1 month. The post-vaccination COVID waves seem to occur at the time the majority of population received the first dose of vaccine only, the wave tends to diminish by the time the majority of population received both doses. In other words, post-vaccination COVID spike occurs before herd-immunity can be achieved by mass vaccination.
- 4. The most likely mechanism causing the spike of the disease is the transient immune-suppression of vaccine recipients in the first 10 days post vaccination (especially after the first dose). Their subsequent exposure to COVID19 is likely to lead to increased risk of COVID infection, increased shedding & transmission of the virus on the others. As the vaccination progresses, the number of infections grows exponentially, until an "unstoppable" wave of COVID disease is triggered. The vulnerable (elderly, immune-compromised and poly-morbid patients) are "consumed" during the spike and subsequently the death rate drops rapidly. Most of the remaining population, in the meantime have had either symptomatic or asymptomatic infection and, as per the outcomes of the Cleveland Clinic Study mentioned above, they are now immune (as if they received both doses of vaccine). Herd immunity is achieved by COVID itself (as vaccination has not been completed by the time the COVID spike is over). This is also the most likely trajectory for Namibia. Based on the data from the other countries that experienced similar post-vaccination COVID waves, by mid/late September, the current COVID wave in Namibia should be over.
- 5. Given the fact that the increased risk of COVID infection after the first dose of vaccine is well established and documented we should advice to all the vaccinated people to self-isolate for 10-14 days after vaccination !!This simple instruction, if applied systematically, is likely to prevent post-vaccination COVID infections.
- **6.** Another possible strategy is to treat all the patients receiving the first COVID19 vaccine dose with ivermectin, using the established prophylactic/post-exposure regime. This strategy could also reduce the risk of getting infected with COVID in the first 7-10 days post vaccination.
- 7. People with previous COVID19 infection or positive COVID19 test should not be vaccinated. People who developed symptomatic COVID infection after the 1st dose of COVID vaccine should not receive the second dose.
- 8. People should be tested for COVID19 by PCR, Antigen and Antibodies tests to make sure they do not get unnecessary vaccination, vaccines can be safely re-directed to COVID naive patients.
- 9. It is necessary to have a genuine and broad discussion about the phenomenon of post-vaccination COVID waves in order to achieve the best outcomes of the vaccination program and to avoid unnecessary COVID infections, hospitalizations and deaths. It is currently not possible to predict whether the booster vaccination (likely to be required and recommended on an annual basis, perhaps even with a vaccine mix) may trigger the phenomenon of post-vaccination spikes again. But if we adopt **smart vaccination strategy** now, we are likely to avoid the post-vaccination spikes in the future.

Signed at Windhoek on 22nd June 2021

Dr Simon Idris Beshir