

## **To my valued patients and colleagues**

### **A quick comment #1**

As things change, the pace of these newsletters may also change. I do not want to give you wasted information to serve as filler but provide you with actual new and interesting facts. Therefore, you may see changes in the frequency of my writing. With that caveat, let us continue.

### **A quick comment #2**

Roche labs has gotten the green light from the FDA for their antibody tests. The serology test has a specificity of 99.8% and sensitivity of 100% when tested at least 14 days after infection. These numbers are similar to the Abbott test. The Roche test currently runs IgM, IgG, and IgA but it is a qualitative test with positive and negative results. The Abbott test just runs IgG but is semiquantitative. We offer access to both tests at this time.

### **Israeli firm discovers hack against Gilead**

An Israeli cybersecurity firm last week uncovered an attempt by Iran backed hackers to breach the US drug company Gilead Sciences who is racing to make enough remdesivir for treating COVID-19 patients. Evidently, three cybersecurity researchers discovered this intrusion, so it appears to have some validity. In one case, a fake email log-in page designed to steal passwords was sent to a top Gilead executive. The reports did not comment if the attempts were successful.



It should be noted that both the US and Britain warned that state-backed hackers were attacking pharmaceutical companies and research institutions working on treatments of the disease.

### **First COVID-19 antigen test approved**

The US FDA has issued emergency use authorization for the first COVID-19 antigen test. This test quickly detects fragments of the virus protein by swabbing the nasal cavity and is used to detect acute disease cases. Previously, a polymerase chain reaction (PCR) was used to look for acute infection. These tests can take time but are very accurate. They may be helpful in screening large groups of people such as those working in large spaces and those planning to return to work.



The antigen test has the advantage of producing results in minutes. The downside is that antigen tests are slightly less accurate than PCR tests. Antigen tests are lower in cost and, because they are so simple, could scale up to testing millions of people a day if necessary.

### **An antiviral cocktail**

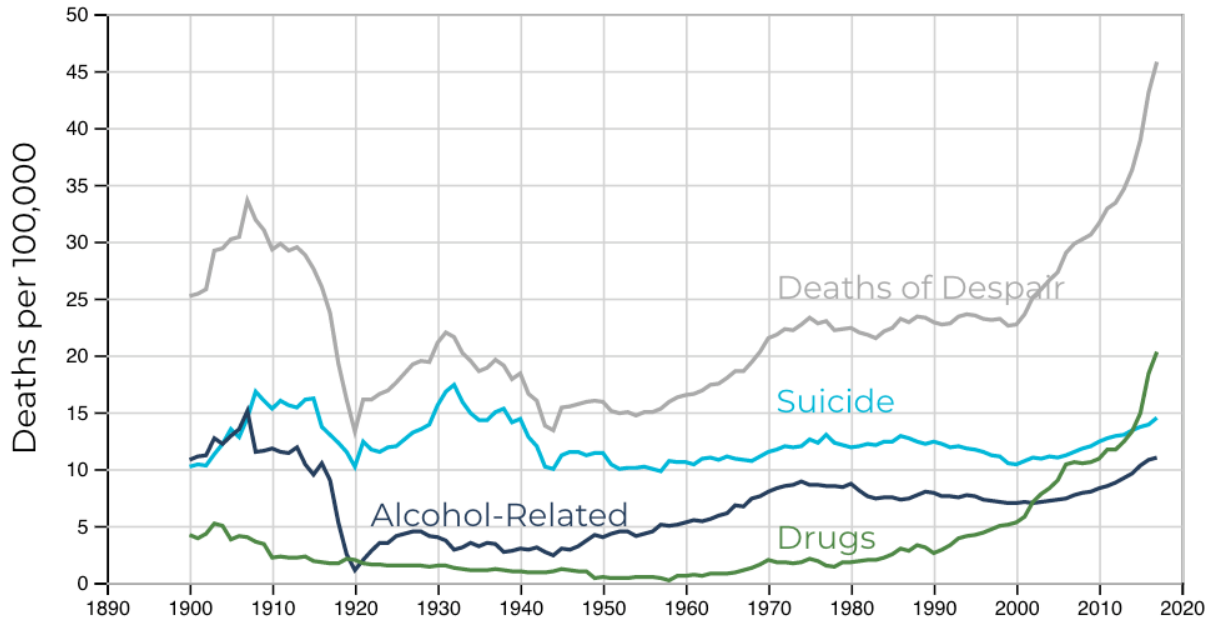
Doctors frequently use combinations of drugs to attack a problem because sometimes each medicine in group acts slightly differently, although when used with other drugs creates a greater cumulative effect. These types of combinations are known as therapeutic “cocktails”. The triple cocktail of interferon beta 1b, lopinavir-ritonavir and ribavirin significantly reduced the duration of viral shedding in mild to moderate COVID-19.



The duration of symptoms decreased in half from 8 days to 4 days and hospitalization time also decreased from 14.5 days to 9 days. No improvement was seen in those who waited 7 days after the onset of symptoms. This was a phase II trial.

### **Deaths of Despair**

Americans are reporting high levels of emotional distress which can lead to a national mental health crisis. It is estimated that the pandemic could lead to about 75,000 additional “deaths of despair” from drug and alcohol misuse, suicide due to unemployment, social isolation, and fears of the virus.

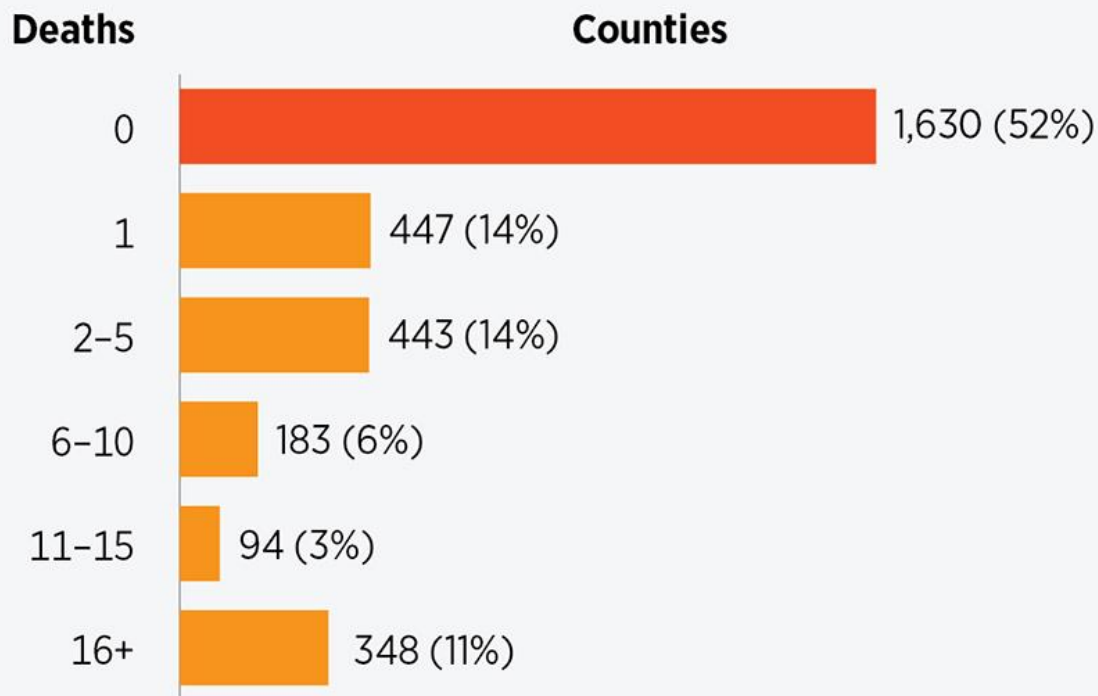


The nation’s crisis and suicide hotlines are seeing the first waves of distress now. Callers have flooded the phone lines to talk about health fears, job losses, strained relationships, and loneliness. Calls increased to a Sacramento crisis line by 40% from February to March and in April were up 58% from a comparable time last year.

### **A telling graph**

No matter what side you come down on the re-opening of America, we need a more nuanced approach. Do you realize more than half of American counties have not had a single death? Should these counties be under strict and total isolation? Or should there be a more rational approach? Here is a graph that is telling.

# Most Counties Have Had Zero COVID-19 Deaths



SOURCES: USAFacts, "Coronavirus Locations: COVID-19 Map by County and State," and The Covid Tracking Project.

**(S)DailySignal.com**

## Other diseases are not being treated

Many diseases are not being treated during this crisis and we cannot forget that though everyone is centered on COVID-19, other diseases can be far more deadly. A survey of 9 major hospitals showed the number of severe heart attacks being treated in US hospitals had dropped nearly 40%. Doctors are concerned that patients are so afraid of entering the hospital that they are dying at home or waiting in long lines to seek care after suffering massive damage.



The same is true for appendicitis and stroke.

People with heart attack or stroke symptoms really need to come in for treatment to limit heart and brain damage. Heart patients are scared. Due to the fact that they have been told that they are at high risk of COVID-19 disease, these patients want to stay at home and socially distance, but any heart attack or stroke symptoms should prompt them to go to the hospital. Patients found dead at home are probably embedded in the COVID-19 mortality data, so we may never know the extent of this problem.

### **Music and Emotions**

Music has the ability to relax, frighten and move one to tears. Music has a direct, immediate action on the brain and how we think. I have provided some music that is new to some and familiar to others in various newsletters. Most of the pieces truly move me.

I played clarinet as a child, restudied it as a young adult and then once more have started playing again as it truly brings me joy and peace in these times. Did you ever wonder why music has such a powerful influence? Here is a TED talk about music and the brain by a neuroscientist and musician.

<https://www.youtube.com/watch?v=MZFFwy5fwYI>

