



The “Politi-COVID (USA)” Epidemic in the “Pre-Election” America, 2020 and 2024

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ABSTRACT

Background: The (Corona Virus Disease) COVID infection became the source of serious disagreements between scientists, doctors, politicians and private citizens, directly after it's detection in the population in January, 2020. The pandemic had some very unusual properties as well as the people's reaction to it. It was feared, that the virus might be used, intentionally or accidentally, to interfere with the usual, democratic way of the upcoming election.

Objective: Research the original COVID statistic and metadata to obtain better understanding of the pandemic including the biological (viral) as well as the social (human) aspects of it. Provide a professional, independent, non-biased view of the pandemic, that is not polluted by political and media suggestions.

Materials and methods: Publicly available data-covering the first 5 months of the COVID pandemic, January, 2020-May, 2020 were collected and analyzed with the usual, common statistical methods, like student's t-test and regression analyses.

The political attitude of the states were characterized by a ratio (D/R) of the number of left, Democrat (D) and right, Republican (R) oriented citizens in the respective states, as determined by opinion research.

Results: *De novo* statistical analyzes of publicly available data (covering the initial five months of the pandemic) suggests that the negative medical consequences of COVID pandemic were significantly more expressed in “Democrat-dominated” (D) states than in “Republican-dominated”, (R) states. The proportion of COVID test positive persons was higher in D-states (6.831 ± 1605 , $n=14$ and $1,165 \pm 323$, $n=13$ respectively, $p<0.001$). The difference in mortality was even more striking, 8-times more person/million population died in COVID related conditions in solid D states than in solid R states (438 ± 128 and 59 ± 13 ; $p<0.001$, respectively). The COVID associated mortality increased two fold from right to left on the political scale of the states ($2.7\% \pm 0.3$ vs. $5.3\% \pm 0.5$, $p<0.001$).

The correlation between COVID deaths (mortality) and the age/pre-existing medical condition(s) of the diseased is very strong ($R^2=0.98$) and the overwhelming majority of COVID “victims” are persons who were close to death even independently of the epidemic.

Conclusion: Alarming signals regarding the dangerousness of COVID infection seems to have originated in a few states with predominantly left oriented citizens (high D/R ratio). The COVID mortality statistic seems to be seen and analyzed with little or no respect for the context of mortality caused by other well-known diseases or even by the natural, age related deaths.

We conclude that it is absolutely necessary to pay serious attention to the correct analyses and interpretation of the epidemic data to avoid being misled or manipulated by false circumstances.

Keywords: COVID-19 (Corona Virus Disease); Pandemic; Political; Mortality; Age; Aging; Co-morbidity; Underlying Cause of Death (UCOD); United States of America (USA); States

INTRODUCTION

We became painfully familiar with some facts regarding the nature of COVID-19 and the real, as well as manmade, troubles it could cause us. There are still more lessons to learn.

At about 84,000 deaths in USA are associated with COVID infection on 13.05.2020, the 134th day of year 2020, that is in average ca, 630/day, maximum 2,683/day on April, 2021, declining; 2,000/d last 30 days).

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However people are dying every day even without COVID: The average number or “regular” (here: Non-COVID) deaths were 5,739/day, with 4,335 of those deaths (or 75%) were >65 years in 2018 [1].

Subjectively every deaths is a tragedy and should be prevented, objectively it is not possible. Consequently the medical impact of COVID depends on the number of additional, extra (not “regular” or not “expected”) deaths it might have caused.

America is slowly recovering from COVID epidemics and its socio-economic consequences. It begins to be possible to see the real events and objectively evaluate the impact of the virus itself and the consequences of our reaction to it. What is/was the cost of the infection itself, in terms of life and suffering compared to the cost of the “cure” in terms of saved life and life-quality? Is it possible that the “cure costs more than the disease itself?”

The only meaningful approach to this cost/benefit calculation is to see facts with cold rational objectivity and distance us from the distorting influence of the media and political wish-thinking.

This review of COVID statistic is focusing on the possible “political bias” in interpretation of data and influencing the American response to the situation. “We, the people” altogether, winners (in relative terms) or big losers (in absolute terms) at the end of the epidemic?

MATERIALS AND METHODS

Publicly available data (covering the first 5 months of the COVID pandemic, January, 2020-May, 2020) were used as indicated in the related footnotes and analyzed with the usual, common statistical methods, like student’s t-test and regression analyses.

Discovery and statistical findings

COVID is observed in every country of the World with functioning

media services (212 countries and territories around the world and 2 international conveyances) [2].

COVID is preferentially associated with the death of sick and vintage population. The severity of COVID disease-including its mortality-is strongly dependent on the age and pre-existing conditions of the infected persons.

This is one of the first observations regarding the COVID pandemic: It is selective, targeting physically weakened individuals, elderly and sick. However the degree of correlation between the age and mortality risk is surprisingly strong ($r^2=0.98$) (Figure 1).

Comparison of the effects of COVID with other serious and life-threatening diseases might provide a good insight into the seriousness of the ongoing epidemic. The first and very important understanding should be that COVID is not the worst killer. Assuming that the rate of COVID deaths continued on the same level as today, (ca. 1,400/day that is 20% of the total, “regular”, “usual” non-COVID deaths) it comes on the third place after heart diseases (ca. 1.800/day) and malignant tumors (ca. 1650/day) (Table 1 and Figure 2).

The CV dilemma is if the virus epidemic continues a year. a) will it add, say 20%, (as today), to the deaths caused by the already existing and known causes or alternatively b) the national mortality remains unchanged, i.e., statistically speaking (!) “only” those will pass away who would die anyway in the coming 12 months?

The negative economic and biological impact of the COVID pandemic is exceptionally large but varies from one state to another. (Figure 3). COVID increased the number of total (expected, ALL) deaths in some, but not in every states. It is most noticeable in the most infected areas (New York (NY), New Jersey (NJ), Massachusetts (MA), Michigan (MI), Illinois (IL), Maryland (ML), Colorado (Co)).

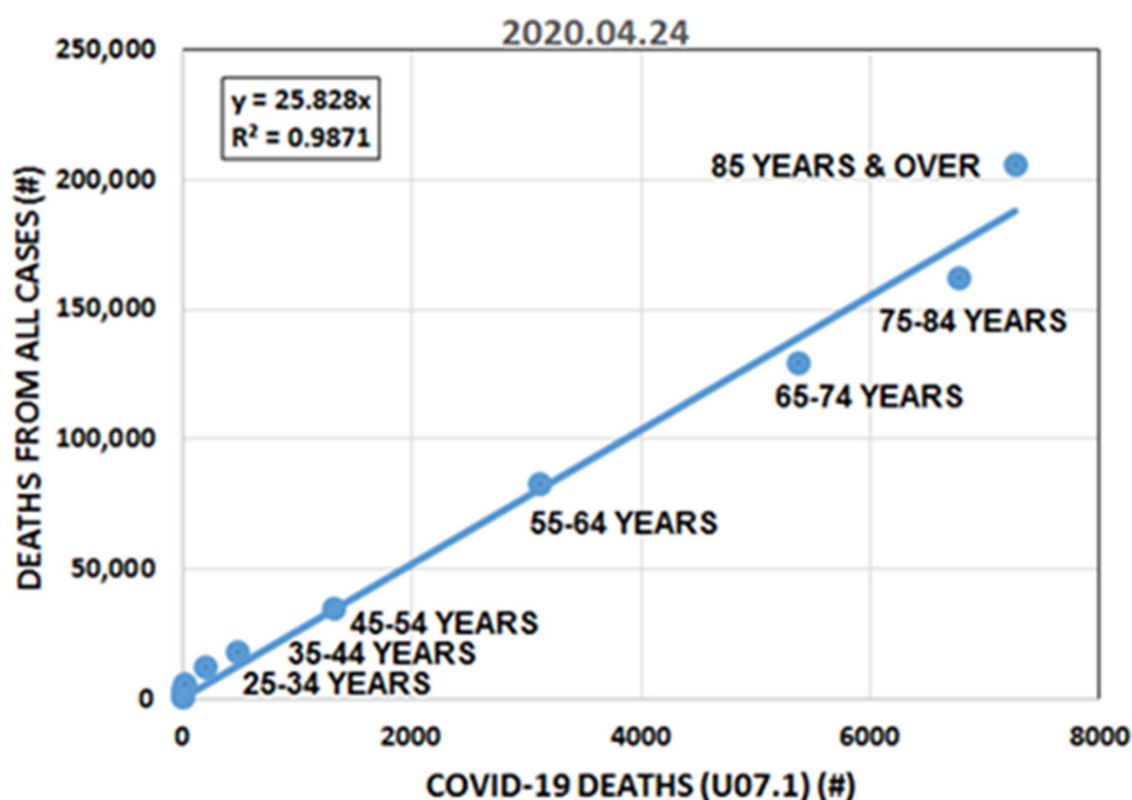


Figure 1: Correlation between COVID and all deaths in different age groups in USA- 2020.

Table 1: Statistital evaluation of deaths in United States of America [3].

10 Leading causes of death by age group, United States of America-2018											
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	Total
1	Congenital anomalies 4,473	Unintentional injury 1.226	Unintentional injury 734	Unintentional injury 692	Unintentional injury 12,044	Unintentional injury 24,614	Unintentional injury 22.667	Malignant neoplasms 37,301	Malignant neoplasms 113,947	Heart disease 526,509	Heart disease 655,381
2	Short gestation 3,679	Congenital a.nomalies 384	Malignant neoplasms 393	Suicide 596	Suicide 6,211	Suicide 8,020	Malignant neoplasms 10,640	Heart disease 32,220	Heart disease 81,042	Malignant neoplasms 431,102	Malignant neoplasms 599,274
3	Maternal pregnancy comp. 1,358	Homicide 353	Congenital Anomalies 201	Malignant neoplasms 450	Homicide 4,607	Homicide 5.234	Heart disease 10,532	Unintentional injury 23,056	Unintentional injury 23,693	Chronic low respiratory disease 135,560	Unintentional injury 167,127
4	Sudden infant death syndrome (SIDS) 1,334	Malignant neoplasms 326	Homicide 121	Congenital anomalies 172	Malignant neoplasms 1,371	Malignant neoplasms 3,684	Suicide 7,521	Suicide 8,345	Chronic low respiratory disease 18,804	Cerebro- vascular 127,244	Chronic low respiratory disease 159,486
5	Unintentional injury 1,168	Influenza and pneumonia 122	Influenza and pneumonia 71	Homicide 168	Heart disease 905	Heart disease 3,561	Homicide 3,304	Liver disease 8,157	Diabetes mellitus 14,941	Alzheimer's disease 120,658	Cerebro- vascular 147,810
6	Placenta cord. Membranees 724	Heart disease 115	Chronic low respiratory disease 68	Heart disease 101	Congenital anomalies 354	Liver disease 1,008	Liver disease 3,108	Diabetes mellitus 6,414	Liver disease 13,945	Diabetes mellitus 60,182	Alzheimer's disease 122,019
7	Bacterial sepsis 579	Perinatal period 62	Heart disease 68	Chronic low respiratory disease 64	Diabetes mellitus 246	Diabetes mellitus 837	Diabetes mellitus 2,282	Cerebro-vascular 5,128	Cerebro-vascular 12,789	Unintentional injury 57,213	Diabetes mellitus 84,946
8	Circulatory system disease 428	Septicemia 54	Cerebro-vascular 34	Cerebro vascular 54	Influenza and Pneumonia 200	Cerebro-vascular 567	Cerebro vascular 1,704	Chronic low respiratory disease 3,807	Saicide 8,540	Influenza and pneumonia 48,888	Influenza and pneumonia 59,120
9	Respiratory distress 390	Chronic low respiratory disease 50	Septicemia 34	Influenza and pneumonia 51	Chronic low respiratory disease 165	HIV 482	Influenza and pneumonia 956	Septicemia 2,380	Septicemia 5,956	Nephritis 42,232	Nephritis 51,386
10	Neonatal hemorrhage 375	Cerebro-vascular 43	Benign neoplasms 19	Benign neoplasms 30	Complicated pregnancy 151	Influenza and pneumonia 457	Septicemia 829	Influenza and pneumonia 2,339	Influenza and Pneumonia 5,858	Parkinson's disease 32,988	Suicide 48,344

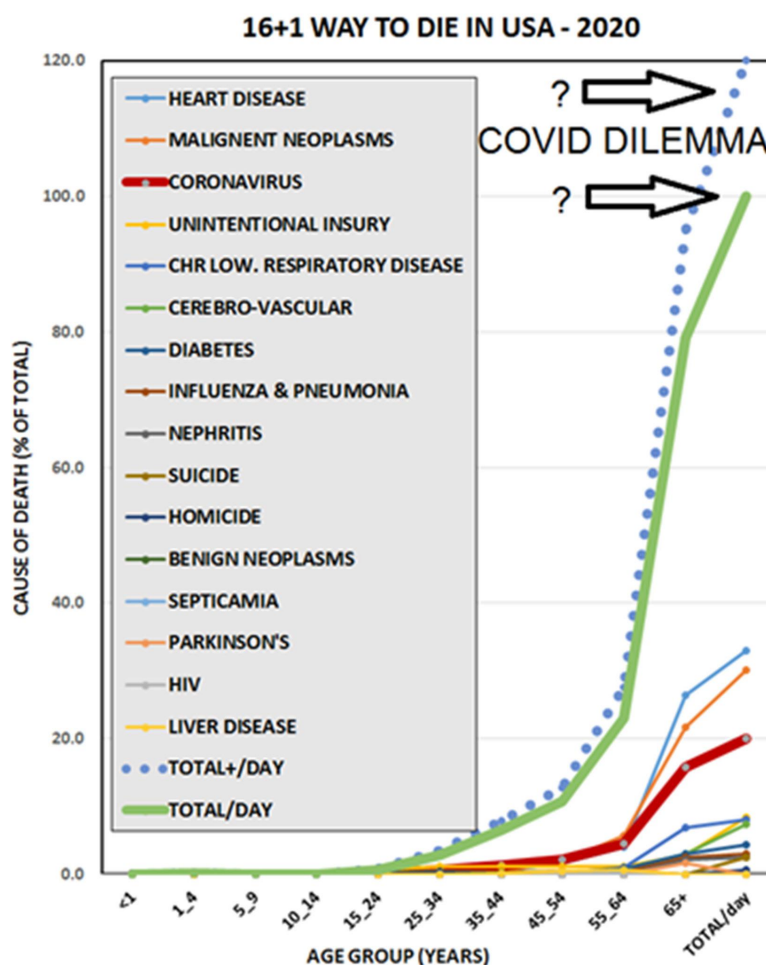


Figure 2: Leading causes of death in USA and the theoretical effect of Corona Virus (CV). **Note:** The frequency (% of total) of the leading causes of death (16 from the table, above) in USA, 2018 were indicated in different age groups. The sum of all deaths in the indicated causes and all age groups were regarded to be 100%=2,094,893 deaths/year=5,739 deaths/day. The corresponding deaths were calculated from the available data and regarding a single day, April 6th, 2020.

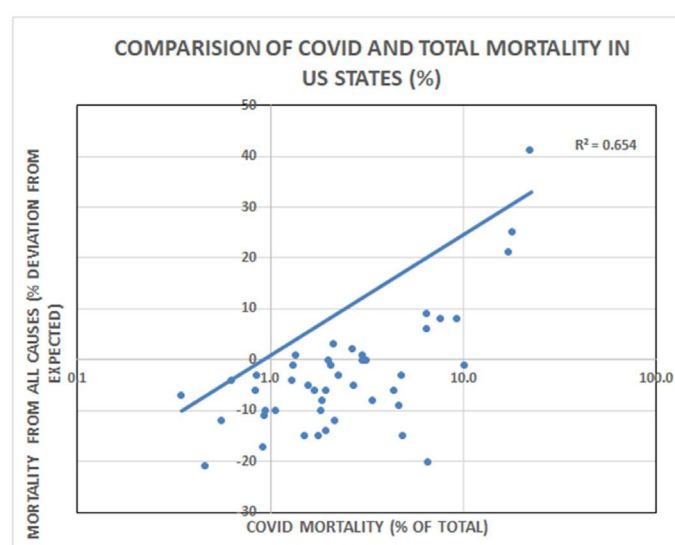


Figure 3: Comparison of the number of COVID and total deaths in US States based on period 1 February, 2020 to 9 May, 2020 [4]. **Note:** The expected number of ALL deaths was regarded 100% and the average frequency of COVID deaths was 3.7% of total (at the end of the period).

The selective nature of the medical consequences of COVID disease is a significant difficulty to determine the exact mortality of the disease. It targets almost exclusively seniors and/or persons with serious pre-existing conditions, i.e., persons with increased risk of death even without COVID infection. Not a single completely healthy young person diseased due to exclusively COVID infection. Consequently the virus is more likely a minor contributing factor in (many) deaths, “the last drop makes the cup run over” and not the sole responsible agent.

Comparison of the preliminary mortality statistics in the 50 United States suggests that the number of total deaths were significantly increased by COVID only in a few states; it remained at or below the expected level (same as in previous years). This very un-uniform effect of COVID in different states motivated further search for explanation in other subgroup characteristics of the states. USA is divided not only by geography and climate, but even racial, religious and political affiliations and the related lifestyles.

Novel-previously unexperienced aspects of an infectious disease was statistically well visible, namely that COVID seems to be “politically biased” (SIC!). The 50 states can be sorted into 5 subgroups accordingly to the main political attitude of the citizens: 1) Strong Democratic/SD (13): California (CA), Delaware (De), Hawaii (HI), Illinois (IL), Maine (ME), Maryland (MD), Massachusetts (MA), New Hampshire (NH), New Jersey (NJ), New Mexico (NM), New York (NY), Vermont

(VT), Washington (WA)); 2) Lean Democratic/LD (8): Colorado (CO), Michigan (MI), Minnesota (MN), Nevada (NV), Oregon (OR), Pennsylvania (PA), Rhode Island (RI), Virginia (VA); 3) Competitive/C (10): Arizona (AZ), Florida (FL), Georgia (GA), Iowa (IA), Kentucky (KY), Nebraska (NE), North Carolina (NC), Ohio (OH), Texas (TX), Wisconsin (WI); 4) Lean Republican/LR (5): Indiana (IN), Louisiana (LA), Missouri (MO), Montana (MT), Oklahoma (OK); 5) Strong Republican/SR (13): Alabama (AL), Alaska (AK), Arkansas (AR), Idaho (ID), Kansas (KS), Mississippi (MS), North Dakota (ND), South Carolina (SC), South Dakota (SD), Tennessee (TN), Utah (UT), West Virginia (WV), Wyoming (WY) [3-5].

Gallup asked all poll respondents to indicate whether they identify as a republican, a Democrat or as independent. Independents were then probed as to whether they lean toward the Republican or the Democratic Party. States in which there is a 10% or greater advantage for one party is considered “solid” for that party. States in which there is an advantage for a party of more than five points but fewer than 10 points are considered “leaning” toward the party, while those in which the parties are within five points of each other are considered competitive.

We used the SD+LD (%) / SR+LR (%) ratio (D/R, #) as the measure of the “political bias” of the states. This continuous scale determined the place of every state in the solid-left-to-solid-right political space of the USA (Table 2 and Figure 4).

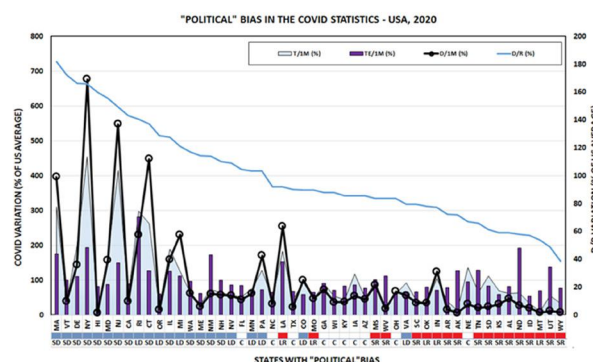


Figure 4: Comparison of the number of COVID and total deaths in United States based on period 2 February, 2020 to 9 May, 2020. **Note:** Detailed graph to illustrate how the political attitude of the states correlate with the total number of COVID cases (T/1M, test positives), the number of COVID related deaths (D/1M) and the total number of tests (TE/1M, both positives and negatives). The D/R ratio indicates the proportion of [solid democrats + lean democrats] to [solid republican + lean republicans] $D/R = (SD+LD)/(SR + LR)$. The values are relative to the average in USA, that was regarded to be 100%, i.e., $T/1M (100\%) = TE/1M (100\%) = D/1M (100\%)$ and $D/R (100\%) = 1.0$ respectively.

Table 2: The statistical evaluation of the results.

Comparison of COVID related statistics in politically different group of states- United States of America, 19 May, 2020

Chart	Group	Solid democrat (D)	t-test*	Lean D+competitive	t-test**	Solid republican	t-test**	USA Total (19 May, 2020)
A	Total Cases/1M pop	T/1M	6831	p<0.001	3501	p<0.001	1165	<.001
		S.E.M	1605		537		323	
		N	14		23		13	
								50

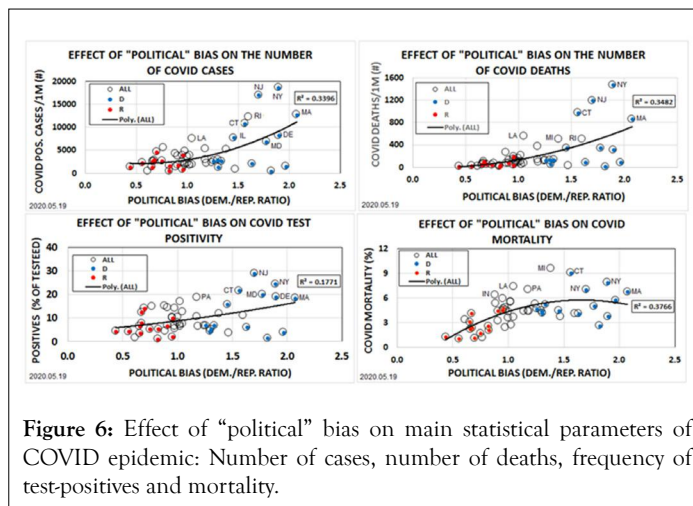
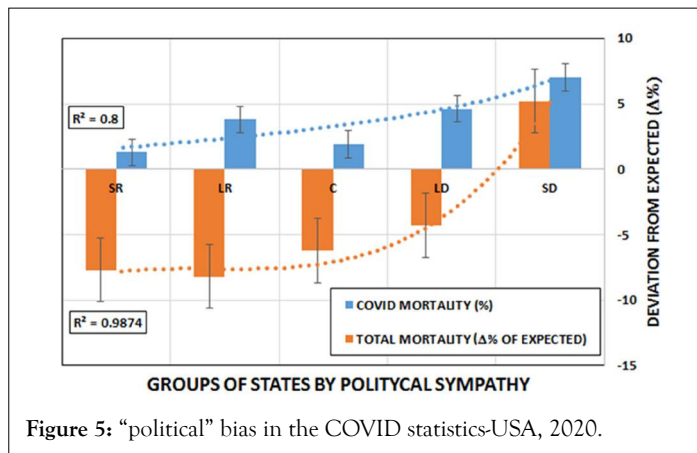
B	Deaths/1M pop	D/1M	438	p<0.001	173	p<0.001	59	p<0.001	218
		S.E.M	129		33		13		43
		N	14		23		13		50
C	Tests/1M pop	TE/1M	46970	p < 05	34638	NS	39294	p< 05	39294
		S.E.M	4179		3837		4249		4249
		N	14		23		13		50
D	Polit. orient	Dem/Repub (#)	1.64	p<001	1.06	p<0.001	0.74	p<0.001	1.14
		S.E.M	0.07		0.05		0.04		0
		N	14		23		13		50
E	Mortality	D/T(%)	5.36	NS	4.73	p<0.001	2.71	p<0.001	3.77
		S.E.M	0.47		0.38		0.37		0.27
		N	14		23		13		50
F	Case/test (%)	T/TE (%)	13.04	NS	9.82	p<.05	6.4	p<0.01	9.83
		S.E.M	241		0.94		107		0.9
		N	14		23		13		50
G	All deaths (percentages of expected)	Percentages of expected	105.46	p<0.01	94.73	NS	92.08	p<0.01	96.92
		S.E.M	4.65		1.46		1.87		157
		N	13		22		13		48

Note: (LD+C+LR) compared to (D); (**) compared to (LD+C+LR); *(R) compared to (D); *: Statistical significance; # (the ratio of democrats to republicans)

The D/R (%) ratio provided a wide scale of political attitudes of the residents and clearly separated the 50 states from each other: “Democrat oriented” with ratios ~100%-180%, “republican oriented” between ratios ~30%-90% and the “competitive” states between (with a few overlaps). The most striking feature of this graph is the visualization of 6 large picks corresponding to the most seriously affected states. The graph reveals that the total number of COVID cases, the number of total COVID deaths as well as the COVID mortality is far larger and above national average in democrat committed states than in republican or competitive states. There is a large variation in the number of COVID tests in different states but without any statistically significant difference in this respect.

There is a significant increase of the total (all cases) mortality from 92.3% (-7.7% under) of expected to 107% (7% over) of expected from right-to-left on the political scale of the states. This increase of all deaths is accompanied by corresponding increase of the average COVID mortality from 1.3% to 7% in the same left-to-right order (Figure 5).

Individual (states-based) as well as category-based (political groups) comparison of all COVID related parameters displays the same major differences: Left (democrat) oriented, blue states suffered significantly more damage of the recent epidemic than the right (republican) oriented and red states (Figure 6).



RESULTS

The recent study confirmed the well-known fact, that COVID almost exclusively targeted elderly and already sick persons with preexisting condition(s). Almost no young and healthy person became life-threateningly ill or died due to the epidemic. This part of the study seems to be solid and widely accepted.

The novel observation in this study is the discovery of signs of “political bias” in the statistical data. Our results suggest that D states with dominating orientation toward ‘democrat’ ideology (life-style?) are more receptive for COVID disease and the outcome is more often terminal in these states, than R states, those more committed to ‘republican’ ideology (and lifestyle?).

The association between infectious diseases and social condition and lifestyle is not new, it is well known, for example in the case of tuberculosis, AIDS, polio, etc. However it is probably one of the early and novel observations related to the recent virus infection.

Another important, but probably controversial suggestion in this study is that the impact of COVID on the total mortality rate of the country is not or minimally influenced by the virus deaths. Even if there will be some increase in the total deaths at the end of this year, we can expect a compensatory reduction of the total mortality of the next year. It seems to be unlikely that any young and healthy person was killed by the COVID.

DISCUSSION

There are physical and biological factors which are known to determine the infectivity of a virus. Physical factors are geography, climate, urban

or rural environment, population density, etc. Biological factors affecting the response of individuals are age, health condition and genetic factors including sex. The involvement of human factors, like “policy”, COVID did something absolutely exceptional that no epidemic or tragic historical event ever was able to do: It stopped the World. Today, after 2 months, ~15% unemployment, ~4 T\$ spending and more than 100,000 reported deaths we started to return to the life as it used to be. There is a very important and very sensitive question to answer: Did we react adequately to the uninvited situation? What was/is so special with this virus?

Epidemic experts predicted the death of >1M persons in USA, hospitals let us believe that unprecedented number of infected persons will need respirators to survival and we started with unemployment and social distancing. The initial alarming predictions turned out to be false but it was too late to reduce the initial reaction: We remained on the ‘million-deaths’ level of alert.

The diagnosis of COVID disease seemed to be simple, it lead to non-specific, flu-like symptoms. Doctors tended to regard all flu-like cases as COVID, even when the specific test became widely available. The differential diagnoses of COVID from seasonal flu became blurred, poorly defined. Doctors are often facing a dilemma, when determining the immediate cause of death [6]. It is not difficult to understand, that in times when all medical attention of the public was focused on the pandemic, COVID became a “popular” as “immediate cause, final disease or condition resulting in death” (Item 26, Part I/a) on the doctors report sheet). Death is death.

(A striking illustration of the tremendous un-certainty around the diagnoses of COVID disease and deaths had been provided by New York. The state New York reports only test-confirmed cases while the New York City (NYC) is adding “probable” cases). Consequently the COVID cases in New York State (NYS) are only about 1/3rd of cases in NYC [7]. A unique property of COVID is that it targets almost exclusively sick an elderly with often numerous pre-existing conditions. Obviously many diseased were accidentally listed under COVID death category even when that person was close to death anyway. Another probable reason of over-diagnosing COVID might have been the significant federal economic incentives to hospitals in “fighting an invisible enemy”.

Consequently the statistical data seems to be intentionally or accidentally inflated due to the-probably-well-meaning (but misleading) information from epidemic experts and media. There were warning signs against the magnitude of the country’s reaction but they were ignored and even suppressed. a) COVID antibodies were detected in large part of the population telling us that most of the infections were silent; b) Independent emergency doctors reported that their hands on experience didn’t match with the suggestions of “administrative” doctors who have never seen any patient, neither living nor dead; c) It was also reported, that healthcare administrators (non-doctors) were pressing doctors to list COVID as immediate cause of death wherever and whenever it was possible; d) States started reporting “likely” or “probable” cases in April, 2020 (not only test-confirmed cases) [8-10].

Replacing the exact laboratory (test) and x-ray diagnosis of COVID disease and cause of deaths’ with permitting the strongly subjective, discretionary “best judgment” of thousands of doctors strongly and unevenly diluted the statistical data. The difference between exact and “hearsay” diagnoses is 300% (SIC statistic from NY State and NY City). Consequently our public understanding of the COVID epidemic and the reason of our introverted defense policy to it are highly unreliable.

CONCLUSION

The real medical impact of COVID on our society is very difficult to objectively estimate. However it is more and more likely that the 100.000 epidemic related deaths are only a fraction of the prize we has to pay for this tragedy. The big prize is the serious disturbance of the normal life of the majority of the people, there the recovery might take considerable time; the serious damage of our relation to China; the serious damage of our relation to WHO; acceleration of social tensions, including violence.

We are aware of the importance of our suggestion of the existence of “political bias in the American “mutation” of COVID disease, especially in the “pre-election” period of USA. Strict confirmation” of our results by independent experts is necessary. It is strongly suggested, that we pay serious, objective, non-partisan attention to the events during the epidemic.

SUMMARY

De novo statistical analyzes of publicly available data suggests that the negative medical consequences of COVID pandemic are significantly more expressed in “Democrat-dominated” (D) states than in “Republican-dominated”, (R) states. The proportion of COVID test positive persons is higher in D-states (6.831 ± 1605 (mean $\pm$ S.E.M), $n=14$ and $1,165 \pm 323$, $n=13$ respectively, $p<0.001$). The difference in mortality is even more striking, 8-times more person/million population died in COVID related conditions in solid D states than in solid R states (438 ± 128 , and 59 ± 13 ; $p<0.001$, respectively). The COVID associated mortality increases two fold from right to left on the political scale of the states ($2.7\% \pm 0.3$ vs. $5.3\% \pm 0.5$, $p<0.001$).

The correlation between COVID deaths (mortality) and the age/pre-existing medical condition(s) of the diseased is very strong ($R^2=0.98$) and the overwhelming majority of COVID “victims” are persons who were close to death even independently of the epidemic. Indeed, most of the COVID deaths are “subtractive” i.e., they didn’t increase the annually expectable number of “normal” or “regular” deaths. Only

a few states with the highest number of cases (New York (NY), New Jersey (NJ), Connecticut (CT), Massachusetts (MA), Michigan (MI)) were “additive” to the number of expected deaths and by that way, exerted some unusually negative effect on the average death-rate of the American population. These novel and controversial observations request (and even demand) is critical, independent, unbiased review and external confirmation.

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