Weathering the Coronavirus Storm

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The coronavirus is so named because the little sucker feet look like crowns.
N-95-carbon mask with respirator

Summary of COVID-19

44,283 cases* and 554 deaths in the U.S. March 24
354,677 cases and 15,436 deaths worldwide. March 23
*half of the cases are in New York

www.info@usafacts.org as of March 24
March 24, 2020

Dear Readers,

We are experiencing a true crisis, and some of our generations might have had to learn that life can be turned upside down in a hurry, inconveniencing all of us.

Some of us who are older used to hear about the Great Depression, world wars, etc. from our parents and grandparents. If I heard “save for a rainy day” once…. We now understand!

The younger generations have had it too comfy without much inconvenience in their lives. Life’s lessons are important to remind us that we are all subject to disasters in the next moment, but we must not dwell on such potentials, but when crises occur, we must act in a mature way, and do our part to get through each crisis, whether a tornado, a fire, a hurricane, a flood, an illness, a death, or a pandemic.

There is already good news in response to this virus with support to the areas most affected and hospitals in metro areas to help those most in need. With bold decisions from our administration, our private industries to help with production of necessary protective gear, and acceptance of the rules of isolation from our citizens, we will get in front of this virus and get our country back to work.
This summary I wrote is dedicated to the dedicated healthcare professionals, support staff, and millions of people who have tried to keep our country going. The exposure to disease is something we medical people are willing to endure to care for our patients. Pretty special, don’t you think?

We have several weeks to go if we can believe those who say pandemics last about 3 months or so. Of course, it will take much more time for us to recover from this virus, and the financial crisis may take months or more to rebound, and get us back to where we were. After all, it took less than a month to lose every bit of gain in the stock market since the new administration took over. But our country, our industries, employment, jobs, and everything that has been taken away from us will rebound, because the structure and hope of greatness is in place and we will shall recover and go to even greater heights.

Relying on America for medical equipment, drugs, disaster preparedness has been a harsh lesson. Let us not repeat this and set our priorities in place for the future.

This summary is in place of my April Medical News Report www.themedicalnewsreport.com I will continue to update as indicated and plan a brand new report for May with all new subjects.
If anyone you are sending these reports to would like to receive future updates and my monthly reports, please email me to add their name to my list:  samlamonte@gmail.com

Constant updates can be accessed from the CDC by clicking on www.cdc.gov/coronavirus/19

Most of my information came from the CDC, personal communications with people in high places, the New England Journal of Medicine, and the Journal of the American Medical Association. I hope my summary will be of help to those who needed an overall view of where we are at present.

I appreciate the enormous number of thanks for my updates, and want you to know that providing medical information to my readers is my ministry and a way of paying back for the good fortune I had for 30 years of private practice and also teaching at LSU Medical School in New Orleans, as I am a teacher at heart, and every healthcare provider is as well. That is why we chose medicine in the first place.

Gratefully, Dr. Sam

1. Where did this virus come from?

Not since the Spanish flu pandemic of 1918 have we seen a virus spread so quickly. The soldiers of WWI came home from Europe with virus after the end of the war, and it
killed 50 million people. And they didn’t even have airplanes and massive travel as we do today.

Bats have been responsible for some of the worst pandemics and birds, pigs, and other animals have been the vector that brought it to humans. It is thought that bats were the source.

It took just a few weeks thanks to China’s New Year going on at the same time which spread the virus much quicker because of air and rail travel. Sadly, the Chinese flew all over the world in celebration since they were off work.

There was a delay in informing infectious departments around the world that they had a serious outbreak.

The number of cases exceed most other countries because of their 1.3 billion population. Italy and Iran have a significant Chinese population (including the U.S.) which probably correlates with the incidence of spread, and that is why these countries lead in the number of cases.

Thankfully air travel from China was stopped early on by President Trump. The mobility of the world has been a major factor in spreading infection throughout the globe in past decades.

COVID-19 was first reported to the World Health Organization on Jan 31, 2019 who declared a world health emergency, and on March 11, 2020, was declared a pandemic, the first pandemic since 2009 (swine flu-H1N1).

The virus was named SARS-COV-2, since it is quite genetically similar to the SARS virus (severe acute respiratory syndrome), and the WHO named it COVID-19 soon after (coronavirus 2019).
2. Biology of the COVID-19

The term novel virus implies that the human does not have any immunity against it, because we have never been exposed to it. SARS, MERS, and now COVID-19 are such viruses.

The coronavirus contains about 30 proteins capable of unlocking the protective protein layer of human cells especially lung cells. Viruses can’t replicate on their own needing a host. When this occurs, the virus turns the human cell’s function into production of viral particles. These viral proteins are the key to our vulnerability, especially lung tissue.

As that occurs those lung cells die being overwhelmed by the virus and those dead cells block oxygen transfer in the lungs and causes areas of infection and pneumonia. This causes the shortness of breath, respiratory failure, and potentially death. This pathology slide shows the lung tissue from one of the first deaths due to COVID-19.

Drugs to block those proteins centers around the way to attack this virus. If a drug can be produced to prevent replication of the virus, the infection stops, according to
Nevan Krogan, Professor and Director of the Quantitative Biosciences Institute at the University of California, San Francisco. 22 labs worldwide are working on these types of compounds to stop this viral production and infection.

Other drugs are being studied that prevent the virus from entering the human cell by blocking the viral entrance rather than just trying to kill the virus outright.

Treatment protocols will be discussed later under treatment.

3. Transmission of COVID-19

Outbreaks in South Korea, Iran, Italy, and France were the first to discover the spread through their countries, and the U.S. was right behind them with passengers coming back to Washington State. Now all states have cases with 50% of the cases in just 12 counties, but the rest are everywhere. New York and Washington State have the most cases in densely populated areas.

Certain latitudes across the world seem to be more affected than others, being more prevalent in northern parts of countries. A temperature of 39 degrees Fahrenheit and 20-80% humidity is most conducive for viral survival. Warmer climates especially tropical climates are seeing less breakouts like most of my readers, but that should not make people complacent. This was based on the average temperature in China, Italy, and Japan.

Italy has surpassed China in deaths (3405 in Italy) but China had twice as many people testing positive. No explanation for this difference yet. China is now reporting no new cases. WebMD
It suggests a **seasonal influence**, although that does not mean infections can’t break out anywhere and through the summer. It also may return this fall, but hopefully we will have a safe and effective vaccine by then.

Dr. Marty Makary, an infectious disease expert said that **pandemics usually last about 3 months**, so we are still looking at over several weeks to go.

This “novel” coronavirus is more infectious because humans lack immunity to novel viruses, and even younger healthy people are getting sick. Most flu viruses are recognized by the human immune system. Most novel viruses come from animals who infect other animals not humans, however, when they mutate, they can infect humans more aggressively.

Before the other 2 previous novel coronaviruses mutated (SARS-China origin in 2002 and MERS-Middle East origin in 2017), these viruses were considered inconsequential causing the common cold in 1/3 of the cases. Now we are learning that these viruses are a greater threat now and in the future.

**Difference in novel viruses**—the coronavirus is an RNA virus genetically, whereas most flu viruses are RNA/DNA. RNA viruses are not recognized by human immune systems. Mutation by this virus has allowed human to human transmission in just a few short weeks infecting 180 countries as of March 24.

We now have two strains of COVID-19—S and L strain. Little information about these strains is yet to be available.

20% of patients in the hospital come from ages 20-59, so millennials must take heed! You can get very sick!! Everyone, even the young, must obey the laws set by states and the federal government. When transmission
rates drop, that is when the virus can be considered less infectious.

4. Testing

Tests are occurring by the thousands per day but are still being prioritized to those who are on the front line, those healthcare professionals, those at greater risk, etc.

PEOPLE NOT ILL DO NOT NEED TO BE TESTED, ACCORDING TO THE CDC. They are only taking up the time of those testers. Remember 80+% of cases are mild and people will be well in a matter of 7-14 days. Also as many as 20% of people with the virus may be asymptomatic, so we must socially isolate.

We may be facing 40-70% of parts of this country being infected. Yet, until enough tests are available throughout the country, we will not know the true incidence. As more tests are available we will see the number of positive tests rise, but only 1 out 10 test positive.

Keep in mind, South Korea tested a vast majority of their citizens and only 3-4% of the country tested positive.

Drive-by testing has begun in certain areas, and a home kit will be available by the end of March, which requires the person to properly swab the very back of the nose and throat. Results can be available in 45 minutes. The Villages in Florida will begin drive through testing shortly.

Who should be tested?
Anyone who has symptoms or fever (previously described in detail) should be tested. Many will test positive for flu (if tested) rather than COVID-19. Doctors now are only asking about symptoms and not really able to differentiate flu from COVID-19 without testing, however, fever, dry cough, and shortness of breath are the most common symptoms of COVID-19.

Once again!! Don’t go to the Emergency Department unless severe or having an underlying complicated medical situation. CALL YOUR DOCTOR, LOG ON TO TELEMEDICINE SITES ($40). MEDICAID AND MEDICARE WILL COVER THE COST). This is being recommended by all healthcare centers and the CDC.

Serological testing (2 different tests) has been developed by the CDC as a blood test that can determine a person’s immunological possible response to the virus for those who were not sick in a community but where the virus was prominent and is meant as an epidemiological tool for public health officials to analyze the true penetrance and scope of the viral infections in communities. It is possible that a significant number of people actually were infected but their immunological strength prevented them from showing symptoms.

5. Can the cure be worse than the disease??

This question is being asked by many currently. Isolation and stay-at-home orders (Lockdown) will continue to be mandatory for those exposed, those with symptoms, and those in their household.
For areas of the country that have the majority of cases (certain New York, California, and Washington state counties) are mandatory, but places seeing few cases might consider, in time, allowing certain workers to go back to work with special precautions distancing (6 feet), and absolutely no symptoms or fever. 56% of all U.S. cases are in New York metro area, so we are not seeing the spread feared. There will be cases in every state and many counties as shown in the USA graph at the beginning of this report. Travel from dense areas to other parts of the country is not a good idea. It will extend our problem, because many of these people will carry the virus to other states. Workers should take their temperature daily. Self responsibility will play a huge role. Will Americans comply?

If we shut down every workplace in the country where the disease is less severe, we might survive financially. With the Congress working on an almost $2 trillion dollar relief package, this will only last so long.

America must stay open if possible where it can when the threat lessens. If re-opening creates more cases than before, we will have to back off. No one has a crystal ball. But it is the experts that must advise the president and vice-president as to exactly what can and cannot be done to restart America without having a major resurgence of the virus.

6. Incubation period---exposure to time of symptoms

The average time from exposure for the virus to infection is 5.1 days. Fever usually starts at that point. After 11.5
days without symptoms, the person can assume they are not going to develop symptoms (true in 97% of patients in a study in China). This is in keeping with 14 days of quarantine. 60% of those infected were male in China. +- NEJM-Journal Watch, March 13, 2020

7. What happens when a person gets sick?

I will summarize: if symptoms of upper and lower respiratory symptoms begin, including gastrointestinal symptoms (nausea, vomiting, diarrhea), contact your doctor for guidance regarding testing. Telemedicine is widely being implemented, and patients can talk to a licensed physician about their symptoms. It will be covered by Medicare and Medicaid at the same rate as a person to person visit. Remember, only 1 in 10 with symptoms will test positive. There are still a lot of other viruses causing respiratory illnesses, not to mention allergy season is in full bloom!

Consult the CDC website for special instructions on what to do once sick:

www.cdc.gov/coronavirus19

Surfaces and viability of viruses

Length of time coronavirus can persist on surfaces—copper-4 hours, cardboard-24 hours, plastic and stainless steel-72 hours. Clean accordingly.

In cleaning the recent Princess cruise ship, the insectors found traces of virus 17 days later.
8. Why are children somewhat exempt from the virus?

A French doctor, Dr. Benjamin Davido, an infectious disease specialist outside of Paris, said there are 2 hypotheses:

1) Children are exposed to other coronaviruses more often than adults, as they can be infected with childhood illnesses (1/3 are other coronaviruses) causing infection in the respiratory tract (a cold) or gastrointestinal tract (diarrhea), and therefore, they may have developed some immunity from these challenges.

2) The immaturity of the lung lining in children may be sufficiently immature that it may prevent the viral particles from attaching to the epithelium.

Children as young as 6 months are being infected in small numbers. They often do not start with fever in these small numbers, but start with nausea, vomiting, and diarrhea, as children’s gastrointestinal tract is so sensitive to any bodily upset, so that is not surprising. Very few have died.

9. Symptoms

This is demonstrates the likelihood of specific symptoms.
Remember, the signs and symptoms overlap with the flu. Also, loss of smell (anosmia) and taste (dysgeusia) has been recommended to be added to the list of screening symptoms for COVI-19. It could even occur before other symptoms.
Fever, dry cough, and shortness of breath are the most obvious, but the above list covers the percentage of patients reported by the WHO. Although 80% have mild symptoms, 5% need to be in the ICU with ventilatory assistance.

10. X-ray findings of COVID-19 pneumonia

The chest X-rays of this virus are severe. Note the ground glass appearance of the lungs and the spots all over the lung, indicating involvement of all lobes of the lung.

Why does the pneumonia cause respiratory failure in those who are the most vulnerable?

When pneumonia occurs in someone very weak from underlying illness creates an environment for respiratory failure which puts eminent stress on the heart. White blood cells called neutrophils which are the cells that
respond to infection. In this kind of pneumonia, an influx of neutrophils into the lung tissue stimulates certain inflammatory markers (cytokines) which can trigger ARDS (acute respiratory distress syndrome) which backs up fluid in the lungs leading to heart failure and potentially death. This storm of neutrophils that causes ARDS is the reason for death.

Markers for severity are now known including a high neutrophil white blood cell count, high fever, older age, immunosuppression, an elevated lactic dehydrogenase (LDH), and D-dimer levels.

An elevated LDH test is present in numerous severe health issues such as to liver disease, heart attack, anemia, muscle trauma, bone fracture, cancer, and severe infections. D-dimer test is used when a pulmonary embolus is suspected because of a blood clot.

This massive infection depresses the immune system by dropping the white blood cell count that provide immunity such as low counts in the blood in lymphocytes, monocytes, and macrophages.

11. Treatment

Cloroquine, an antimalarial and hydrochloroquine (Plaquinil) used in many autoimmune diseases (rheumatoid arthritis, lupus, etc. in combination with a Z-pack (zithromycin) for 7-10 days are showing significant benefit in reducing the number of days in very sick patients in China and other countries, now being prescribed in the U.S. The FDA just approved these drugs
to be used by prescription for COVID-19. It may or may not be helpful as a preventative, but time will tell.

Healthcare professionals and first responders should be given this first and those in a household who has a sick individual with COVID-19. Clinical trials are also being started regarding this treatment as a therapeutic and a prophylactic medication. There are side effects, so search them on the internet if prescribed this.

Convalescent plasma (taking plasma from a patient who has recovered from the virus) may be beneficial.

Monoclonal antibodies also are being tested as well. These are used in many types of disease to ward off invading tissues and germs that try to invade us through weakening our resistance rendering us weak and unable to fight back.

Anti-virals, Remesevir, and other off-label drugs are under clinical trials to possibly treat COVID-19 illness.

Some of these drugs were found to be valuable in killing the SARS and MERS virus in animals.

Soon there will be treatments to safely prevent and treat these viruses that surely will challenge us.

12. Treating milder cases

Treatment for milder cases include antihistamines, decongestants, cough medicine, mucus splitters, Tylenol for fever and muscle ache (never give a child aspirin because of the possibility of Reye’s syndrome). Aleve or ibuprofen works as well for adults, although there are internet sites that report these NSAIDs may actually prolong the illness (not proven in evidence based research). Elderly people or anyone sick that must
quarantine needs to be sure their prescriptions are current and available. Oxygen is mandatory for those short of breath, as pneumonia will drop the oxygen levels in the blood, and if the patient has underlying heart disease, lung, or kidney disease, diabetes all can complicate this virus and potentially cause death. Ventilatory assistance is necessary if the oxygen levels in the blood can’t be maintained with more conservative measures.

13. Care for the sick at home--guidelines

For those in the household, they must distance themselves physically from the sick person, and constantly wash their hands and clean surfaces frequently. Do not sleep with them, kiss or hug them. They need to be isolated in their own home from other members. Those sick should wear a mask at times to prevent respiratory droplets of mucus from spreading into the room. Those caring for the sick could wear a mask (may not prevent infection), but washing the hands is also very important. Feed them separately and keep their dishes separate, cleaning the dishes separately. It may be necessary to have groceries delivered if alone and sick and don’t have anyone to shop for them. Reach out to them if needed. Stocking up suggestions should not get out of hand with everyone clearing the shelves of the grocery stores. 2 weeks max is suggested in these cases. Let the sick use a private bathroom, as the gastrointestinal tract sheds the virus too. Clean the bathroom frequently.
Chances are people who are fairly ill anyway will need hospitalization, and consultation with the doctor is obvious. You may not be able to visit them. Wash their clothes separately in hot water. Also segregate their soiled clothing from other dirty clothes. Clean the floors often with antiseptic cleaners. Vacuum the carpet and discard the bag or use a separate cleaner. Testing of family members and the patient will need to be performed when tests are available, and all family members must quarantine themselves for 14 days and need testing at 14 days after consulting their doctors. No visitors around anyone sick! Do not go to a nursing home to see sick family or friends. Do not let sick individuals touch pets as they could transmit the virus from their hair. Pets are not known to transmit the virus to humans.


Paid sick leave, free testing for those who are ill; All testing must be reported to the CDC. People with no symptoms do not need testing. Just being exposed does not mean a person will become ill and does not testing. 1 in 10 will test positive.

Borders are closed (except for essential people and legal Americans trying to get back to the U.S.). Multiple forms of relief for workers are coming and for small and large businesses by the federal government ($2 trillion). This should be comforting to those whose anxiety levels have been worsened by this invasion on the American way.

I am concerned with the public handling this crisis in destructive ways—too much alcohol, drugs, less sleep (less than 6 hours a night can drop the immune system by 50%), marital strife, abuse, even suicide, etc. These issues
will be looked at in time when the virus has passed. PTSD will be a rampant disorder.

15. Prevention

A very important preventative would be a method to protect healthcare professionals. From research on Ebola virus, antibody drugs engineered by biotech companies that target the surfaces of the virus can be given to doctors, nurses, etc. to protect them, and if successful eventually prove to be a treatment for patients. It is in the works, according to Dr. Scott Gottlieb, former commissioner of the FDA.

Clip nails close, don’t share lip balm, clean tips of nasal spray, medihalers, and throw away tissues each time you use it rather than carrying the tissue around. Use a new tooth brush each month, and don’t share tooth brushes. Clean the handle of the tooth brush, hair brush, door handles, knobs, and clean surfaces frequently.

Take your temperature daily to see where you might land (98.6). A temperature above 99.5, and a significant fever is considered to be 100.4. Medicine.net

A new study in the NEJM stated that depending on the volume of droplets of respiratory COVID-19, the virus can last on surfaces for 24 hours to several days. That means frequent sanitizing surfaces in our home, car, phones, Kindles, computers, handles, doors, etc. is mandatory to minimize the spread of germs including viruses.

Soap, hand sanitizers, alcohol wipes, cleansers, etc. work by rupturing the lipid membrane of viruses and bacteria. The lining of these germs is fragile and susceptible to
these cleaning methods. Most of us are down to washing our hands, because the hoarders bought up all the supplies.

16. Medical misconceptions spread faster than the virus

1) Vinegar, salt water, steroids, herbal agents, essential oils can protect against COVID-19—FALSE

2) China deliberately spread this virus—There is no evidence to date that China played any role in spreading the virus except was slow to alert the world about the outbreak.

3) Ordering or buying products from China will get a person sick—Boxes and packages should be opened outside the home when delivered, because the boxes have been handled by several people and it is better to take the contents into the house and clean the surfaces just to be sure. Wash hands.

4) Everyone should be wearing masks—only people with symptoms should wear a mask while around family. Unless a person has an N-95 mask, a person is not protected from others sick who cough in your area. Healthy people do not need masks of any kind unless helping people who are sick, test positive, or have a serious underlying health issue.

5) If I feel ok after a COVID-19 infection, I am free to be around others—FALSE—Until 2 tests prove the virus is not longer active, a person must remain quarantined, including their household.
17. Morbidity and mortality

Those most vulnerable Americans include these people in the graph. This is a great lesson on why we need to keep ourselves healthy. BUT, healthy people can become seriously ill, so don’t be naïve...socially isolate!

From USA Facts:

The death rate in the U.S. is currently 1.3% (March 24), while China is 1.4% and South Korea is 1.2%. The curve is flattening for the other 2 countries. Great news! These rates will drop when all testing is complete.

Smokers and vapers beware, for you are vulnerable.

A note to those over 65!

There is a chronological age and physiological age. A good percentage of us older people are physiologically younger than our stated age. This graph shows many diseases that potentially can put a person into a more vulnerable position. But even if you have one or more of these disorders, you must consider yourself to be in a
more vulnerable class. Clearly, those who are very healthy even with these diseases are better off.

The above graph demonstrated the potential percent of people in our country that might be more vulnerable. But this also includes younger people too, especially those who have had cancer in recent years, are immunosuppressed from medications (chemo, HIV drugs, steroids, immunologic drugs, etc.). These people must stay home and prevent their exposure. Tell your friends and family to stay away for the next couple of months. No one is safe!!

Graph from website called USA Facts.
www.info@usafacts.org

18. Chinese experience

Among more than 44,000 confirmed cases of COVID-19 in China as of Feb 11, 2020, most occurred among patients aged 30–69 years (77.8%), and approximately 19% were severely or critically ill.

Case-fatality proportion among cases aged ≥60 years was: 60-69 years: 3.6%; 70-79 years: 8%; ≥80 years: 14.8%. The overall death rate in Wuhan, China has been 1.4%, much less than previously estimated.

FYI-Flu usually causes 0.01% mortality rate.

The graph below compares Flu vs COVID-19:
Dr. Fauci of the CDC feels 0.6-1.0% death rate is possible in the U.S. (now 1.3%) once most sick people are tested. Until that time, percentages mean little since the number of cases testing positive must be compared to the number of dead. Even then, other co-existing diseases will play a major role in the death rate.

Keep in mind the Swine flu (H1N1) virus killed 500,000 and the flu this season has already killed an estimated 40-50,000 people according to the CDC.

Patients who reported no underlying medical conditions had an overall case fatality of 0.9%, but case fatality was higher for patients with co-morbidities: 10.5% for those with cardiovascular disease, 7% for diabetes, and 6% each for chronic respiratory disease, hypertension, and cancer. Case fatality for patients who developed respiratory failure, septic shock, or multiple organ dysfunction was 49% mortality.
Stools will test positive for some time after the patient recovers, and therefore, these patients should use a separate bathroom.

19. Triage of the sick

In any war, serious decisions about who gets saved is always necessary when there are so many injured (sick in this case). We are at war!! We must accept the doctor’s decision when trying to decide who has a real chance of survival vs someone too sick to survive.

Our health workers must be protected no matter what, or we are doomed. Those who want to get in the way and selfishly take up the time of those dedicated professionals must be sent away. This is a time for triage, understanding about wartime, and acceptance of decisions by healthcare professionals and our government and infectious disease experts. For that reason, all Americans follow the instructions for social isolation, stay off the beaches and out of public places, and support restaurants who are delivering food to keep them open. Quit hoarding and donate blood if young and healthy.

20. Beware of those who will try to take advantage of you!
BEWARE OF Cybersecurity malware

EXECUTIVE SUMMARY:
A malicious website pretending to be the live map for Coronavirus COVID-19 Global Cases by Johns Hopkins University is circulating on the internet waiting for unwitting internet users to visit the website. Visiting the website infects the user with the AZORult trojan, an information stealing program which can exfiltrate a variety of sensitive data. It is likely being spread via infected email attachments, malicious online advertisements, and social engineering. Furthermore, anyone searching the internet for a Coronavirus map could unwittingly navigate to this malicious website.

Be very careful where you get your information on this virus. I was sent an alert from that same friend who has friends who work in the Cybersecurity section of our government and warned him about the malicious websites that are being put out regarding the coronavirus. Once clicked on it, a Trojan malware is inserted into the computer. Only consult the CDC website: www.cdc.gov/coronavirus

There are so many bogus treatments on the internet. Vitamins, supplements, and herbs will not protect you from this virus like exercise, good health, good nutrition, and good sleep with a minimum of stress.

Another point that needs to be made. For those taking immunosuppressants, DO NOT STOP THEM! The underlying disease is probably more important than the virus. Regardless, if a person is contemplating stopping, please talk to the doctor about this issue.

Based on the incidence of disease in the U.S., it will not be surprising that the COVID-19 Task Force could change
the mitigation guidance for different parts of the country, but the final decision will come from the state government.

21. Final comments

We are still in the thick of things with hope that we can get our country back to work by the middle of May and get this virus under control. This can happen with cooperation from every sector of our country and economy. We can do this. With a rise in the stock market of a record rise, this should tell us that there is hope in America.

God bless the families that have lost loved ones and friends to this demon virus. God bless the healthcare workers, the first responders, caregivers, and yes those who supported us in our time of need. And God bless the Coronavirus Task Force for leading us to eventual victory over this invisible foe.

Stay safe and well!

With gratitude, Dr. Sam