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Memorandum

To: Trialists

Fr: Curtis Meinert

Re: Pandemics and trials

The world has lived through dozens of pandemics. We are lucky if we do not experience at least one in a lifetime.

An article on the History website (<https://www.history.com/topics/middle-ages/pandemics-timeline>) lists pandemics.

**430 B.C. Athens**

The earliest recorded pandemic happened during the Peloponnesian War. After the disease passed through Libya, Ethiopia and Egypt, it crossed the Athenian walls as the Spartans laid siege. As much as two-thirds of the population died.

**165 A.D. Antonine Plague**

The Antonine plague was possibly an early appearance of smallpox that began with the Huns. The Huns then infected the Germans, who passed it to the Romans and then returning troops spread it throughout the Roman empire. This plague continued until about 180 A.D., claiming Emperor Marcus Aurelius as one of its victims.

**250 A.D. Cyprian Plague**

City dwellers fled to the country to escape infection but instead spread the disease further. Possibly starting in Ethiopia, it passed through Northern Africa, into Rome, then onto Egypt and northward. There were recurring outbreaks over the next three centuries.

**541 A.D. Justinian Plague**

First appearing in Egypt, the Justinian plague spread through Palestine and the Byzantine Empire, and then throughout the Mediterranean.

**11th Century Leprosy**

A slow-developing bacterial disease that causes sores and deformities, leprosy was believed to be a punishment from God that ran in families. This belief led to moral judgments and ostracization of victims. Now known as Hansen's disease, it still afflicts tens of thousands of people a year and can be fatal if not treated with antibiotics.

**1350 The Black Death**

Responsible for the death of one-third of the world population, this second large outbreak of the bubonic plague possibly started in Asia and moved west in caravans. Entering through Sicily in 1347 A.D. when plague sufferers arrived in the port of Messina, it spread throughout Europe rapidly. Dead bodies became so prevalent that many remained rotting on the ground and created a constant stench in cities.

**1492 The Columbian Exchange**

Upon arrival on the island of Hispaniola, Christopher Columbus encountered the Taino people, population 60,000. By 1548, the population stood at less than 500. This scenario repeated itself throughout the Americas.

**1665 The Great Plague of London**

The bubonic plague led to the deaths of 20 percent of London's population. As human death tolls mounted and mass graves appeared, hundreds of thousands of cats and dogs were slaughtered as

the possible cause and the disease spread through ports along the Thames. The worst of the outbreak tapered off in the fall of 1666.

#### **1817 First Cholera Pandemic**

The first of seven cholera pandemics over the next 150 years, this wave of the small intestine infection originated in Russia, where one million people died. Spreading through feces-infected water and food, the bacterium was passed along to British soldiers who brought it to India where millions more died. The reach of the British Empire and its navy spread cholera to Spain, Africa, Indonesia, China, Japan, Italy, Germany and America, where it killed 150,000 people. A vaccine was created in 1885, but pandemics continued.

#### **1855 The Third Plague Pandemic**

Starting in China and moving to India and Hong Kong, the bubonic plague claimed 15 million victims. Initially spread by fleas during a mining boom in Yunnan, the plague is considered a factor in the Parthay rebellion and the Taiping rebellion. India faced the most substantial casualties, and the epidemic was used as an excuse for repressive policies that sparked some revolt against the British. The pandemic was considered active until 1960 when cases dropped below a couple hundred.

#### **1875 Fiji Measles Pandemic**

After Fiji ceded to the British Empire, a royal party visited Australia as a gift from Queen Victoria. Arriving during a measles outbreak, the royal party brought the disease back to their island, and it was spread further by the tribal heads and police who met with them upon their return. Spreading quickly, the island was littered with corpses that were scavenged by wild animals, and entire villages died and were burned down, sometimes with the sick trapped inside the fires. One-third of Fiji's population, a total of 40,000 people, died.

#### **1889 Russian Flu**

The first significant flu pandemic started in Siberia and Kazakhstan, traveled to Moscow, and made its way into Finland and then Poland, where it moved into the rest of Europe. By the following year, it had crossed the ocean into North America and Africa. By the end of 1890, 360,000 had died.

#### **1918 Spanish Flu**

The avian-borne flu that resulted in 50 million deaths worldwide, the 1918 flu was first observed in Europe, the United States and parts of Asia before swiftly spreading around the world. At the time, there were no effective drugs or vaccines to treat this killer flu strain. Wire service reports of a flu outbreak in Madrid in the spring of 1918 led to the pandemic being called the "Spanish flu."

#### **1957 Asian flu**

Starting in Hong Kong and spreading throughout China and then into the United States, the Asian flu became widespread in England where, over six months, 14,000 people died. A second wave followed in early 1958, causing an estimated total of about 1.1 million deaths globally, with 116,000 deaths in the United States. A vaccine was developed, effectively containing the pandemic.

#### **1981 HIV/AIDS**

AIDS was first observed in American gay communities but is believed to have developed from a chimpanzee virus from West Africa in the 1920s. The disease, which spreads through certain body fluids, moved to Haiti in the 1960s, and then New York and San Francisco in the 1970s. Treatments have been developed to slow the progress of the disease, but 35 million people worldwide have died of AIDS since its discovery, and a cure is yet to be found.

#### **2003 SARS**

Severe acute respiratory syndrome (SARS) is a viral respiratory disease caused by a SARS-associated coronavirus. It was identified February 2003 during an outbreak in China and spread to 4 other countries.

#### **2019 COVID-19**

A contagious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first known cases were identified in Wuhan, China, in December 2019. The disease has since spread worldwide, leading to an ongoing pandemic resulting in thousands of deaths worldwide and no end in sight.

Several things jump out from the list.

First: Some pandemics are like old soldiers. They just fade away and others are like Freddie Kruger or Jason in horror movies in reoccurring roles.

Second: Some pandemics are done in by vaccines, for example, smallpox, albeit after centuries of battling the condition.

Third: Some have no treatment, as with HIV/AIDS, except in affluent countries able to afford antiretroviral therapy (ART); the combination of several antiretroviral medicines used to slow the rate at which HIV makes copies of itself in the body.

Pandemics are devastating and cast long shadows. Until COVID-19 the world was in the dark as to ongoing research to find treatments. COVID-19 is the first pandemic since implementation of a registration system for trials. It is a small step in our unending battle against pandemics.