Recent Findings on COVID-19 and City-County Health Board Position Discussions

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Introduction

This report will be my final product as it pertains to SARS-CoV-2 while I am still the Mayor of Dillon. This report is broken into two major groups, the first will cover what I have found on the subject of New General COVID-19 Information, Vaccines, Therapeutics, Mask Wearing, and Schools and Mask Wearing related to COVID-19. The second group will be rules and proposals for the City/County Health Board trying to implement the new changes in State Code on Health Boards. I hope that all the information that I have been able to obtain will help inform the public on COVID-19 and to guide the City/County Health Board to items that they might need to implement. Remember as you read this information that I am not a medical doctor nor am I trying to practice medicine just looking and presenting facts which anyone can take or leave.

1 SARS-CoV-2 New Information

1.1 SARS-CoV-2 General Information

To determine the relative "strength" of the various variants of SARS-CoV-2 virus, the United Kingdom keeps a good list for their country.[1] There are four main variants at this time that UK has concerns 1) Alpha, 2) Beta, 3) Gamma, and 4) Delta. Table 1 shows the numbers (case count and deaths) as between February 1, 2021 to August 29, 2021 for the four variants.

Table 1: Ages, Cases, and Deaths for Four SARS-CoV-2 Variants in England[1]

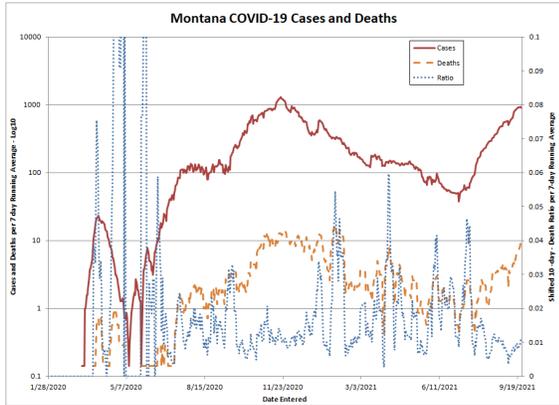| Variant	Age Group	Cases	Deaths	Death Rate	Deaths-Vaccinated	Deaths-UnVaccinated
Alpha	< 50	118,540	67	0.057%		
	≥ 50	32,363	1,550	4.789%		
	All Cases	151,006	1,617	1.071%		
Beta	< 50	612	1	0.163%		
	≥ 50	167	7	4.192%		
	All Cases	790	8	1.013%		
Gamma	< 50	227	0	0.000%		
	≥ 50	24	0	0.000%		
	All Cases	251	0	0.000%		
Delta	< 50	420,689	154	0.037%	51	99
	≥ 50	71,107	1,644	2.312%	1182	437
	All Cases	492,528	1,798	0.365%	1233	536

Figure 1: Daily Plot of the Number of COVID-19 Cases and Deaths in Montana.[2]
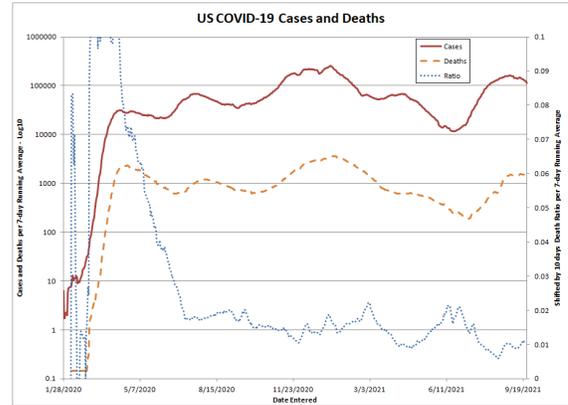

Figure 2: Daily Plot of the Number of COVID-19 Cases and Deaths in the United States.[2]

Note that the total cases for the Delta variant (492,528) is 3.3-fold greater than the Alpha variant (151,006). Also, the total death rate for the Alpha variant (1.071%) is 2.93-fold greater than the Delta variant (0.365). What this means is that the Delta variant causes 3.3 times more cases than the Alpha variant but the Alpha variant is 2.93 times more deadly than the Delta variant. That is also what is noticed in different types of viruses: They try to mutate/adjust to produce more of themselves but be less deadly so as to try to multiply and exist (i.e. Darwin theory of evolution by natural selection). Also note for the Delta variant that there were more deaths in the vaccinated over 50 age group (i.e. 2.7-fold increase) compared to the unvaccinated but there were more deaths in the unvaccinated less than 50 age group (i.e. 1.9-fold decrease) than the vaccinated.

Also, from the CDC[2] the number of cases and deaths for each state in the nation over time from the beginning of COVID-19 in the United States was obtained and analyzed. Shown in Figures 1 and 2 are the data for the State of Montana and for the United States. For these two plots, I plotted the cases and deaths on a log10 scale so both cases and deaths can be shown on the same plot. For Montana and the US, what is easily seen is the peak in the cases during the winter time last year (most likely the Alpha variant, very similar to the Wuhan original) and then the peak just occurring now (Delta variant). For both plots, if you take the number of cases and divide by the number of cases, you obtain what I term the death ratio (if multiplied by 100 would be the probability of death given infected with SARS-CoV-2, COVID-19). Notice that for Montana the date that the vaccines were available the number of cases and deaths started its downward march. During this time the death ratio was around 0.02 (very hard to get accurate numbers since deaths per day were around 0 and 1) or 2% but for the latest peak, the ratio is around 0.01 or 1% which indicates that the Delta variant is at least as infectious if not more than the Alpha variant but the death rates are less. Now for the US data, again there are two strong peaks around the same dates as seen in Montana but with slightly more cases for the first peak and about twice as many deaths for the first peak. This then is what shows in the 0.02 death ratio (2%) for the first peak and then drops to around 0.01 (1%) for the Delta variant. From the plot it is also
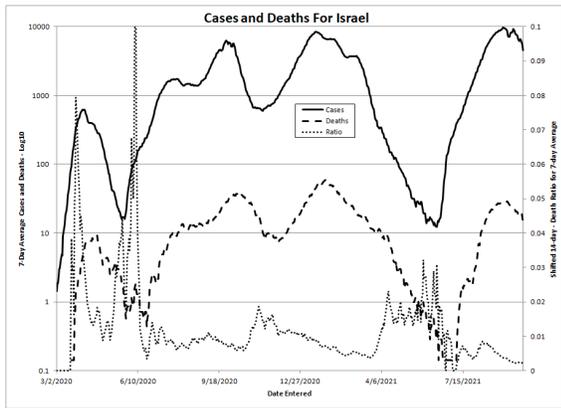
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Figure 3: Daily Plot of the Number of COVID-19 Cases and Deaths in Israel.[3]
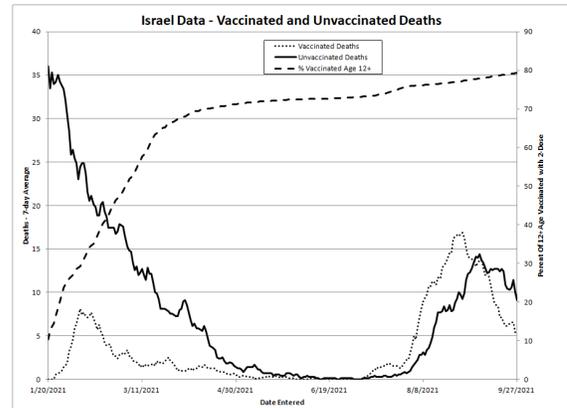

Figure 4: Daily Plot of the Number of COVID-19 Deaths for Vaccinated and Unvaccinated in Israel.[3]

noticed that the cases are now dropping along with the deaths but with no drastic change in the number of vaccinated people (in the last couple of months) indicating that the drop was most likely due to "nature" and not the vaccines.

Now let's look at a country that has been in the news lately about COVID-19 and vaccinations, Israel.[3] Why Israel is in the news is this country is one of the highest vaccinated in the world. Figure 3 is a plot similar to the Montana and United States previously shown with cases and deaths for the country of Israel from March 2020 to about present time plotted by date. Notice that their numbers were low around the time that vaccinations started (first part of Nov 2020) and then cases and deaths rose until the peak around January 2021 and then both dropped until around June 2021. It is possible that the variant starting around November and December was affected by the vaccines which produced the drop in both the cases and deaths or it was just "nature" with the virus "burning itself out" in that time frame. Either way can not be answered now but it is obvious that when the Delta variant was introduced (around May-June 2021) the number of cases and deaths increased about three-fold (i.e. cases increased from around 10 per day to 10,000 per day and deaths increased from around 0.1 per day to around 50 per day). This indicates that the vaccines have VERY LITTLE effect on the Delta variant. It is also seen that before May-June the death ratio was around 0.015-0.02 and then when the Delta variant showed, the death ratio dropped to around 0.01-0.005 (1%-0.5%). Now to investigate further on the subject of vaccination for the Delta variant, the nation of Israel allows people to obtain the number of deaths on all individuals along with their vaccination state by date. This is shown in Figure 4 along with the percentage vaccinated of all individuals over the age of 12 by date. First note that around 1st of April, 2021 the percentage of people vaccinated in Israel changed only from about 70% to 80% at the present time. Note that as the number of individuals started to become vaccinated (started at 10% and went to 70% in about 3 months) the number of deaths for the unvaccinated went from approximately 35 per day down to approximately 0 per day around June-July 2021. An interesting point though is that the number of deaths for the vaccinated increased as the number of vaccinations increased until it peaked and started
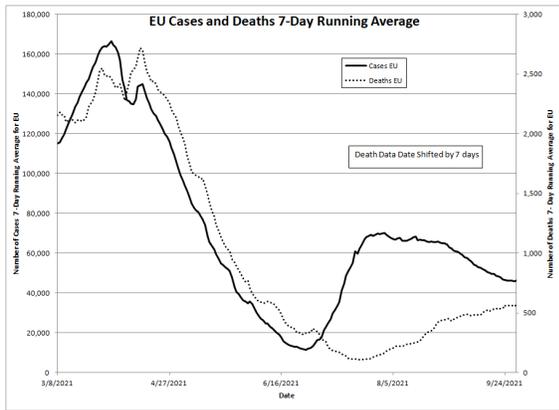
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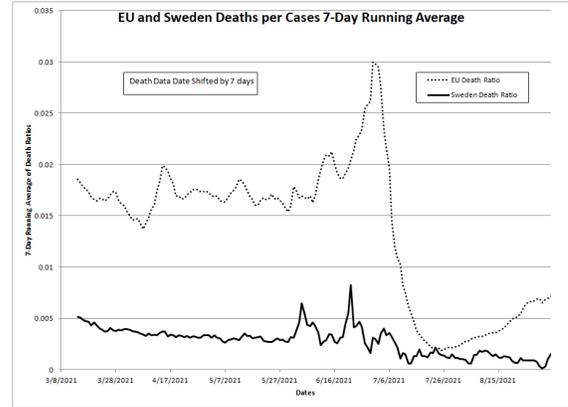Figure 5: Daily Plot of the Number of COVID-19 Cases and Deaths in EU.[4]

Figure 6: Daily Plot of the Number of COVID-19 Deaths for Vaccinated and Unvaccinated in EU.[4]

downward at approximately the same decay as seen in the unvaccinated until this group reached 0 deaths per day. Israel used both the Pfizer and the Moderna vaccines. Now when the Delta variant was introduced the number of deaths started to increase again in both the vaccinated and unvaccinated groups but never reaching the level the unvaccinated reached in January, 2021. At the beginning the number of deaths for the vaccinated was always higher than the number of unvaccinated but this most likely was due to the fact that 75%-80% of the population was vaccinated and only around 25%-20% was unvaccinated although the vaccines DID NOT PROTECT to the 95%-98% level as stated by the CDC and others. This is also not a strong sale point to FORCE everyone to be vaccinated since the 20%-25% of the remainder of the people are at "natural immunity" which shows that neither worked very well against the Delta variant.

Another country that has been negatively remarked against by the "Fake News" was Sweden so let's look at this country.[4] At the start of the pandemic, most fake news companies marked Sweden as murderers since they did not lockdown, force masks, etc... They pretty much left the businesses alone to protect their economy. First, let's look at the standard plot as before (Figure 5), number of cases and number of deaths for European Union (EU). Notice that EU, like all others, observed the peak in cases and deaths around the March-April time frame with cases over 160,000 per day and about the same number for deaths just shifted by approximately 7 days. Now this occurred approximately 5 months after the vaccines were released bringing into question whether vaccinations really work. I was not able to easily obtain the variant, if any, that caused the first peak but the second peak was caused by the Delta variant. It is unknown why the second cases peak occurred around middle of July and then started downward while the deaths peak never did peak within the time frame obtained. The time differences between cases and deaths is longer than two months which is very much larger than normally seen (i.e. normally about 7-14 days difference).

Now Figure 6 shows what is labeled as the death ratio for the EU and for the country
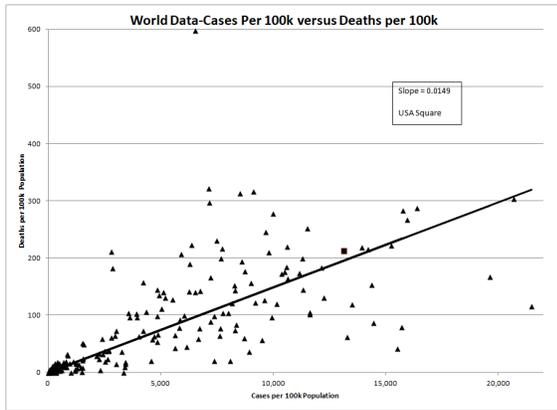
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Figure 7: Plot of the Number of COVID-19 Cases and Deaths in World as of Sept 27, 2021.[5]
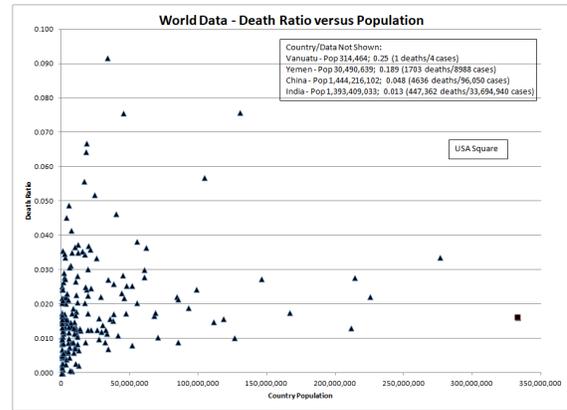

Figure 8: Plot of the Countries Population versus Death Ratio in World as of Sept 27, 2021.[5]

Sweden. Notice that the EU ratio was between 0.015 and 0.02 which was about the same as seen in all others data sets. Sweden's death ratio is slightly lower than 0.005 which was about 3 times lower than the EU for the first peak time frame. For a country that according to fake news should have larger number of deaths it was opposite. Obviously something that they did different worked. Also look at the second peak time frame. Again the EU had the death ratio steadily increasing as seen in Figure 5 but with the death ratio between 0.005 and 0.01 as seen in other data for the Delta time frame. But notice the Sweden data in the Delta time frame starts with a value approximately 0.0025 and then steadily decreased to around 0.001 with no visible peak. If only the USA followed this data.

Let's now look at the current data (as of September 27, 2021) for the world (203 countries).[5] Figure 7 shows the number of cases per 100k versus number of deaths per 100k for the world. A straight line was fitted to the shown data using linear least squares regression (shown as a solid straight line). Also shown on this plot and the next three is a square solid box which represents the data for the United States. The value of the slope of the straight line represents the death ratio for the world which is determined to be 0.0149 or 1.49%. This value is between the 0.02 for the Alpha variant and 0.01 for the Delta variant. The R-square value for the regression is 0.70226 which represents the "goodness-of-fit" for the regression and the F-test value is 476.445 with significance of 6.22×10^{-55}. What this is interpreted to mean is that 70% of the data can be represented by a straight line while there is quite a bit of variation still in the data but, by the F-test, the data reasonably fits a straight line.

Figure 8 shows a plot of the death ratio versus the population of each country in the world. Although the data is very scattered between .090 down to near 0 but a majority of these data lies between 0.01 and 0.02 which is what the data in Figure 7 also showed (slope of Figure 7 was 0.0149). That is about all that can be determined from this figure. Now the next plot (Figure 9) is the percentage of vaccinated people in each country in the world plotted against the number of cases per 100k. If you look at the vaccinated range of 50% to
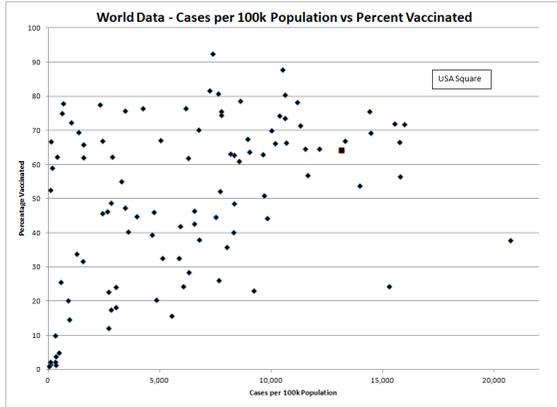
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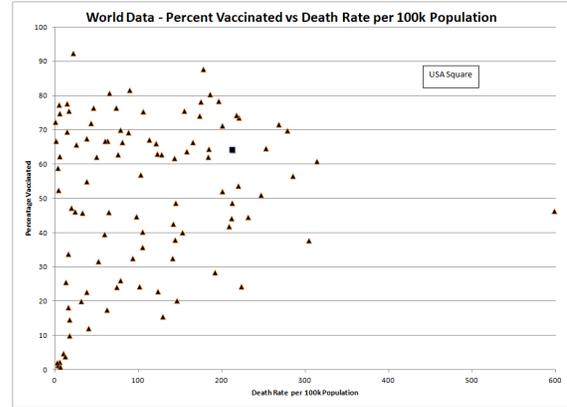Figure 9: Plot of the Number of COVID-19 Cases and Vaccinated Percentage in World as of Sept 27, 2021.[5]

Figure 10: Plot of the Number of COVID-19 Deaths versus Vaccination Percentage in World as of Sept 27, 2021.[5]

around 90% the number of cases per 100k ranges between approximately 70 cases per 100k up to approximately 17,000 cases per 100k. This shows that the United States is in the upper range in vaccinations but we are also in the top 11 of the worst case rates. Also, with the large span in the number of cases for about the same vaccination percentage, it looks like either vaccination status does not change the number of cases or vaccinations make the situation worse. Now looking at the lower range from 0 up to about 50% vaccination percentage, the number of cases per 100k decreases with the decreasing vaccination percentage down to the group below 10% vaccination percentage while the number of cases per 100k is approximately less than 500. These data implies that the number of cases per 100k either does not depend on vaccinations or worse, it shows that vaccines makes it worse for the number of cases per 100k.

After investigating the data from Figure 9, we should investigate what happens with the number of deaths per 100k versus the vaccination percentage for the world. This data is reflected in Figure 10 and again, for the vaccination percentage range between 50% to around 90%, the death rate per 100k ranged between zero and approximately 320. For the vaccination range between 0% to 50%, the death rate per 100k ranged between 1 and approximately 300 with an outlier (one datum of 600, Peru). Again, the United States lies in the worst 16 countries for death rates per 100k. Again, the death rate per 100k does not depend much at all on the vaccination percentage for the countries above 50% and it again seems to decrease with decreasing vaccination percentages.

Above I presented numbers from various groups but never answered when might the pandemic end. This time is dependent on various factors but in simple terms, if we define R_o as the number (on average) of people infected by one infected person, then "herd immunity" (HI) would be reached at $HI = 1 - 1/R_o$. Thus, if $R_o = 3$ then HI = 0.67 or 67% but once the ratio of infected versus total reaches this number, the virus will still spread but the rate of people being infected drops due to less people being capable of becoming infected. That one sentence carried a lot of information meaning that once herd immunity is reached infections

will still continue just the rate of infection will be less so looking at a plot of number of cases per day, the number of cases per day will decrease. The inverse might not be true though, If the number of cases start to decline does that mean we arrived at herd immunity? The answer to that question would be maybe. It might mean that HI was reached but it also might mean that the environment of the virus might have changed such as the weather became warmer and more people outside where the virus dies quicker among various other factors. You can also calculate that the R_o number is directly related to the infection rate of the virus (i.e. does the virus spread by multiple transmission venues or only one and how much of the virus is needed to be transmitted from one person to another for the other person to become infected and sick). All of these numbers are very difficult to obtain just from looking at number of cases or number of deaths. Also, the ratio of "infected" is not only determined by people becoming infected but also the number vaccinated enters the equation. A common assumption for R_o is 2.5 people become infected by one person on average. This would give a HI ratio of 0.6 or 60%. You can see from Figures 9 and 10 that a large number of countries are at this threshold. But then why are the number of infections still going up and the number of deaths still going up? Well, when you use vaccinations to reach HI and the vaccinations do not work on a specific, active, variant of the virus then the number of vaccinated drops off the calculation for HI while the calculation still assumes that natural immunity still protects the "cured" individual (see Vaccines section below on several research results showing this fact). Now according to the CDC[6] and European Centre[7] the following variants are being tracked/identified:

- Original Virus - First Detected November 2019

- Variant Being Monitored (VBM)

    - Alpha (B.1.1.7 and Q lineages) - First Detected October 2020
    - Beta (B.1.351 and descendant lineages) - First Detected December 2020
    - Gamma (P.1 and descendant lineages) - First Detected January 2021
    - Epsilon (B.1.427 and B.1.429, 5 total) - First Detected March 2020
    - Lambda (C.37) - First Detected August 2020
    - Eta (B.1.525) - First Detected December 2020
    - Iota (B.1.526) - First Detected November 2020
    - Kappa (B.1.617.1) - First Detected December 2020
    - B.1.617.3 - First Detected February 2021
    - Mu (B.1.621, B.1.621.1) - First Detected January 2021
    - Zeta (P.2) - First Detected February 2021
    - Theta (P.3) - First Detected February 2021
    - R.1 - First Detected January 2021
    - B.1.466.2 - First Detected November 2020

- B.1.1.318 - First Detected January 2021
- B.1.1.519 - First Detected November 2020
- C.36 + L452R - First Detected December 2020
- C.36.3 - First Detected January 2021
- B.1.214.2 - First Detected November 2020
- B.1.1.523 - First Detected May 2020
- B.1.619 - First Detected May 2020
- B.1.620 - First Detected November 2020
- C.1.2 - First Detected May 2021
- B.1.1.207 - First Detected August 2020
- B.1.1.317 - First Detected March 2021
- B.1.616 - First Detected January 2021
- B.1.618 - First Detected October 2020
- A.23.1 - First Detected December 2020
- A.27 - First Detected December 2020
- A.28 - First Detected December 2020
- C.16 - First Detected October 2020
- AV.1 - First Detected March 2021
- AT.1 - First Detected January 2021

- Variant of Interest (VOI)

- Variant of Concern (VOC)

  - Delta (B.1.617.2 and AY lineages, 28 total) - First Detected May 2021

- Variant of High Consequence (VOHC)

Note: due to the increasing number of sublineages that are associated with Alpha, Delta, and Gamma, CDC will refer to the sublineages collectively as Q lineages (Alpha), AY lineages (Delta), and P.1 descendant lineages (Gamma). Notice that after approximately 2 years (24 months) there are 34 known/obtained variants of the SARS-CoV-2 virus. That makes it about 1.4 variants per month. Also note that starting on November 2020 (month and year that the vaccines were released) there were 25 variants and 9 variants before the vaccines. Does this not look like the release of the vaccines started the increase in the rate of variants of SARS-CoV-2. With the very large number of variants and no logic why the rate would not continue, then the possibility of vaccines efficacy is decreasing while it is still unknown if even natural immunity would still be effective.

Now, the following information could have been placed under the Vaccines or Therapeutics section. This information is related to the Nuremberg Code (1947) which discusses

what doctors must and must not do for medical experiments. These consist of 10 mandatory standards the physicians must conform when carrying out experiments on human subjects. Below, I will list the relevant standards that apply specifically to COVID-19, in my opinion.

1. The voluntary consent of the human subject is absolutely essential. This means that the person involved should have legal capacity to give consent; should be so situated as to be able to exercise free power of choice, without the intervention of any element of force, fraud, deceit, duress, overreaching, or other ulterior form of constraint or coercion; and should have sufficient knowledge and comprehension of the elements of the subject matter involved as to enable him to make an understanding and enlightened decision. This latter element requires that before the acceptance of an affirmative decision by the experimental subject there should be made known to him the nature, duration, and purpose of the experiment; the method and means by which it is to be conducted; all inconveniences and hazards reasonably to be expected; and the effects upon his health or person which may possibly come from his participation in the experiment. The duty and responsibility for ascertaining the quality of the consent rests upon each individual who initiates, directs, or engages in the experiment. It is a personal duty and responsibility which may not be delegated to another with impunity.

3. The experiment should be so designed and based on the results of animal experimentation and a knowledge of the natural history of the disease or other problem under study that the anticipated results justify the performance of the experiment.

4. The experiment should be so conducted as to avoid all unnecessary physical and mental suffering and injury.

7. Proper preparations should be made and adequate facilities provided to protect the experimental subject against even remote possibilities of injury, disability, or death.

This code has been adopted in international law in Article 7 of the United Nations International Covenant on Civil and Political Rights (1966). Why are these standards important? The vaccinations forced by President Biden and various states in the union are forcing a treatment by force, fraud, etc on individuals WITHOUT THEIR CONSENT! The vaccinations are still experimental (see below in Vaccines), has not been designed based on the results of animal experimentation, and deaths occur from the vaccination (see below section on Vaccines for more information).

1.2   Conclusion

The data from England shows that the Delta variant is more infectious but less mortality compared with the Alpha variant. Also, for the Delta variant, there were more deaths in the vaccinated than compared with the unvaccinated. The data from Montana again shows that the Delta variant is more infectious but less deadly (death ratio around 0.01) compared

with earlier variants (death ratio around 0.02). Data from the United States shows again that the Delta variant is more infectious but less deadly (death ratio around 0.01) compared with earlier variants (death ratio around 0.02). The decrease in death rates per 100k and in the number of cases per 100k for the Israel data seems to be related to a lower vaccination percentage but also, it might be dependent on the use of therapeutics (or the lack thereof) such as hydroxychloroquine and/or ivermectin. The data from the European Union shows that the Delta variant had a lower death ratio (around 0.01 or less) compared with earlier variants but compared with Sweden, a county which used limited amount of extreme controls such as mandated masks, forced closures, etc had a very low death ratio (around 0.001 for the Delta variant). Now the world in general when the data was plotted of cases per 100k and deaths per 100k versus percentage vaccinated, there tended to have a positive reaction (i.e. positive slope) showing more cases and deaths per 100k for more vaccinations. This was completely opposite as stated by government leadership and medical professionals, that the number of cases and deaths would be less for more vaccinations. Not only this fact but for a specific vaccination percentage range, the number of cases and deaths ranged randomly between zero and a large number with the large number increasing with increasing vaccination percentages. The information presented in this section shows, in my opinion, that people should not be forced to be vaccinated but I have no arguments against anyone choosing to be vaccinated but only by their choice and only after they have been notified to all risks.

2   Vaccines

2.1   Vaccines in General

At this time the three most widely used vaccines in the US for the COVID-19 virus are (1) Pfizer-BioNTech (mRNA vaccine), (2) Moderna (mRNA vaccine), and (3) Johnson and Johnson Janssen (modified virus DNA vaccine). In the "old days" vaccines were generated by using the actual virus and killing the virus, weaken the virus, or use a piece of the virus and then administer that concoction to your body. The mRNA vaccines do not contain any live virus but they work by teaching our cells to make a harmless piece of a "spike protein," which is found on the surface of the virus that causes COVID-19. After making the protein piece, cells display it on their surface and then our immune system recognizes that it does not belong there and responds to get rid of it. When an immune response begins, antibodies are produced, creating the same response that happens in a natural infection.[8] The Johnson and Johnson vaccine uses a disabled adenovirus (not related in any way to the COVID-19 virus)[9] and will deliver the instructions on how to defeat the coronavirus but can't replicate in your body and will not give you a viral infection. For all three of these vaccines, there were no children or pregnant women included in the initial trials.

Now for some more information on the top two vaccines. Around 2013 Moderna and BioNTech both were working on a new technology named synthetic mRNA. They were

adapting to create medicines that could be given dose over and over for various diseases including cancer (but not vaccines). They had a problem though, in animal studies the ideal dose of the leading mRNA therapies was triggering dangerous immune reactions - the kind for which Kariko (the scientist who discovered and developed mRNA) had improvised a major workaround under some conditions - but a lower dose had proved too weak to show any benefits. They decided to limit the dosage to one or two injections. That was when things changed, on December 30, 2019 it was reported that a number of people from Wuhan, China were diagnosed with unexplained pneumonia.[10] On January 10, 2020 Chinese scientists posted online its genetic sequence for the COVID-19 virus. Since to create vaccines using mRNA only a computer that tells scientists what chemicals to put together and what order, several companies got to work developing a vaccine for COVID-19. Forty-two days after the genetic code was released, Moderna had developed an experimental vaccine. Soon, its vaccine became the first to undergo testing on humans in a small early-stage trial and on May 18 the company (Moderna) stated that its vaccine generated neutralizing antibodies in the first eight volunteers but no backup data was released to allow assessment. And then on July 28, it started testing a late-stage trial. After the rush to push vaccines, some people were worried about the first vaccine of this kind into hundreds of million of people. "You have all these odd clinical and pathological changes caused by this novel bat coronavirus, and you're about to meet it with all of these vaccines with which you have no experience," stated Paul Offit, an infectious disease expert at Children's Hospital of Philadelphia and an authority on vaccines.

One study from Israel studied the statistics relative to vaccine-induced immunity compared with natural-induced immunity.[11] The authors conducted an observational study comparing three groups: SARS-CoV-2-naive individuals who received a two-dose regimen of BioNTech/Pfizer vaccine, previously infected individuals who have not been vaccinated, and previously infected and single dose vaccinated individuals. This study was conducted when the Delta variant was dominant in Israel. The results were SARS-CoV-2-naive vaccinees had a 13.06-fold increased risk for breakthrough infection with the Delta variant compared to those previously infected (the increased risk was statistically significant for symptomatic disease as well) when the first event (infection or vaccination) occurred during January and February, 2021. When allowing the infection to occur at any time before vaccination (from March 2020 to February 2021), evidence of waning natural immunity was demonstrated, though SARS-CoV-2-naive vaccinees had a 5.96-fold increased risk for breakthrough infection and a 7.13-fold increased risk for symptomatic disease. SARS-CoV-2-naive vaccinees were also at a greater risk for COVID-19 related hospitalization compared to those that were previously infected. This study demonstrated that natural immunity confers longer lasting and stronger protection against infection, symptomatic disease and hospitalization caused by the Delta variant of SARS-CoV-2, compared to the two-dose vaccine-induced immunity. Individuals who were both previously infected and given a single dose of the vaccine gained additional protection against the Delta variant.

Another study from Nature investigated the progress in controlling the COVID-19 pandemic by the emergence of variants that appear to be more transmissible and more resistant to antibodies.[12] They studied a cohort of 63 individuals who have recovered from COVID-19

assessed at 1.3, 6.2, and 12 months after SARS-CoV-2 infection, 41% of whom also received mRNA vaccines. In the absence of vaccination, antibody reactivity to the receptor binding domain (RBD) of SARS-CoV-2, neutralizing activity and the number of RBD-specific memory B cells remain relatively stable between 6 and 12 months after infection. Vaccination increases all components of the humoral response and, as expected, results in serum neutralizing activities against variants of concern similar to or greater than the neutralizing activity against the original Wuhan Hu-1 strain achieved by vaccination of naive individuals. The data suggest that immunity in convalescent individuals will be very long lasting and that convalescent individuals who receive available mRNA vaccines will produce antibodies and memory B cells that should be protective against circulating SARS-CoV-2 variants.

Another study from Nature was an investigation in how might the virus change in response to vaccines and also how your body might change.[13] The authors investigated the extent to which mutations affecting the antigenic phenotype of SARS-CoV-2 will enable variants to circumvent immunity conferred by natural infection or vaccination. Their research focused on the spike protein and antibody-mediated immunity and discussed them in the context of observed mutation frequencies in global sequence datasets. The authors determined that there is clear evidence of the changing antigenicity of the SARS-CoV-2 spike protein and of the amino acid changes that affect antibody neutralization and that there is emerging evidence of variants exhibiting resistance to antibody-mediated immunity elicited by vaccines. Recent studies have shown the potential selective pressure exerted by convalescent plasma and mAb (monoclonal antibody - antibodies made by cloning a unique white blood cell which usually has monovalent binding affinity for a specific epitope) treatments on SARS-CoV-2 evolution in immuno-compromised individuals. This may have contributed to the sporadic emergence of the more heavily mutated variants and given that therapeutics (vaccines and antibody-based therapies) target mainly the SARS-CoV-2 spike protein, the selection pressures that favor the emergence of new variants carrying immune escape mutations generated in chronic infections will be similar to those selecting for mutations that allow reinfections within the wider population. The collective data on the effect of mutations on vaccines and convalescent serum efficacy show that the polyclonal response is focused on a few immuno-dominant regions, indicating the high probability of future mutation-mediated escape from host immunity.

A Department of Defense study[14] was completed to investigate virus interference by comparing respiratory virus status among Department of Defense personnel based on their influenza vaccination status along with individual respiratory viruses and their association with influenza vaccination. They compared the vaccination status of 2880 people with non-influenza respiratory viruses to 3240 people with pan-negative results. Comparing vaccinated to non-vaccinated patients, the adjusted odds ratio for non-flu viruses was 0.97 (95% CI: 0.86, 1.09; p=0.60). Additionally, the vaccination status of 3349 cases of influenza were compared to three different control groups: all controls (N=6120), non-influenza positive controls (N=2880), and pan-negative controls (N=3240). The adjusted ORs for the comparisons among the three control groups did not vary much (range: 0.46-0.51). They determined that vaccine derived virus interference was significantly associated with coronavirus and human metapneumovirus; however, significant protection with vaccination was associated not only

with most influeza viruses, but also parinfluenza, RSV, and non-influenza virus coinfections.

For information on children, one study was looking at epidemiological assessment reviewed reports filed between January 1, 2021 and June 18, 2021 among adolescents ages 12-17 who received both shots of the mRNA vaccines against COVID-19.[15] There were a total of 257 cardiac adverse event (CAE) identified following dose 2. The rates per million among males were 162.2 (ages 12-15) and 94.0 (ages 16-17); among females were 13.0 and 13.4, per million, respectively. For boys ages 12-15 without medical comorbidities, the rate of CAE is 3.7 to 6.1 times higher than their 120-day COVID-19 hospitalization risk as of August 21, 2021 (7-day hospitalizations 1.5/100k population) and 2.6 to 4.3-fold higher at times of high weekly hospitalization risk (7-day hospitalizations 2.1/100k). For boys 16-17 without medical comorbidities, the rate of CAE is currently 2.1 to 3.5 times higher than their 120-day COVID-19 hospitalization risk and 1.5 to 2.5 times higher at times of high weekly COVID-19 hospitalization.

Also, the belief that being vaccinated will protect the individual from becoming infected or even symptomatic is very incorrect and misleading.[16] During July 2021, 469 cases of COVID-19 associated with multiple summer events in Barnstable County, Massachusetts. At that time, the vaccination coverage among eligible Massachusetts residents was 69%. Approximately three-quarters (346 cases or 74%) occurred in fully vaccinated persons (i.e. they received two doses of the mRNA vaccine, Pfizer or Moderna, or single dose of Johnson & Johnson vaccine) at least 14 days before exposure and the Delta variant was the variant largely found. Overall, 274 vaccinated patients (79%) had symptomatic infections and of the five COVID-19 patients who were hospitalized, four were fully vaccinated but thankfully no deaths were reported. Dr. Fauci stated in August that the CDC needed to change the mask guidance to require vaccinated people to also wear the mask since the Delta variant of COVID-19 causes the viral load to be approximately the same in vaccinated versus unvaccinated people.

Another study investigated the infection and hospitalization rates for people over 15 years old by vaccination status in Los Angeles County.[17] They completed the study between the dates May 1 and July 25, 2021. During this time the percentages of B.1.617.2 (Delta variant) infections estimated from 6,752 samples increased among the fully vaccinated persons from 8.6% to 91.2%, partially vaccinated persons from 0% to 88.1%, and unvaccinated persons from 8.2% to 87.1%. For the complete study time frame the rate of infections were 10,895 (25.3%) in fully vaccinated persons, 1,431 (3.3%) in partially vaccinated persons, and 30,801 (71.4%) in unvaccinated persons. In May, there were differences in median Ct values (Ct means cycle threshold and the higher the value, the more virus load is present) by vaccination status (the ORF1ab gene target, 22.8, 36.6, 27.7 for unvaccinated, partially vaccinated, and fully vaccinated and the N gene target, 24.0, 36.0, 30.6) but, by July, no differences were detected among specimens from fully vaccinated, partially vaccinated, and unvaccinated persons by gene targets (ORF1ab gene target, 18.8, 17.8, 19.0 and N gene target, 19.3, 18.6, 19.5). The authors stated that efforts to increase COVID-19 vaccination coverage are critical to preventing COVID-19 related hospitalizations and deaths. I would be nervous about this conclusion given that the levels of Ct drastically changed from May to July largely due to

the new Delta variant present in large numbers starting in June and largely in July. The data would have been better to separate the two groups (before Delta and during Delta) and the effect of efficiency for the vaccine might vanish especially since the Ct variance vanished in July.

A study was completed on Cleveland Clinic Health System in Ohio to determine the necessity of COVID-19 vaccination in persons previously infected with SARS-CoV-2.[18] Employees of the Cleveland Clinic Health System working on December 16, 2020, the day COVID-19 vaccination was started, were included in the study. Any subject who tested positive for SARS-CoV-2 at least 42 days earlier was considered previously infected while one was considered vaccinated 14 days after receipt of the second dose of the mRNA vaccine. The cumulative incidence of SARS-CoV-2 infection over the next five months, among previously infected subjects who received the vaccine, was compared with those of previously infected subjects who remained unvaccinated, previously uninfected subjects who received the vaccine, and previously uninfected subjects who remained unvaccinated. Among the 52,238 subjects which included employees, 1,359 (53%) of 2,579 previously infected subjects remained unvaccinated compared with 20,804 (42%) of 49,659 not previously infected. The cumulative incidence of SARS-CoV-2 infection remained almost zero among previously infected unvaccinated subjects, previously infected subjects who were vaccinated, and previously uninfected subjects who were vaccinated compared with a steady increase in cumulative incidence among previously uninfected subjects who remained unvaccinated. Not one of the 1,359 previously infected subjects who remained unvaccinated had a COVID-19 infection over the duration of the study. In a Cox proportional hazards regression model, after adjusting for the phase of the epidemic, vaccination was associated with a significantly lower risk of COVID-19 infection among those not previously infected (HR 0.031, 95% CI 0.015 to 0.061) but not among those previously infected (HR 0.313, 95% CI 0 to infinity).

Another study was completed in Vietnam[19] that showed that the vaccinated individuals were could still pass the virus to other individuals. This study recurted 62 out of 69 healthcare workers whom were tested positive for SARS-CoV-2 and 49 were (pre)symptomatic with one requiring oxygen supplementation and all recovered uneventfully. Of these studies, all viruses were the Delta variant and were phylogenetically distinct from the Delta variant obtained from community transmission cases suggestive of ongoing transmission between the workers. Viral loads obtained from the workers were 251 times higher than those of cases infected with old strains detected between March-April 2020. Neutralizing antibody levels after vaccination and at diagnosis of the cases were lower than those in the matched uninfected controls. There was no correlation between vaccine-induced neutralizing antibody levels and viral loads or the development of symptoms. Also time from diagnosis to PCR negative was 8-33 days (median: 21). The conclusion was that the breakthrough Delta variant infections are associated with high viral loads, prolonged PCR positivity, and low levels of vaccine-induce neutralizing antibodies, explaining the transmission between the vaccinated people.

To study how effective Pfizer-BioNTech vaccine was against various strains of SARS-CoV-2, a high-throughput live-virus COVID-19 neutralization assay were completed.[20] The authors studied 250 participants after either one dose (n=149; median time after first

dose=30 days) or two doses (n=159; median time after second dose=28 days) with the assay using strain with the original spike sequence (Wild-type), a strain with Asp614Gly mutation obtained after first wave of infection in the UK in 2020, variant B.1.617.2 (Delta), variant B.1.351 (Beta) and B.1.1.7 (Alpha). Two doses of Pfizer vaccine elicited ELISA-detected anti-Wild-Type spike antibodies in all participants and NAb activity against all strains in all except six (3%) and nine (5%) of 159 participants who lacked NAb activity against the Delta and Beta variants. Of these the NAbTs were 5.8-fold reduced against Delta relative to Wild-Type, 2.6-fold more reduced against Alpha, and 4.9% reduction against Beta all compared against Wild-type. Notably, increased age and time since the second dose significantly correlated with reduced NAbT across all variants.

Another interesting finding is from a doctor in Boise, Idaho that has found an increase in cancers since January 2021.[21] Dr. Ryan Cole, a board-certified pathologist (trained at the Mayo Clinic) and owner and operator of a diagnostics lab (largest independent testing laboratory in Idaho) reported that he is seeing a massive uptick in various autoimmune diseases and cancers in patients who have been vaccinated. He stated that "Since January 1, in the laboratory, I'm seeing a 20 times increase of endometrial cancers over what I see on an annual basis." He also stated that "for post-vaccine, what we are seeing is a drop in your killer T-cells, in your CD8 cells. And what do CD8 cells do? They keep all other viruses in check." He stated that "he is seeing an uptick of not only endometrial cancer, but also melanomas, as well as herpes, shingles, mono, and a huge uptick in HPV."

What was also just noticed was information on the Pfizer vaccine.[22] Senator Ron Johnson (R-Wisconsin) stated the following on an interview with Fox News Primetime.

SEN. RON JOHNSON: We do not have an FDA-approved vaccine being administered in the U.S. The FDA played a bait and switch. They approved the Comirnaty version of Pfizer drugs. It's not available in the U.S. They even admit it. I sent them a letter three days later going "What are you doing?" What they did is they extended the emergency use authorization for the Pfizer drug vaccine that's available in the U.S., here that's more than 30 days later, they haven't asked that very simple question. If you're saying that the Pfizer drug is the same as the Comirnaty, why didn't you provide FDA approval on that? So, there's not an FDA-approved drug and, of course, they announced it so they could push through these mandates so that people actually think, "Oh, OK now these things are FDA approved." They are not and again, maybe they should be, but the FDA isn't telling me why.

As a side fact, it has been found that the Moderna vaccine sent to Japan may have contained metallic foreign matter and reacts to a magnet. The vaccine was believed to have been produced at a plant in Spain. Moderna stated that the company had found no safety or efficacy issues.[23]

2.2   Conclusions

After studying how the mRNA vaccines stimulates your body to fight off COVID-19 viruses, once the vaccine has invaded your cell and after your cell pushes the spike protein to the cell wall, your body will then destroy the cell after it determines that your cell was an invader by the spike protein. This action is largely completed in a muscle cell usually in your arm but in some individuals, the vaccine moves to another muscle cell, your heart. This explains why a large number of deaths after vaccination is due to cardiac arrest or some other cardiac event. The Israel study demonstrated that natural immunity confers longer lasting and stronger protection against infection, symptomatic disease and hospitalization caused by the Delta variant of SARS-CoV-2, compared to the two-dose vaccine-induced immunity. Individuals who were both previously infected and given a single dose of the vaccine gained additional protection against the Delta variant. Another study from Nature showed from the collective data on the effect of mutations on vaccines and convalescent serum efficacy show that the polyclonal response is focused on a few immuno-dominant regions, indicating the high probability of future mutation-mediated escape from host immunity. Another study[15] found that for children 12 to 17 years of age were 2-6 times more susceptible to a cardiac adverse event following the second vaccine dose compared with their 120-day COVID-19 hospitalization risk. This shows that, in my opinion, children younger than 17 should never be given a vaccine since they have a higher risk of having a cardiac adverse event than being sick from COVID-19 and being placed in the hospital. Also a study from Massachusetts found that a county with vaccination percentage almost 70% had a large number (74%) that had were symptomatic were fully vaccinated thus vaccinations, in my opinion, can cause a "super-spreader" event. From a study in Cleveland, it was found that not one of the 1,359 previously infected subjects who remained unvaccinated had a COVID-19 infection over the duration of this study. In a Cox proportional hazards regression model, after adjusting for the phase of the epidemic, vaccination was associated with a significantly lower risk of COVID-19 infection among those not previously infected (HR 0.031, 95% CI 0.015 to 0.061) but not among those previously infected (HR 0.313, 95% CI 0 to infinity). This shows that for individuals not infected previously, vaccinations might help but at all for those that already previously been infected. The study from Vietnam showed that the breakthrough Delta variant infections are associated with high viral loads, prolonged PCR positivity, and low levels of vaccine-induce neutralizing antibodies, explaining the transmission between vaccinated people again showing that the vaccinated are most likely the transmitters and not the unvaccinated and in conflict with President Biden and his staff including Dr. Fauci. Some other information from an Idaho doctor has data that indicates that the vaccines have been linked with cancer due to a drop in your killer T-cells. This is very scary, in my opinion, that if you are being treated for cancer then the vaccine might allow the cancer to increase or start again its growth rate. After reading all of the information presented in this document, it is also very, very sad, in my opinion, that a number of people are following President Biden's demand that 98% of the people should be vaccinated.

3 Therapeutics

There are much investigations ongoing to determine if there are any therapeutics out there to help out if you become infected. The following is not an all inclusive list nor am I giving any medical advice on the use of any or all of these medications. YOU MUST TALK WITH YOUR PHYSICIAN BEFORE ANY TRIALS!!

3.1 Ivermectin

J.C. Rajter, et.al.[24] shows that for a two hundred eighty patients all confirmed to have COVID-19 were treated with ivermectin (173) and without ivermectin (107). After completing a univariate analysis the results were that a lower mortality in the ivermectin group (15% vs 25.2%) Mortality was also lower among ivermectin-treated patients with severe pulmonary involvement (38% vs 80.7%). Their conclusion was that the "Ivermectin treatment was associated with lower mortality during treatment of COVID-19, especially in patients with severe pulmonary involvement.

Also another study[25] completed a double-blinded trial compared patients receiving Ivermectin 0.2 mg/kg for 3 days vs. placebo in non-hospitalized COVID-19 patients. RT-PCR from a nasopharyngeal swab was obtained at recruitment and then every two days. Primary endpoint was determined to be reduction of viral-load on the 6th day as reflected by Ct level>30 which is the non-infectious level. The primary outcome was also supported by determination of viral culture viability. Eighty-nine patients were chosen with 47 given Ivermectin and 42 given placebo. On day 6, 34 out of 47 (72%) patients in the Ivermectin group reached the endpoint compared to 21 out of 42 (50%) in the placebo group. These values give the odds of a negative test at day 6 to be 2.62 time higher in the Ivermectin group. Cultures at days 2 to 6 were positive in 3 out of 23 (13%) of the Ivermectin group vs 14 out of 29 (48.2%) of the placebo group (p=0.008).

Another conclusive trials came from various states in India.[26] On April 22, 2021, the All India Institute of Medical Science (AIIMS) and the Indian Council of Medical Research (ICMR) added Ivermectin to the protocol as an option for the early treatment for even mild cases of COVID-19. The Indian State of Uttar Pradesh developed a policy of treating ALL the contacts of an infected patient prophylactically with Ivermectin and this includes everyone in the house gets Ivermectin treatment and not only the infected one. Another State (Kerala) chose to adopt this Ivermectin protocol but limit the use to severe cases and they abandoned Ivermectin use altogether on August 5, 2021. On August 15, Kerala accounted for 18,582 of India's 32,937 new cases and 102 of India's 417 new deaths. By contrast, the Ivermectin-using State of Delhi which has approximately the same population, recorded only 53 new cases and ZERO deaths and also, Uttar Pradesh which has approximately eight times more inhabitants, had only 30 new cases and ONE death. This data shows that Kerala had 619 times as many new cases as Uttar Pradesh and over 100 times as many deaths (see Figure 1 for state comparisons by date).
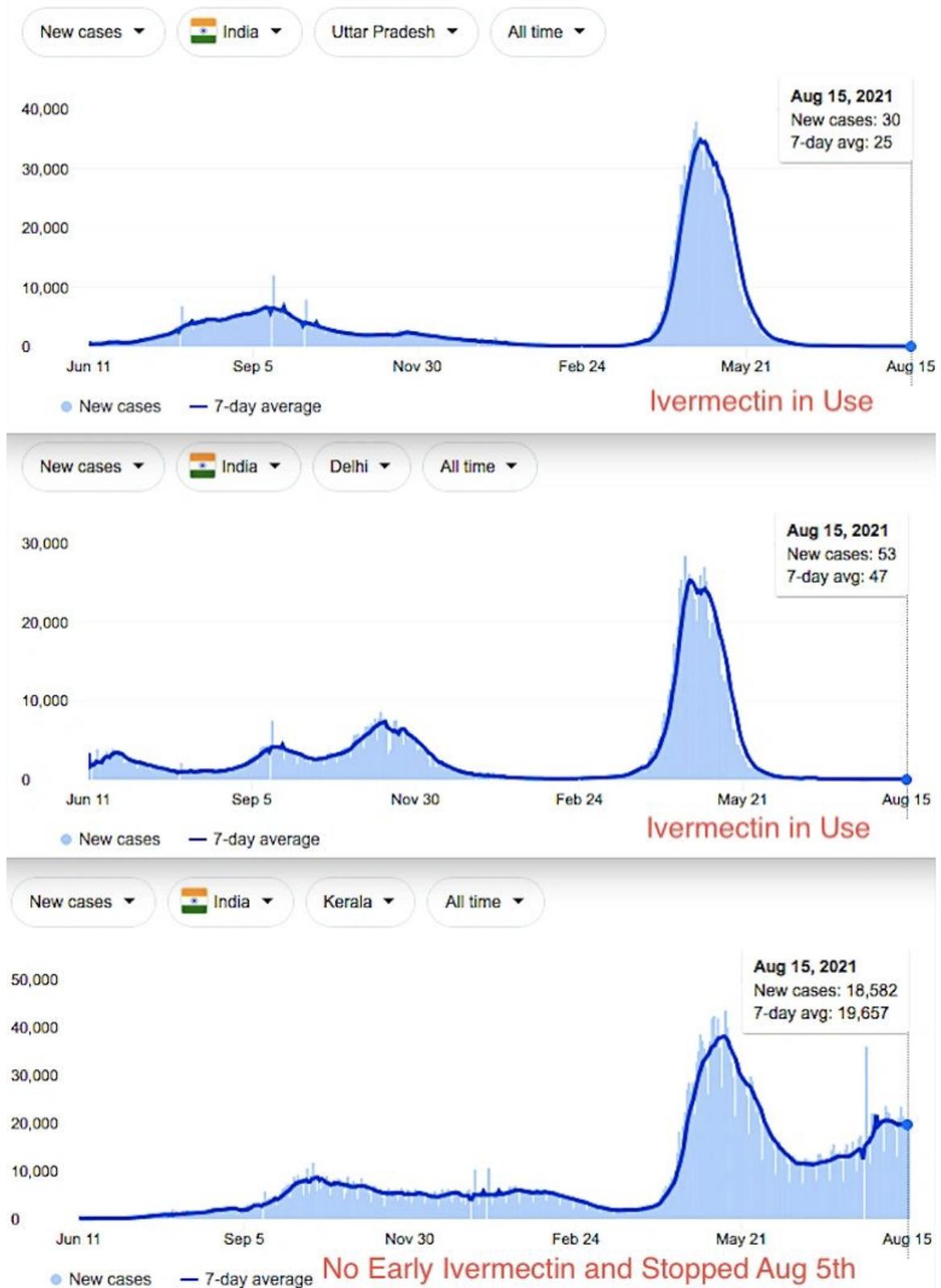
Figure 11: COVID-19 Cases for Three Indian States (states Uttar Pradesh, Delhi, and Kerala) by Dates.[26] Note that with Ivermectin use a rapid decrease in cases and minimal change with no Ivermectin use in Kerala.   18

Also, from many other reports, one was found that completed a meta-analyses on 18 randomized controlled treatment trials of ivermectin in COVID-19.[27] After the analysis, they have found large, statistically significant reductions in mortality, time to clinical recovery, and time to viral clearance by using Ivermectin. Furthermore, results from numerous controlled prophylaxis trials report significantly reduced risks of contracting COVID-19 with the regular use of Ivermectin. Finally, the many examples of Ivermectin distribution campaigns leading to rapid population-wide decreases in morbidity and mortality indicate that an oral agent effective in all phases of COVID-19 has been identified.

3.2 Hydroxychloroquine (HCQ)

At the US Senate in Nov 2020, Dr. Risch of Yale School of Public Health[28] states that "hydroxychloroquine is exceedingly safe. Common sense tells us this, that a medication safely used for 65 years by hundreds of millions of people in tens of billions of doses worldwide, prescribed without routine screening EKGs, given to adults, children, pregnant women and nursing mothers, must be safe when used in the initial viral-replication phase of an illness that is similar at that point to colds or flu." Also, about the "early use in high-risk outpatients, every one of them, and there are now seven studies, has shown significant benefit: 636 outpatients in Sao Paulo, Brazil; 199 clinic patients in Marseille, France' 717 patients across a large HMO network in Brazil; 226 nursing-home patients in Marseille; 1,247 outpatients in New Jersey; 100 long-term care institution patients in Andorra (between France and Spain); and 7,892 patients across Saudi Arabia. All these studies pertain to the early treatment of high-risk outpatients-and all showed about 50 percent or greater reductions in hospitalization or death. The Saudi study was a national study and showed 5-fold reduction in mortality for hydroxychloroquine plus zinc vs zinc alone. Not a single fatal cardiac arrhythmia was reported among these thousands of patients attributable to the hydroxychloroquine. These are the non-randomized but controlled trials that have been published."

Another study was completed to determine the association between treatment with hydroxychloroquine (HCQ) and azithromycin (AZ) and age, sex, and epidemic period and between clinical outcomes (deaths, ICU admissions, HC).[29] In 2020, 11,725 COVID-19 patients were treated and followed in their day hospital. Among these, 504 were immediately hospitalized in the conventional ward and were excluded from the study. Among 11,221 outpatients, 792 were excluded for the following reasons: 424 patients with unavailable information on treatment, 265 minor patients, 82 considered cured, and 72 without a positive PCR test. After the exclusions, 10,429 outpatients were used for the study. Of the 10,429 outpatients, 8315 received the combination therapy HCQ + AZ (79.9%), 1091 received AZ alone (10.5%), 207 received HCQ alone (2.0% mainly the first week), and 816 did not receive either HCQ or AZ (7.8%) all with no serious adverse events observed. Of the 10,429 patients, 21 had a second SARS-CoV-2 infection (0.2%) with a median time to reinfection of 160 days (interquartile range 127 to 209 days). The results were that of the 10,429 outpatients, there were 16 deaths (0.15%) with no patient under 60 years of age dying (0/8414). Therefore, the infection fatality rate (IFR) among the 2,015 patients aged 60 and over was 0.8% with the

median age of the decedents was 78 years (interquartile age 69-82 years) and 12/16 (75%) were male. Thirteen (81%) had a Charlson score ≥ 5 which corresponds to a risk of death within one year of more than 85% so that only three were expected not to die in the following year. Among the 13 patients with a known cause of death, 12 presented with respiratory failure, 1 presented with anaphylactic and septic shock after dexamethasone, 1 presented with neurological failure, and 6 presented with severe coagulopathy. None of the deaths with a known cause were related to a side effect of hydroxychloroquine and/or azithromycin. There were 5 deaths among the 8,315 patients who received HCQ+AZ and 11 among the 2,114 who received other treatments (p < 0.0001). Of the 11 non-HCQ deaths, 9 received AZ alone (0.82%) and 2 deaths were among those who received no treatment. In the multivariable logistic regression, age, sex, and treatment were associated with a significant difference in the risk of death. HCQ+AZ was associated with a significant 83% decrease in the risk of death (0.17, 0.06-0.48) independent of age, sex, or epidemic period. In conclusion, this study showed that treatment with HCQ was not associated with serious cardiac side effects but was associated with a significant IFR decrease of 75%. Also, the IFR among patients of all ages treated with HCQ+AZ was 60 per 100k, which is much lower than the natural infection rate even when evaluated under the best conditions as in Iceland (estimated to be 300 per 100k).

3.3   Remdesivir

A double-blind, randomized, placebo-controlled trial of intravenous Remdesivir in adults who were hospitalized with COVID-19 and had evidence of lower respiratory tract infection was conducted.[30] Patients were randomly assigned to receive either Remdesivir (200 mg day 1 followed with 100 mg daily up to 9 additional days) or a placebo for up to 10 days. The primary outcome was the time to recovery which was defined by either discharge from the hospital or hospitalization for infection-control purposes only. A total of 1062 patients were randomly selected (541 assigned to receive Remdesivir and 521 placebo). The results obtained showed those that received Remdesivir had a median recovery time of 10 days compared with 15 days of those that received the placebo (rate ratio for recovery of 1.29 with p < 0.001). The Kaplan-Meier estimates of mortality were 6.7% with Remdesivir and 11.9% with placebo by day 15 and 11.4% with Remdesivir and 15.2% with placebo by day 29. Serious adverse events were reported in 131 of the 532 patients who received Remdesivir (24.6%) and in 163 of the 516 patients who received placebo (31.6%).

But even after the above study, the World Health Organization has recommended against the use of Remdesivir for COVID-19.[31] "The antiviral drug remdesivir is not suggested for patients admitted to hospital with covid-19, regardless of how severely ill they are, because there is currently no evidence that it improves survival or the need for ventilation." This was determined after reviewing new evidence from four international randomized trials involving over 7,000 patients hospitalized for COVID-19.

3.4   Regeneron

REGEN-COV (casirivimab and imdevimab) is a cocktail of two monoclonal antibodies that was designed to specifically block infectivity of SARS-CoV-2. The two virus-neutralizing antibodies that form the cocktail bind non-competitively to the critical receptor binding domain of the virus's spike protein which diminishes the ability of mutant viruses to escape treatment and protects against spike variants. Trial phases 2 and 3 results show that REGEN-COV significantly reduced viral load within 7 days of treatment where the trial was conducted in patients hospitilized with COVID-19 who did not require high-flow oxygen or mechanical ventilation at baseline and did not mount their own antibody response (seronegative).[32] 1,197 patients (530 entered the trial with no supplemental oxygen and 667 were on low-flow oxygen) who received REGEN-COV in this trial experienced a 36% reduced risk of dying within 29 days of receiving treatment and, in patients who were seronegative when they entered the trial, the risk of dying was reduced by 56%. The trial produced results across the spectrum of COVID-19 infection, from prevention to hospitalization including 1) Prevention of symptomatic infection in both uninfected and infected asymptomatic household contacts of SARS-CoV-2 infected individuals, 2) Treatment of non-hospitalized patients already infected with SARS-CoV-2, and 3) Treatment of certain patients hospitalized due to COVID-19 infection. Multiple analysis showed that the antibody cocktail retains potency against the main variants of concern including Delta, Gamma, Beta, and Mu.

Another trial which was related to the phase 1-3 trial as described above was a double-blind, placebo-controlled study involving symptomatic, nonhospitalized patients.[33] This study involved 275 patients who were randomly assigned (1:1:1) to receive placebo, REGN-COV2 at dose of 2.4 g (low-dose), or REGN-COV2 at dose of 8.0 g (high dose). All patients underwent serum antibody assay to determine if any three antibodies were present (IgA anti-S1 domain of spike protein, IgG anti-S1 domain of spike protein, and IgG anti-nucleocapsid protein) and if any were, the patient was designated as serum antibody-positive, otherwise they were serum antibody-negative. A total of 275 patients were assigned to receive either the high-dose (90), low-dose (92), or the placebo (93). In the trials, clearance of the virus was correlated with better clinical outcomes. The neutralizing titers achieved with REGN-COV2 were more than 1000 times the titers achievable with convalescent-phase plasma, and REGN-COV2 had a profound and rapid effect on viral load, with most reduction occurring within 48 hours. This was striking even in the patients with the highest quantifiable viral loads (greater than 10^7 copies per milliliter) and these patients were presumably at the highest risk for additional complications and death. The data indicate that REGN-COV2 enhanced clearance of virus particularly in patients in whom an endogenous immune response had not yet been initiated (i.e. serum antibody-negative) or who had a high viral load at baseline.

3.5   Molnupiravir

On the list of new therapeutics which show promise, Merck and Ridgeback Biotherapeutics has produced an experimental oral antiviral drug name Molnupiravir to fight COVID-19.[34]

They consider this the first oral medicine that fights viral infection for COVID-19 if approved by the US Food and Drug Administration for emergency use authorization. The interim results showed that 7.3% (28/385) of patients who received molnupiravir were either hospitalized or died through day 29 compared with 14.1% of placebo treated patients (53/377) and that no deaths were reported in patients who receive molnupiravir as compared to 8 deaths in patients who received the placebo.

3.6 Protocol

There have been several "cocktails" that have been tried to minimize the effects of COVID-19. One that seems to have worked has been developed by Dr. George Fareed and Dr. Brian Tyson[35][36] which is given below.

Protocol:
HCQ 200 mg tabs #16, Zinc Sulfate 220 mg (or elemental Zinc 50 mg) #15, Azithromycin 500 mg #5 (or Z pack) or Doxycycline 100 mg #10, Ivermectin 3 mg tabs #8, Aspirin 325 mg tabs #30

Day 1 - HCQ 2 tabs twice a day, Zinc Sulfate tab twice a day, Azithromycin tab one per day or doxycycline cap twice a day, Ivermectin 12 mg on day 1 only, Aspirin 325 mg.

Day 2-5 - HCQ tab 3 times a day, Zinc Sulfate 3 times a day, Azithromycin tab daily or doxycycline cap twice a day, Aspirin 325 mg daily, Ivermectin 12 mg on day 3 if symptoms warrant, Prednisone 60 mg daily for 5-7 days or Dexamethasone 4 mg bid if wheezing/SOB, Budesonide 0.5-1 mg/2ml via nebulizer bid, Vitamin D3 5000 iu daily, Pepcid 20 mg daily, Continue daily Aspirin 325 mg.

Over the counter prevention:
Elemental Zinc 25 mg once a day, Vitamin D 4000 iu once a day, Vitamin C 1000 mg once a day, Quercetin 500 mg once a day (If Quercetin unavailable, then use Epigallocatechin-gallate [EGCG] 400 mg once a day).

Prophylaxis Protocol (Prophylaxis is an action taken to prevent or protect against a specified disease.):

Low Risk Patients - "Young healthy people do not need prophylaxis against COVID-19. In young and healthy people, this infection causes mild cold-like symptoms. It is advantageous for these patients to be exposed to COVID-19, build up their antibodies and have their immune system clear the virus. This will facilitate the development of herd immunity and help prevent future COVID-19 pandemics. However if these patients desire prophylaxis against COVID-19, then they should take the protocol noted below."

Moderate-Risk Patients - "Patients from this category are healthy but have high potential viral-load exposure. This group includes medical personnel, caregivers of high-risk patients,

people who use public transportation, first responders and other essential personnel who are crucial to the continued functioning of society. These patients should be encouraged to take prophylaxis against COVID-19 in accordance with the protocol noted below."

High-Risk Patients - "Patients are considered high risk if they are over the age of 60, or if they are younger than 60 but they have comorbidities; that is, they have other health conditions that put them at risk. These patients have between a 5 ot 10 percent mortality rate if they are infected with COVID-19. These patents should be strongly encouraged to take prophylaxis against COVID-19 in accordance with the protocol noted below."

Protocol for Low and Moderate Risk Patients - Elemental Zinc 25 mg once a day, Vitamin C 1000 mg once a day, Quercetin 500 mg once a day (note above if not available)

Protocol for High-Risk Patients - Elemental Zinc 25 mg once a day, HCQ 200 mg once a day for five days, then once a week.

3.7   Conclusions

Today there are numerous therapeutics that seem to work although some better than others. Again TALK TO YOUR DOCTOR FIRST! It seems to my non-medical doctor analysis that the ranking from best to worst would be 1) Ivermectin, 2) Regeneron, 3) Hydroxychloroquine, 4) Molnupiravir, and 5) Remdesivir. I was just informed that Barrett Hospital has started using Regeneron for certain classes of patients (I hope that some of the criteria used would include severity and/or high-risk patients). That is very good news since, in the past, they would give as therapeutics was only Remdesivir (see above info on this ineffective drug) but only when you were hospitalized. Most of the time they would send the patient home until they were much worse. Barrett Hospital doctors are told by hospital administrators to follow the CDC guidelines even if they have researched the issue and determined that other options are available. With this section as with this complete document, if anyone disagrees with this section, then reread the study from India on Ivermectin and see how effective it is to protect the individual from COVID-19. Open your eyes, PLEASE!! People are dying and the number might be decreased with the above therapeutics (aside from Remdesivir) and not just from vaccinations.

4   Mask Wearing

4.1   Mask Wearing in General

There are several professional studies on the issue of "Does mask wearing help limit the COVID-19 spread?". One study just released[37] entailed a randomized-trial in rural Bangladesh

including 600 villages and 342,126 adults. Mask-wearing and physical distancing were assessed through direct observation at least weekly at mosques, markets, the main entrance roads to villages, and tea stalls and there were 178,288 in the intervention group and 163,838 in the control group. The intervention increased proper mask-wearing from 13.3% in control villages to 42.3% in treatment villages. Physical distancing increased from 24.1% in control villages to 29.2% in treatment villages. The proportion of individuals with COVID-19-like symptoms was 7.62% (N=13,273) in the intervention arm and 8.62% (N=13,893) in the control arm. There were two types of mask used, cloth and surgical masks. The cloth masks provided the wearer with filtration efficiency of 37% and 95% filtration efficience for the surgical masks. The results for mask wearing had clear evidence that surgical masks lead to a relative reduction in symptomatic seroprevalence of 11.2% (aPR or adjusted prevalence ratio = 0.89 [0.78,1.00]; control prevalence = 0.80%; treatment prevalence=0.71%). For cloth masks, an imprecise zero was obtained although the confidence interval includes the point estimate for surgical masks (aPR=0.95 [0.79,1.11]; control prevalence=0.67%; treatment prevalence=0.62%).

There was another study from Denmark to investigate the effectiveness of wearing masks (surgical masks) for COVID-19 for April and May.[38] The investigators chose adults that were spending more than 3 hours per day outside the home without occupational mask use. A total of 3030 participants (about 2335 completed the study) were randomly assigned to wear masks and 2994 participants (about 2527 completed the study) were assigned to the control group with 4862 completing the study). The result obtained from the two months study was 42 participants (1.8%) were infected within the mask group and 53 participants (2.1%) were infected from the control group. The between-group difference was -0.3 percentage point (95% CI, -1.2 to 0.4 percentage point; P=0.38). The values indicate that "the difference observed was not statistically significant".

Another study investigated SARS-CoV-2 infections among Marine Corps recruits who underwent a 2-week quarantine at home followed by a second supervised 2-week quarantine at a closed college campus that involved mask wearing, social distancing, and daily temperature and symptom monitoring.[39] The recruits were tested by means of quantitative polymerase-chain-reaction (qPCR) assay obtained between the time of arrival and the second day of supervised quarantine and on days 7 and 14. Recruits who did not volunteer for the study underwent qPCR testing only on day 14, the end of the quarantine period. A total of 1848 recruits volunteered to participate in the study and within 2 days after arrival, 16 (0.9%) tested positive for COVID-19, 15 of whom were asymptomatic. An additional 35 participants (1.9%) tested positive on day 7 or day 14. Five of the 51 participants (9.8%) who tested positive at any time had symptoms in the week before a positive qPCR test. Of the recruits who declined to participate in the study, 26 (1.7%) of the 1554 recruits with available qPCR results tested positive on day 14. Epidemiologic analysis supported multiple local transmission events, including transmission between roommates and among recruits within the same platoon. Their conclusions were that approximately 2% who had previously had negative results for COVID-19 at the beginning of supervised quarantine, and 1.7% of recruits with unknown previous status tested positive by day 14 and most recruits who tested positive were asymptomatic.

4.2 Conclusions

Like what I have stated previously from other studies, masks in general does not protect the people from COVID-19 unless the mask type was at least a N95 type of mask. From the studies above, if cloth masks were used, statistically there was no change in infection rates between wearing a cloth mask or no mask. Only wearing a N95 or better mask will help some (approximately a 11% reduction in risk) but in no way was the protection even close to 100% perfect. The Danish study was a blinded study which again obtained that the difference between mask wearing and not was not statistically significant. Finally, the Marine Corps study showed conclusively that mask wearing, social distancing, and monitoring does not help since multiple local transmission events occurred between both groups (quarantined and control) and the percentage infected were 2% for the quarantined group and 1.7% for the group that declined the study. Another information from this study was that most recruits who tested positive were asymptomatic showing that there might be a larger number of people in the population that were infected and cured without even knowing they were infected.

5 Schools and Mask Wearing

5.1 Federal Mandatory Mask Usage

In the appendix, I have responded to information released by the Montana School Boards Association on masks wearing on school buses. I added the information as an appendix since it is related but not directly to the subject of science related to COVID-19. Please read if you are on a school board with this as an agenda item.

5.2 Children in General

The latest estimates for the survival rates for various age groups are given in Table 2.[40]

Now on the issue should kids (0-19) be forced to wear masks look at table 1 and notice that for this age group the survival rate for COVID-19 is 99.9973%. This table is calculated from world wide numbers. In layman terms that would calculate to be in 2.7 kids in 100,000. Now I for one do not like ANY KID to die let alone anyone but look at Table 2 which shows the ten leading causes of death for various age groups as of 2021[41] and Table 3 which shows the US population for the various age groups. From Table 3 let's assume that there are 77,842,364 children in the 1-19 age groups. With the probability given above for deaths in the 1-19 age group, the deaths would be approximately 2102 assuming that all of the children became infected (which will happen but not in a very long time, if at all). If you use the current numbers for the US of 331,449,281 with 39,831,318 that have been infected and

Table 2: Age Infection Survival Rates[40]

Age (in Years)	Survival Rate)
0-19	99.9973%
20-29	99.986%
30-39	99.969%
40-49	99.918%
50-59	99.73%
60-69	99.41%
70+ (non-inst.)	97.6%
70+ (all)	94.5%

644,848 deaths, then approximately 12% have been infected. Thus, for Children age 1-19, that would be about 252 children that have died since COVID-19 started. If you now look at Table 2 and add columns 2, 3, 4, and 5 together (i.e. ages 1-19) you would determine that COVID-19 would rank in the top ten at 7th with Accidents (6178), Intentional self-harm (2744), Assault (2507), Malignant neoplasms (1649), Congenital malformations (985), Heart diseases (371), Influenza and pneumonia (316) causing more deaths. Just from this fact alone would not justify pulling kids from school or even forcing them to wear masks. Also note what was shown above under vaccines[15] that more children were having cardiac events after receiving the mRNA vaccines. Also note that the odds are not just for any child but these are mostly for children that have underlying complex disabilities.[42] In fact, one study picked through all hospital admissions and deaths for people younger than 18 in England and found that COVID-19 caused 25 deaths in that age group. About half of those deaths were in individuals with high health-care needs such as tube feeding or assistance with breathing.

Table 3: Leading Causes of Death for Various Ages[41]

Causes	Rank&1-4	Rank&5-9	Rank&10-14	Rank&15-19	Rank&20-24	Rank&25-34	Rank&35-44	Rank&45-54	Rank&55-64	Rank+64
Accidents	1-1,149	1-714	1-778	1-3,537	1-8,218	1-24,516	1-24,070	3-23,359	3-24,892	7-60,527
Intentional self-harm	—	—	2-534	2-2,210	2-3,744	—	2-8,059	4-7,525	5-8,012	8-8,238
Congenital malformations	2-416	3-192	5-189	6-188	6-202	—	—	—	—	—
Malignant neoplasms	3-285	2-371	3-404	4-589	4-799	4-3,577	2-10,695	1-35,587	1-111,765	2-435,462
Assault	4-284	4-155	4-191	3-1,877	3-2,897	3-5,341	5-3,446	—	—	—
Heart Diseases	5-133	5-91	6-87	5-288	5-584	5-3,495	3-10,499	2-31,138	2-80,837	1-531,583
Chronic lower respiratory	—	6-69	7-81	8-60	9-108	—	—	8-3,592	4-18,743	3-133,246
Diabetes mellitus	—	—	—	9-59	7-189	7-887	7-2,228	6-6,348	5-15,508	6-62,397
Influenza and pneumonia	6-122	7-52	8-71	7-71	10-104	—	9-951	—	—	9-40,399
Chronic liver and cirrhosis	—	—	—	—	—	6-1,112	6-3,417	4-8,098	6-14,385	—
Cerebrovascular diseases	9-52	8-37	9-48	10-58	—	8-585	8-1,741	7-5,153	7-12,931	4-129,193
In situ, benign neoplasms	10-49	10-31	10-35	—	—	—	—	—	—	—
Pregnancy and childbirth	—	—	—	—	8-126	9-532	—	—	—	—
Nephritis and nephrosis	—	—	—	—	—	—	—	9-2,269	9-5,857	8-42,230
Septicemia	8-53	9-36	—	—	—	—	10-812	10-2,176	10-5,672	—
Alzheimers	—	—	—	—	—	—	—	—	—	5-120,090
Parkinsons	—	—	—	—	—	—	—	—	—	10-34,435
HIV disease	—	—	—	—	—	—	10-486	—	—	—
Conds in perinatal period	7-57	—	—	—	—	—	—	—	—	—
All other causes	1,076	585	746	1,321	2,542	10,588	17,602	34,661	76,109	527,770
All Causes	3,676	2,333	3,164	10,258	19,513	59,178	82,986	160,393	374,937	2,117,332

Table 4: US Population for 2019 for Age Groups

Age (in Years)	Number in Group
1-4	15,793,631
5-9	20,195,895
10-14	20,798,268
15-19	21,054,570
20-24	21,632,940
25-34	45,940,321
35-44	41,659,144
45-54	40,874,902
55-64	42,448,537
65 and over	54,058,263

An issue about school closures or learning from home is on the consequences for student's learning.[43] They investigated school performance in the Netherlands with approximately 350,000 students. The Netherlands underwent a relatively short lockdown (8 weeks). Still, the results revealed a learning loss of about 3 percentile points which is equivalent to one-fifth of a school year (the same period that schools remained closed). Losses are up to 60% larger among students from less-educated homes. Their findings imply that students made little or no progress while learning from home and suggest losses even larger in countries with weaker infrastructure or longer school closures.

Also, what about the risk that school children present to teachers and their household members. This has been recently studied in England and just published.[44] Most of the teachers in the study were young (average age 42) women (80%) with few underlying health conditions (84%) and the study period was from March 2020 to July 2021. In general, no evidence was found that the risk of admission to the hospital with COVID-19 was higher among teachers than among other adults of working age in the general population, after adjusting for age, sex, socioeconomic deprivation, location, race/ethnicity, household composition, and comorbidities. When schools were largely closed, teachers showed a lower risk of being admitted to the hospital (risk ratio 0.77) and household members (risk ratio 0.66) and of severe COVID-19 (risk ratio 0.56) than the general population and when schools were fully open, the risk in both groups was similar. Risks were found to be higher in patient facing healthcare workers (1.73) and their household members (1.17).

5.3 Conclusions

The study from the Netherlands shows that students that were quarantined or lockdown lost approximately one-fifth of a school year for just 8 weeks of lockdown. By locking down the students, we are "dumbing down" our children that are to replace us and that is very, very

sad. I also showed that from previously section under Vaccines that children are suscteptible to cardiac adverse events and that that odds were higher for the event than for them to be hospitalized. Also, it was presented before that most of the children that succumbed to the virus were already at a much higher risk than other children and would have had problems virus or not. I also showed that for relative risks children have numerous other risks that they are living/adapting with although NO DEATH is wanted but almost all are VERY HARD to control or stop and the requirements from public health can do neither. Finally for this section, people state that although children will not most likely be harmed by the virus, teachers and adults would be. I showed a study from England that indicated that no additional risk was found with teachers compared with the general population. Thus, children do not increase the risk to teachers for the SARS-CoV-2 virus. We must not force children to leave school (quarantined) or to be vaccinated. It is wise to keep the children at home or in face masks when at school if or when they have tested positive for the virus but not to isolate the children. The same should be said for all the other viruses though especially since the children are at higher risk for the other viruses compared to SARS-CoV-2.

6   City-County Health Board Positions Discussions

First, let's insert the laws pertaining to City-County Health Boards as changed by the 2021 Montana Legislature. The first change was from HB-121 which was Signed by Governor April 16, 2021 and from HB-257 which was Signed by Governor May 7, 2021. I will only show the sections/parts that were changed and relevant to local health boards:

MCA 50-1-101. Definitions. Unless the context indicates otherwise, in chapter 2 and this chapter, the following definitions apply:

(8)] "Local governing body" or "governing body" means:

   (a) the board of county commissioners that oversees a county local board of health;

   (b) the elected governing body of a city that oversees a city local board of health; or

   (c) the entity identified as the governing body as established in the bylaws, interlocal agreement, or memorandum of understanding creating a city-county local board of health or a local district board of health.

MCA 50-2-116. Powers and duties of local boards of health.

(1) Except as provided in subsection (5), in order to carry out the purposes of the public health system, in collaboration with federal, state, and local partners, each local board of health shall:

   (a) recommend to the governing body the appointment of a local health officer who is:

      (i) a physician;

      (ii) a person with a master's degree in public health; or

      (iii) a person with equivalent education and experience, as determined by the department;

(b) elect a presiding officer and other necessary officers;

(c) adopt bylaws to govern meetings;

(d) hold regular meetings at least quarterly and hold special meetings as necessary;

(e) identify, assess, prevent, and ameliorate conditions of public health importance through:

      (i) epidemiological tracking and investigation;

      (ii) screening and testing;

      (iii) isolation and quarantine measures;

      (iv) diagnosis, treatment, and case management;

      (v) abatement of public health nuisances;

      (vi) inspections;

      (vii) collecting and maintaining health information;

      (viii) education and training of health professionals; or

      (ix) other public health measures as allowed by law;

(f) protect the public from the introduction and spread of communicable disease or other conditions of public health importance, including through actions to ensure the removal of filth or other contaminants that might cause disease or adversely affect public health;

(g) supervise or make inspections for conditions of public health importance and issue written orders for compliance or for correction, destruction, or removal of the conditions;

(h) bring and pursue actions and issue orders necessary to abate, restrain, or prosecute the violation of public health laws, rules, and local regulations;

(i) identify to the department an administrative liaison for public health. The liaison must be the local health officer in jurisdictions that employ a full-time local health officer. In jurisdictions that do not employ a full-time local health officer, the liaison must be the highest ranking public health professional employed by the jurisdiction.

(j) subject to the provisions of 50-2-130, propose for adoption by the local governing body necessary regulations that are not less stringent than state standards for the control and disposal of sewage from private and public buildings and facilities that are not regulated by Title 75, chapter 6, or Title 76, chapter 4. The regulations must describe standards for granting variances from the minimum requirements that are identical to standards promulgated by the board of environmental review and must provide for appeal of variance decisions to the department as required by 75-5-305. If the local board of health regulates or permits water well drilling, the

regulations must prohibit the drilling of a well if the well isolation zone, as defined in 76-4-102, encroaches onto adjacent private property without the authorization of the private property owner.

(2) Local boards of health may:

    (a) accept and spend funds received from a federal agency, the state, a school district, or other persons or entities;

    (b) propose for adoption by the local governing body necessary fees to administer regulations for the control and disposal of sewage from private and public buildings and facilities;

    (c) propose for adoption by the local governing body regulations that do not conflict with 50-50-126 or rules adopted by the department:

        (i) for the control of communicable diseases;

        (ii) for the removal of filth that might cause disease or adversely affect public health;

        (iii) subject to the provisions of 50-2-130, for sanitation in public and private buildings and facilities that affects public health and for the maintenance of sewage treatment systems that do not discharge effluent directly into state water and that are not required to have an operating permit as required by rules adopted under 75-5-401;

        (iv) subject to the provisions of 50-2-130 and Title 50, chapter 48, for tattooing and body-piercing establishments and that are not less stringent than state standards for tattooing and body-piercing establishments;

        (v) for the establishment of institutional controls that have been selected or approved by the:

            (A) United States environmental protection agency as part of a remedy for a facility under the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601, et seq.; or

            (B) department of environmental quality as part of a remedy for a facility under the Montana Comprehensive Environmental Cleanup and Responsibility Act, Title 75, chapter 10, part 7; and

        (vi) to implement the public health laws;

    (d) adopt rules necessary to implement and enforce regulations adopted by the local governing body; and

    (e) promote cooperation and formal collaborative agreements between the local board of health and tribes, tribal organizations, and the Indian health service regarding public health planning, priority setting, information and data sharing, reporting, resource allocation, service delivery, jurisdiction, and other matters addressed in this title.

(3) A local board of health may provide, implement, facilitate, or encourage other public health services and functions as considered reasonable and necessary.

(4) A directive, mandate, or order issued by a local board of health in response to a declaration of emergency and/or or disaster by the governor as allowed in 10-3-302 and 10-3-303 or by the principal executive officer of a political subdivision as allowed in 10-3-402 and 10-3-403:

  (a) remains in effect only during the declared state of emergency or disaster or until the governing body holds a public meeting and allows public comment and the majority of the governing body moves to amend, rescind, or otherwise change the directive, mandate, or order; and

  (b) may not interfere with or otherwise limit, modify, or abridge a person's physical attendance at or operation of a religious facility, church, synagogue, or other place of worship.

(5) A regulation allowed in subsection (2)(c)(i), (2)(c)(ii), or (2)(c)(vi) adopted or a directive, mandate, or order implemented to carry out the provisions of this part that applies to the entire jurisdictional area of a town, city, or county under the jurisdiction of the local health board may not:

  (a) (a) compel a private business to deny a customer of the private business access to the premises or access to goods or services;

  (b) (b) deny a customer of a private business the ability to access goods or services provided by the private business; or

  (c) (c) include any of the following actions for noncompliance of actions described in subsections (4)(a) and (4)(b):

    (i) require the assessment of a fee or fine;

    (ii) require the revocation of a license required for the operation of a private business;

    (iii) find a private business owner guilty of a misdemeanor; or

    (iv) bring any other retributive action against a private business owner, including but not limited to an action allowed under 50-2-123, a penalty allowed under 50-2-124, or any other criminal charge.

(6) The prohibition provided for in subsection (5)(b) does not apply to persons confirmed to have a communicable disease and who are currently under a public isolation order.

(7) The prohibitions provided for in subsection (5) do not restrict a local board of health from exercising its authority under this section to enforce and ensure compliance by private businesses with all lawfully adopted regulations, directives, and orders.

(8) As used in this section, "private business" means an individual or entity that is not principally a part of or associated with a government unit. The term includes but is not limited to a nonprofit or for-profit entity, a corporation, a sole proprietorship, or a limited liability company."

MCA 50-2-118. Powers and duties of local health officers.

(1) Except as provided in subsection (3), in order to carry out the purpose of the public health system, in collaboration with federal, state, and local partners, local health officers or their authorized representatives shall:

(a) make inspections for conditions of public health importance and issue written orders for compliance or for correction, destruction, or removal of the condition;

(b) take steps to limit contact between people in order to protect the public health from imminent threats, including but not limited to ordering the closure of buildings or facilities where people congregate and canceling events;

(c) report communicable diseases to the department as required by rule;

(d) establish and maintain quarantine and isolation measures as adopted by the local board of health; and

(e) pursue action with the appropriate court if this chapter or rules adopted by the local board or department under this chapter are violated.

(2) A directive, mandate, or order issued by a local health officer in response to a declaration of emergency and/or disaster by the governor as allowed in 10-3-302 and 10-3-303 or by the principal executive officer of a political subdivision as allowed in 10-3-402 and 10-3-403:

(a) remains in effect only during the declared state of emergency or disaster or until the governing body holds a public meeting and allows public comment and the majority of the governing body moves to amend, rescind, or otherwise change the directive, mandate, or order; and

(b) may not interfere with or otherwise limit, modify, or abridge a person's physical attendance at or operation of a religious facility, church, synagogue, or other place of worship.

(3) A local health officer may not enforce a regulation, directive, mandate, or order or issue an order that is in violation of 50-2-116(5).

(4) The prohibitions provided for in 50-2-116(5) do not restrict a local health officer from exercising the local health officer's authority under this section or 50-2-123 to enforce and ensure compliance by private businesses with all lawfully adopted regulations, directives, and orders.

MCA 50-2-123. Compliance order authorized.

(1) If a person refuses or neglects to comply with a written order of a state or local health officer within a reasonable time specified in the order, the state or local health officer may cause the order to be complied with and initiate an action to recover any expenses incurred from the person who refused or neglected to comply with the order. The action to recover expenses shall be brought in the name of the city or county.

(2) An order of compliance or action allowed pursuant to subsection (1) may not be initiated for an order that violates 50-2-116(5) or 50-2-118(3).

MCA 50-2-124. Penalties for violations.

(1)(a) A person who does not comply with rules adopted by a local board that are not in conflict with 50-2-116(5) or 50-2-118(3) is subject to a civil penalty of not less than $10 or more than $200.

(1)(b) A business entity that does not comply with rules adopted by a local board is subject to a civil penalty of not more than $250.

(2) Except as provided in 50-2-123 and subsection (1) of this section, a person who violates the provisions of this chapter or rules adopted by the department under the provisions of this chapter is guilty of a misdemeanor. On conviction, the person shall be fined not less than $10 or more than $500 or be imprisoned for not more than 90 days, or both.

(3) Each day of violation constitutes a separate offense.

(4) The local board or the county attorney of the county in which a violation described in subsection (1) occurred may petition a court of limited jurisdiction to impose the civil penalties allowed in subsection (1). Venue for an action to collect a civil penalty pursuant to subsection (1) is in the county in which the violation occurred or in a court of limited jurisdiction.

(5) Fines, except justice's court fines, must be paid to the county treasurer of the county in which the violation occurs.

(6)(a) As used in this section, "business entity" means a corporation, association, partnership, limited liability partnership, limited liability company, sole proprietorship, or other legal entity recognized under state law.

(6)(b) The term does not include an individual.

MCA 50-2-130. Local regulations no more stringent than state regulations or guidelines.

(1) After April 14, 1995, except as provided in subsections (2) through (4) or unless required by state law, the local board may not adopt propose for adoption by the local governing body a rule under 50-2-116(1)(k), (2)(c)(iii), or (2)(c)(iv) 50-2-116(2)(j), (3)(c)(iii), or (3)(c)(iv) that is more stringent than the comparable state regulations or guidelines that address the same circumstances. The local board may incorporate by reference comparable state regulations or guidelines.

(2) The local board may adopt propose for adoption by the local governing body a rule to implement 50-2-116(1)(k), (2)(c)(iii), or (2)(c)(iv) 50-2-116(2)(j), (3)(c)(iii), or (3)(c)(iv) that is more stringent than comparable state regulations or guidelines only if the local board makes a written finding, after a public hearing and public comment and based on evidence in the record, that:

   (a) the proposed local standard or requirement protects public health or the environment; and

   (b) the local board standard or requirement to be imposed can mitigate harm to the public health or environment and is achievable under current technology.

(3) The written finding must reference information and peer-reviewed scientific studies contained in the record that forms the basis for the local board's conclusion. The written finding must also include information from the hearing record regarding the costs to the regulated community that are directly attributable to the proposed local standard or requirement.

(4)(a) A person affected by a rule of the local board adopted after January 1, 1990, and before April 14, 1995, that that person believes to be more stringent than comparable state regulations or guidelines may petition the local board to review the rule. If the local board determines that the rule is more stringent than comparable state regulations or guidelines, the local board shall comply with this section by either revising the rule to conform to the state regulations or guidelines or making the written finding, as provided under subsection (2), within a reasonable period of time, not to exceed 12 months after receiving the petition. A petition under this section does not relieve the petitioner of the duty to comply with the challenged rule. The local board may charge a petition filing fee in an amount not to exceed $250.

(4)(b) A person may also petition the local board for a rule review under subsection (4)(a) if the local board adopts a rule after January 1, 1990, in an area in which no state regulations or guidelines existed and the state government subsequently establishes comparable regulations or guidelines that are less stringent than the previously adopted local board rule.

The following change came from HB-501 which was Signed by Governor May 14, 2021

45-6-203. Criminal trespass to property.

(1) Except as provided in subsection (4), 15-7-139, 70-16-111, and 76-13-116, a person commits the offense of criminal trespass to property if the person knowingly:

   (a) enters or remains unlawfully in an occupied structure; or

   (b) enters or remains unlawfully in or upon the premises of another.

(2) A person convicted of the offense of criminal trespass to property shall be fined not to exceed \$500 or be imprisoned in the county jail for any term not to exceed 6 months, or both.

(3) A person convicted of or who forfeits bond or bail for committing an act of criminal trespass involving property owned or administered by the department of fish, wildlife, and parks or while hunting, fishing, or trapping may be subject to revocation of the person's privilege to hunt, fish, or trap in this state for up to 24 months from the date of conviction or forfeiture.

(4) It does not constitute criminal trespass when a person who lacks proof of vaccination or vaccination status or fails to wear a specific medical device, such as masks or other facial coverings, enters or remains in a public place paid for in whole or in part with taxpayer funds where proof of vaccination or use of medical devices, such as masks or other facial coverings, is required.

Finally, the following are sections from the **Interlocal Agreement Between the City of Dillon, Town of Lima, and County of Beaverhead to Cooperate in the Provision of Health Services** filed in the Beaverhead County Clerk and Recorder Office Number 2001-0005 and Dated December 31, 2001.

II. PURPOSE

(1) It is the purpose of this Agreement to create a City/County Health Board and to delineate the membership and responsibilities of that board.

III. MEMBERSHIP OF CITY/COUNTY HEALTH BOARD

(1) The City/County Health Board shall be composed of seven (7) members in accordance with the provisions of Section 50-2-106, M.C.A., and appointed as follows:

(a) Three members shall be appointed by the County Commissioners. One (1) of these appointees and only one (1) may be an elected County official. None of these appointments shall be subject to review or confirmation by the other participants herein.

(b) Two members shall be appointed by the Dillon City Council. One (1) and only one (1) of these may be an elected City official. None of these appointments shall be subject to review or confirmation by the other participants herein.

(c) One member shall be appointed by the Town of Lima Council. This appointee may or may not be an elected town official. This appointment shall be subject to review or confirmation by the other participants herein.

(d) One member, who shall be the County Health Officer.

(2) The terms of appointed members shall be as follows:

(a) The three (3) persons appointed by the County Commissioners shall serve staggered three (3) year terms.

(b) The two (2) persons appointed by the Dillon City Council shall serve staggered three (3) year term.

(c) The person appointed by the Town council of Lima shall serve a three (3) year term.

(d) The County Health officer shall be appointed for a three (3) year term, or until they no longer serve as County Health officer, whichever term is shorter.

(3) Each governing body shall be responsible for adopting their own policy regarding the number of terms the member may serve and procedure for their reappointment.

(4) As the proper functioning of the board is seriously imparired by the absence of its members, the following rules regarding absenteeism shall apply.

(a) Absenteeism is the responsibility of the governing body who appointed that particular member.

(b) Three (3) consecutive absences from regularly scheduled meetings during the year shall cause the appropriate governing body to review the appointment of that member and replace the member when considered appropriate.

Now for what follows is not official City of Dillon City Council positions but my own as Mayor. I am presenting this to the other two identities so we can start to negotiate another or an addendum to the old interlocal agreement. The old interlocal agreement creates the City/County Health Board but does not identify what would be known as the "governing body" stated in MCA 50-1-101. Thus, we must negotiate another agreement to determine the "governing body" for the City/County Health Board. Obviously it must entail the two City Councils (Lima and Dillon) along with the Beaverhead County Commissioners but the weight for each jurisdiction must be determined. Once each governing body of the entities decide on a specific position or rule, then the weights would be applied to each entity and then majority vote decides. I believe that there are three possible weighing structure. Option One has three total votes, one vote from each entity. Option Two has seven total votes, three votes from the Commissioners, two from City of Dillon, and one from Town of Lima. The governing bodies of each entity can decide how to split their votes up (i.e. commissioners can say 0 vote for 3 against, 1 vote for 2 against, 2 votes for 1 against, or all for some position) with the City of Dillon having three decisions (0 votes for 2 against, 1 vote for 1 against, and all for some position) and the Town of Lima would have either 1 vote for or 1 against. Option Three would decide the weights on population of each entity with Lima and Dillon using what the population of their Town or City but Beaverhead County would use their population minus the City of Dillon's population and minus the Town of Lima's population. Again, we would have 7 or 9 total votes (with the same structure of partial votes as before) to decide whether or not to pass some rule or recommendation for the City/County Health board to implement. I am not saying that these three are the only options just what I came up with to start the negotiations. Now according to state law the mayor has the power of negotiation so the member to attend the negotiation meeting would be the mayor of both jurisdictions but let's have the Commissioners pick one member to represent the County only for negotiations. All bodies need to have a public, noticed meeting to finalize the proposed

Memorandum of Understanding. We should start the negotiations soon since, in my opinion following MCA 50-2-116, the local health officers have no power unless it is connected with rules, etc adopted by the "governing body" or adopted by the department (DPHHS).

Conclusion

Remember that what follows is my opinion although the data also shows my conclusions. Looking at the recent data from England, United States, Israel, and the World, the vaccines might have worked with the original and Alpha variant (and there are questions even about this statement) but the vaccines mostly do not work on the new variants of SARS-CoV-2 although they do increase the human antibodies. Vaccinated people are still dying from COVID-19, can still become infected with COVID-19, and still transmit COVID-19 (some even state that the vaccinated become superspreaders). In fact the World data indicates that, if there is a pattern, it would be that the more vaccinations then there would be more cases. Also, there are numerous questions on the safety of the vaccines especially the mRNA vaccines. One look at the VAERS data would show that, from my search in the database, that almost 5,000 deaths are linked to COVID-19 vaccines and from most statements on this database, this number is very likely way too small. For me it is very questionable to take one of the vaccines for what I known now but the vaccines should be available to any person that wants the shots along with the approval of their doctor. Now, on the subject of FORCED vaccination, NO GOVERNMENT ENTITY should ever be allowed to force vaccinations. What happened to the slogan of "my body, my choice" and the Governor of Montana issued an Executive Order (EO-7-2021) on this subject. The only outcome from forcing vaccinations, would be to force close hospitals (firing of nurses and doctors), increase crime (firing of police officers), and very limited supplies (very limited dock workers to unload the ships and very limited truck drivers to deliver the goods) to state the obvious but not the only outcomes. As a community, all of the medical profession should not listen to the CDC or FDA on the subject of COVID-19. The CDC and FDA are not bad in general but the leadership of these bodies are incompetent, corrupt, political hacks whom are not following their oaths to "do no harm", in my opinion. What everyone needs to understand is that SARS-CoV-2 is around most likely forever just like pneumonia, influenza, and measles to name a few. We must start treating everyone with respect and not take away their constitutional rights of freedom!! Thank you for your time.

A   Appendix - Federal Mandatory Mask Usage

Let me respond to information that has been released by Montana School Boards Association on the mandatory wearing of masks on school buses. The law/rule that was quoted used the following 42 U.S.C. 264 (U.S.C Title 42, Chapter 6A-Public Health Service, SubChapter II-General Powers and Duties, Part G-Quarantine and Inspection, Section 264-Regulations

to control communicable diseases) which states the following:

(a) Promulgation and enforcement by Surgeon General.

The Surgeon General, with the approval of the Secretary, is authorized to make and enforce such regulations as in his judgment are necessary to prevent the introduction, transmission, or spread of communicable diseases from foreign countries into the States or possessions, or from one State or possession into any other State or possession. For purposes of carrying out and enforcing such regulations, the Surgeon General may provide for such inspection, fumigation, disinfection, sanitation, pest extermination, destruction of animals or articles found to be so infected or contaminated as to be sources of dangerous infection to human beings, and other measures, as in his judgment may be necessary.

(b) Apprehension, detention, or conditional release of individuals.

Regulations prescribed under this section shall not provide for the apprehension, detention, or conditional release of individuals except for the purpose of preventing the introduction, transmission, or spread of such communicable diseases as may be specified from time to time in Executive orders of the President upon the recommendation of the Secretary, in consultation with the Surgeon General.

(c) Application of regulations to persons entering from foreign countries.

Except as provided in subsection (d), regulations prescribed under this section, insofar as they provide for the apprehension, detention, examination, or conditional release of individuals, shall be applicable only to individuals coming into a State or possession from a foreign country or a possession.

(d) Apprehension and examination of persons reasonably believed to be infected.

(1) Regulations prescribed under this section may provide for the apprehension and examination of any individual reasonably believed to be infected with a communicable disease in a qualifying stage and

(A) to be moving or about to move from a State to another State; or

(B) to be a probable source of infection to individuals who, while infected with such disease in a qualifying stage, will be moving from a State to another State. Such regulations may provide that if upon examination any such individual is found to be infected, he may be detained for such time and in such manner as may be reasonably necessary. For purposes of this subsection, the

term "State" includes, in addition to the several States, only the District of Columbia.

(2) For purposes of this subsection, the term "qualifying stage", with respect to a communicable disease, means that such disease—

(A) is in a communicable stage; or

(B) is in a precommunicable stage, if the disease would be likely to cause a public health emergency if transmitted to other individuals.

(e) Preemption.

Nothing in this section or section 266 of this title, or the regulations promulgated under such sections, may be construed as superseding any provision under State law (including regulations and including provisions established by political subdivisions of States), except to the extent that such a provision conflicts with an exercise of Federal authority under this section or section 266 of this title.

Note that this complete law/rule has to do with moving from a foreign country or possession or between State to State. This is not about moving within an individual State. In my non-lawyer opinion, the Federal government has no power to dictate and enforce any law/rule within a State only when traveling between States. The Tenth Amendment to the United States Constitution gives "powers not delegated to the Unites States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people. Thus, in my non-lawyer opinion, as long as a school bus does not travel between States the rules set by the CDC do not apply.

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