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COUNTY OF SANTA CLARA, SARA H. CODY,  
7 LAURIE SMITH and JEFF ROSEN

8 SUPERIOR COURT OF CALIFORNIA

9 COUNTY OF SANTA CLARA

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12 LOKEY FIREARMS, a sole proprietorship;  
FFLGUARD, LLC, a Delaware limited liability  
13 company, and CALIFORNIA RIFLE & PISTOL  
ASSOCIATION, INCORPORATED, a  
14 California corporation,

15 Plaintiffs,

16 v.

17 COUNTY OF SANTA CLARA; SARA H.  
CODY, M.D., in her official capacity as Health  
18 Officer of the County of Santa Clara; LAURIE  
SMITH, in her official capacity as Sheriff of the  
19 County of Santa Clara; JEFF ROSEN, in his  
official capacity as District Attorney for the  
20 County of Santa Clara; and DOES 1-25,

21 Defendants.

No. 20CV365840

**DECLARATION OF GEORGE W.  
RUTHERFORD, M.D., IN SUPPORT OF  
DEFENDANTS' RESPONSE TO ORDER  
TO SHOW CAUSE AS TO WHY A  
PRELIMINARY INJUNCTION SHOULD  
NOT ISSUE**

Date: May 19, 2020

Time: 10:00 A.M.

Dept.: 19

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23 I, GEORGE W. RUTHERFORD, M.D., declare as follows:

24 1. I have personal knowledge of the facts set forth in this declaration. If called as a  
25 witness, I could and would testify competently to the matters set forth herein.

26 2. I graduated from Stanford University, where I received Bachelor's Degrees in Classics  
27 and Chemistry and a Master's Degree in History. I received my Doctor of Medicine from Duke  
28

1 University School of Medicine. I completed a residency in Pediatrics at the University of California,  
2 San Diego and the Hospital for Sick Children in Toronto, Ontario, Canada. Following training in  
3 epidemiology in the Centers for Disease Control's Epidemic Intelligence Service, I spent the first ten  
4 years of my professional career in public health practice and subsequently teaching and conducting  
5 research in public health, with a primary emphasis on the epidemiology and control of  
6 communicable diseases.

7 3. I currently serve as a Professor in the Department of Epidemiology and Biostatistics at  
8 the University of California, San Francisco School of Medicine. I am the Salvatore Pablo Lucia  
9 Professor of Epidemiology, Preventive Medicine, Pediatrics, and History. I am also the Head of the  
10 Division of Infectious Disease and Global Epidemiology in the Department of Epidemiology and  
11 Biostatistics. Additionally, I am a Professor in the Department of Pediatrics, the Department of  
12 Family and Community Medicine, and the Department of Anthropology, History, and Social  
13 Medicine. I am an Adjunct Professor in the University of California, Berkeley School of Public  
14 Health. Further, I am the Director of the Prevention and Public Health Group and the Director of  
15 Global Strategic Information Group at the Institute for Global Health Sciences. I am Board Certified  
16 in Pediatrics and in General Preventive Medicine and Public Health.

17 4. My primary research interest is in the epidemiology and control of infectious diseases,  
18 with a particular emphasis on HIV/AIDS in low- and middle-income countries; the prevention of  
19 coccidioidomycosis (Valley Fever); sexually transmitted disease control in California; pediatric  
20 vaccination policy; the role of public health in managed care; evidence-based public health practice;  
21 the epidemiology and control of tuberculosis in California; and emerging infectious diseases.

22 5. The current novel coronavirus pandemic requires extraordinary measures to protect the  
23 population because the virus (SARS CoV-2) is extremely easy to transmit, can be transmitted by  
24 infected people who show no symptoms, has no cure, and the population has not developed herd  
25 immunity. The disease that is caused by the novel coronavirus, COVID-19, is fatal to up to eighty  
26 percent of patients who go into intensive care units in hospitals. Information about the pandemic is  
27 still limited and constantly evolving, therefore, I may need to revise my opinions as new information  
28 comes to light.

1           6.     Right now, shelter-at-home orders are being used worldwide to minimize the potential  
2 for people infected with the novel coronavirus to spread it. When restrictions are lifted and normal  
3 activities resume, extensive contact tracing (described below) will be needed to prevent new  
4 outbreaks. At the request of the San Francisco Department of Public Health, I am currently leading  
5 a project to conduct contact tracing in the City and County of San Francisco. Contact tracing  
6 involves first interviewing people who are infected with COVID-19, then tracking down everyone  
7 who has been near them, and then making decisions to test them and, if they are tested, to isolate (if  
8 they test positive) or quarantine (if they test negative). Isolation separates sick people with COVID-  
9 19 from people who do not have the disease. Quarantine separates and restricts the movement of  
10 people who were exposed to COVID-19 in case they become sick, at which point they go into  
11 isolation; they may have the disease but show no symptoms. Contact tracing such as the project I  
12 am leading in San Francisco would have been insufficient without the shelter-in-place orders as a  
13 first step. Contact tracing becomes significantly more complex and difficult when there are  
14 increased numbers of in-person interactions, as the tracing process is labor intensive and time  
15 consuming.

16           7.     According to the World Health Organization, worldwide, as of May 6, 2020, there have  
17 been 3,588,773 confirmed COVID-19 cases and 247,503 deaths, though the actual numbers are  
18 likely higher due to limited testing and incomplete diagnosis, owing to a substantial proportion of  
19 infected individuals being asymptomatic or mildly symptomatic. In the United States, as of May 6,  
20 2020, public health officials have confirmed at least 1,171,185 cases and 62,698 deaths.

21           8.     According to the California Health and Human Services Agency, as of May 6, 2020,  
22 there have been 60,614 confirmed cases in California and 2,504 deaths. There is wide regional  
23 variation in California. For example, as of May 6, 2020, there have been 28,687 confirmed cases in  
24 Los Angeles County but zero confirmed cases in Lassen, Modoc, Sierra, and Trinity Counties.

25           9.     The last time our country faced a pandemic of this scale was the influenza pandemic in  
26 1918, during which millions of people were infected worldwide. There were about 50 million deaths  
27 worldwide, with 675,000 deaths in the United States, when the population of the country at that time  
28 was only 103 million. There were clear lessons from the 1918 pandemic that guide public health

1 experts in their response to the current COVID-19 pandemic. One of them is the need to take quick  
2 and aggressive action to slow the spread of the virus. The cities that acted quickly and aggressively  
3 to contain the spread of the virus fared better than those that took longer. For example, when the  
4 virus first spread in St. Louis, health officials responded by closing schools, shuttering movie  
5 theaters and pool halls, and banning all public gatherings, including a parade to promote war bonds  
6 for World War I. The health officials' actions enabled St. Louis to contain the spread of the virus, or  
7 to "flatten the curve." Philadelphia, however, proceeded with its war bond parade even as infection  
8 rates were climbing. Days later, Philadelphia's hospitals were overwhelmed. According to a 2007  
9 analysis of influenza death records, the peak mortality rate in St. Louis was only one-eighth of  
10 Philadelphia's death rate at its worst. Critically, however, St. Louis suffered another wave of  
11 influenza cases after it loosened its restrictions, resulting in a rebound of influenza-related deaths.

12       10. There are similar examples from the current COVID-19 pandemic where later initiation  
13 of shelter-in-place orders resulted in more confirmed cases of infection. The province of Lodi,  
14 southeast of Milan, Italy was at the center of that country's coronavirus outbreak when the first  
15 locally transmitted case was confirmed on February 21, 2020. Lodi was immediately put under  
16 lockdown. The province of Bergamo, northeast of Milan, had its first confirmed case on February  
17 23, 2020, but did not go into lockdown until March 8, 2020. Lodi had one-fifth the number of cases  
18 of Bergamo, which is attributable to Lodi's quick and aggressive shelter-in-place order. The stark  
19 contrast between the number of cases in Lodi compared to the number of cases in Bergamo provides  
20 empirical evidence, as shown in the graph below, that shelter in place is highly effective at reducing  
21 the number of COVID-19 cases.

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## Empirical evidence that social distancing works

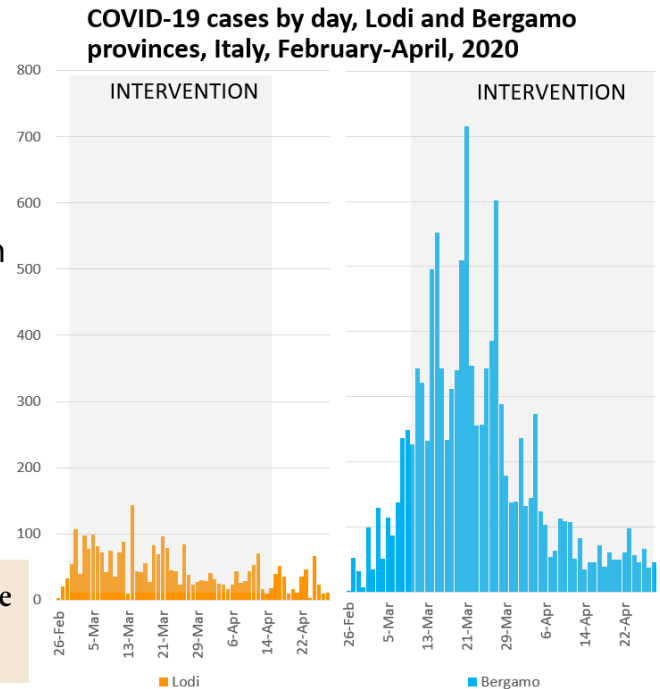
- Two adjacent Italian provinces in Lombardy region
- One (Lodi) began shelter-in-place on 26 February
- Other (Bergamo) began shelter-in-place on 9 March
- Empirical evidence that shelter in place orders can blunt transmission and new disease

STATISTICHE SUL CORONAVIRUS

### Coronavirus, i dati di Lodi lo dimostrano: le misure di «lockdown» rallentano il contagio

Negli ultimi tre giorni, in particolare dal 6 al 9 marzo, in provincia di Lodi il tasso di diffusione del contagio ha rallentato la sua corsa rispetto alle settimane precedenti

<https://www.ilsole24ore.com/art/coronavirus-dati-lodi-dimostrano-misure-lockdown-rallentano-contagio-ADo675B>



11. Effective containment of the virus requires limiting people's contact with each other because of the way that the virus is transmitted. The goal of sheltering in place is to reduce the transmission rate enough for a sustained period of time to mitigate the number of people who become sick and ensure that hospitals do not become overwhelmed with patients, as has happened in Italy, Spain, and now the northeastern United States.

12. The effectiveness of containment measures depends not only on how soon they are enacted but how strict they are. Effective sheltering in place requires limiting activities and business as much as possible. Exceptions must be narrowly defined because each exception increases the risks of community transmission. The narrow definition of what is essential, accordingly, should reach only activities and businesses that directly and indirectly meet the basic need of residents, such as to provide food, medicine, and hygiene; and to effectively shelter in place. Thus, businesses such as grocery stores, pharmacies, laundromats/dry cleaners, and hardware stores are deemed essential because they provide for the basic needs of residents for food, medicine, hygiene, and shelter. If people have no opportunity to wash their clothes, they can get fleas and ticks, which can spread other infectious diseases, such as flea-borne (murine) typhus and trench fever. Among homeless people in Los Angeles, there was a recent outbreak of flea-borne (murine) typhus, which is caused

1 by *Rickettsia typhi* and transmitted by infected fleas. Among homeless people in Seattle, there was a  
2 previous outbreak of trench fever, which was caused by *Bartonella quintana* and transmitted by body  
3 lice. And hardware stores provide supplies needed to maintain shelter, such as heat, indoor  
4 plumbing, and refrigeration, that will require maintenance and repair to keep them working.

5 13. Implementing social distancing protocols for non-essential activities and businesses  
6 lowers but does not eliminate the increased transmission risks those activities and businesses create.  
7 Even with those protocols, people need to leave their houses to engage in these activities, some of  
8 which take place in environments (e.g., retail stores) that occur indoors, where the risk of  
9 transmission is higher and involve high-touch surfaces such as door handles and countertops. When  
10 individuals are in those environments, it is impossible to ensure perfect compliance with social  
11 distancing protocols. In order of efficacy, the best way to stop transmission is to shelter in place,  
12 then isolation when sick, then quarantine when exposed, then social distancing, then masks, then  
13 washing hands frequently, then covering coughs and sneezes.

14 14. Despite shelter-in-place orders, the number of cases has not fallen dramatically in the  
15 Bay Area but rather is slowly declining. There are multiple reasons for this. First, much of the late  
16 transmission is among people who live in large households (e.g., rooming houses) with multiple  
17 generations of spread within residences, much like on cruise ships. Second, essential workers (e.g.,  
18 health care providers, public transportation drivers, grocery store clerks, etc.) are acquiring infection  
19 at their work sites, despite extensive precautions, and can bring the infection home to their families.  
20 Third, people are getting infected or spreading the virus when they go out of their homes for  
21 essential services (e.g., grocery shopping). Fourth, people who do not adhere to shelter in place and  
22 congregate socially—there were multiple examples of this over Easter weekend—have caused the  
23 virus to spread. Fifth, visitors from outside the Bay Area bring the disease with them. That being  
24 said, we would have seen significantly more cases if the shelter-in-place orders had not been issued,  
25 if they had been issued later than they were, or if they defined essential businesses and activities  
26 more broadly than they do.

27 15. On March 4, 2020, California led the nation with 53 laboratory-confirmed COVID-19  
28 cases. The San Francisco Bay Area jurisdictions took quick and aggressive action to respond to the

1 public health threat by being the first jurisdictions in the country to issue shelter-in-place orders on  
2 March 16, 2020. It was no accident that these orders occurred the day before St. Patrick’s Day,  
3 which is a huge social-mixing holiday. The lessons from St. Louis and Philadelphia in 1918 taught  
4 public health experts that allowing large celebrations to proceed would result in more infections, an  
5 overwhelmed health care system, and ultimately more deaths.

6 16. In contrast, New Orleans, Louisiana, proceeded with Mardi Gras celebrations on  
7 February 25, 2020. It did not issue a shelter-in-place order until March 23, 2020. New Orleans now  
8 has one of the highest incidences of COVID-19 cases per capita in the country.

9 17. Because the Bay Area jurisdictions implemented the shelter-in-place orders closer in  
10 time to the introduction of the virus in the community—eight days after what was at that time  
11 believed to be the first death identified in Santa Clara County<sup>1</sup>—there were not as many generations  
12 of transmission, resulting in fewer cases per capita in the population.

13 18. The difference in number of cases in the Bay Area and Southern California  
14 demonstrates that even a few days can make a difference in the number of cases. There were not  
15 shelter-in-place orders in Southern California until the statewide order went into effect three days  
16 after the Bay Area’s orders. SARS CoV-2 had probably been circulating in both the Bay Area and  
17 Southern California since early February. The best explanation for the differences in the number of  
18 cases between the Bay Area and Southern California is the order to shelter in place three days  
19 earlier. If you look at the shape of the curves in the graph below, Southern California’s cases by day  
20 rise for about 10 days before starting to level off, and the Bay Area’s by about nine days. The fact  
21 that the virus was allowed to circulate another three days (and actually more like six or seven given  
22 lax enforcement of the order in Southern California the first weekend) led to one to two more  
23 generations of spread, which equates to about 4 to 16 times more infected people ( $R_0$  of 4.0).

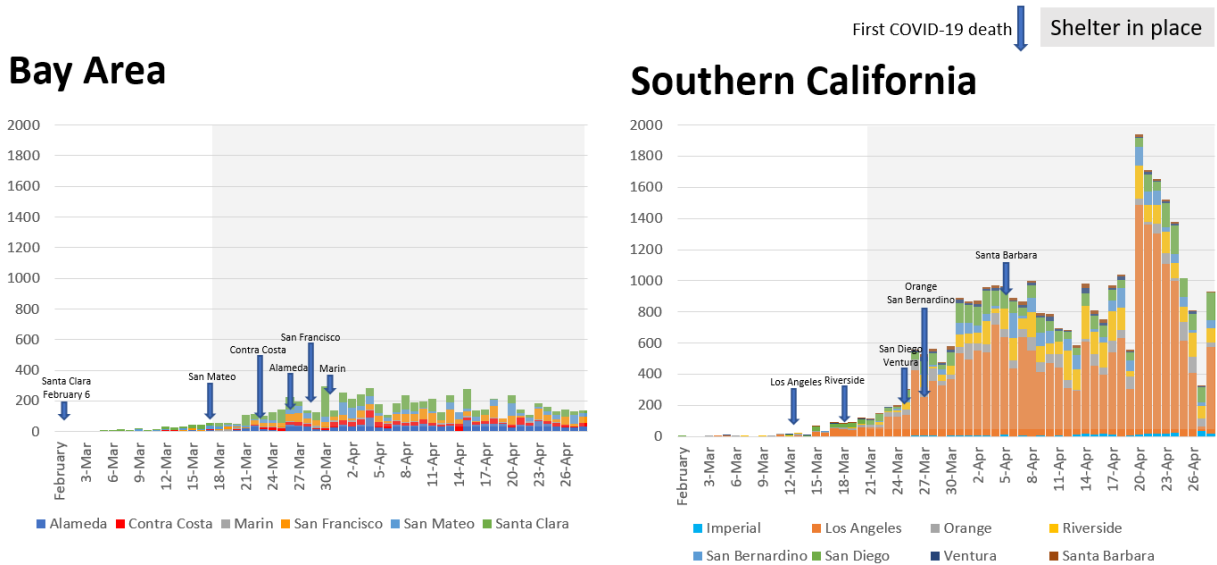
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27 <sup>1</sup> On April 21, 2020, the County of Santa Clara Medical Examiner-Coroner identified three individuals who died with  
28 COVID-19 in Santa Clara County before March 9, 2020, originally thought to be the date of the first death associated  
with COVID-19 in the county. The new data showed that there were two COVID-19-related deaths on February 6, 2020,  
and one on February 17, 2020.

# Is social distancing working in the Bay Area?

## COVID-19 cases by day, Bay Area and Southern California, March-April 2020

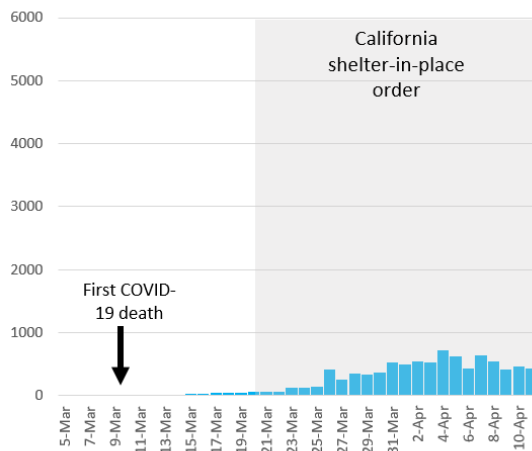


19. An early and aggressive response is one of the reasons why there have been fewer cases, and more lives saved, here in California than in New York. California’s statewide order went into effect on March 19, 2020; New York’s order—known as Policies Assure Uniform Safety for Everyone or “PAUSE”—did not go into effect until March 22, 2020. As explained in the previous paragraph, even a few days can make a significant difference. There is another reason why there have been fewer cases in California than New York. As shown in the graph below, compared to Los Angeles, New York City already had several thousand diagnosed cases by the time PAUSE was instituted. These early high numbers can be explained in part by many more importations from Europe than in California as well as an early super-spreader who infected 113 people. More importations mean significantly more chains of transmission and thus many more thousands of people infected by the time shelter in place was ordered in New York. In other words, New York instituted shelter in place later both in time and chains of transmission. Both factors account for New York’s higher numbers of confirmed cases and deaths: By April 8, 2020, California had more than 17,000 cases of COVID-19 and 452 deaths; New York, in contrast, had more than 140,000 cases and more than 5,000 deaths.

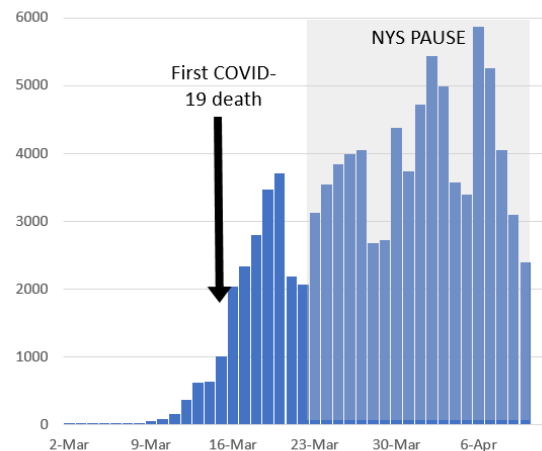


## COVID-19 cases, Los Angeles and New York City, March-April 2020

COVID-19 cases by date of report, Los Angeles, 2020



COVID-19 cases by date of report, New York City, 2020



20. Data shows that the Bay Area jurisdictions' shelter-in-place orders are working to reduce transmission of the virus, thus reducing the number of cases and saving lives. Bay Area hospitals have not been strained beyond capacity. And the curve in the region is flattening. This is the result of sheltering in place. The Bay Area jurisdictions' decision to be the first in the nation to issue shelter-in-place orders and to draft some of the strictest versions of those orders has effectively reduced transmission of the novel coronavirus and saved between approximately 34,000 and 44,000 lives.

21. On April 14, 2020, California Governor Newsom announced six indicators the state would consider when modifying the statewide order to stay at home. These indicators included, among others, the surge capacity for hospital and health systems and the ability to test, contact trace, and isolate those exposed to the coronavirus. On April 28, 2020, the Governor announced four "Resilience Roadmap Stages" that the state would use to modify the statewide orders and guide a gradual reopening process. Stage 1, where we currently are, involves maximizing sheltering in place and social distancing while improving the state's performance on the six indicators. Stage 2 will involve gradually reopening some lower-risk workplaces with modifications to lower the risk of

1 COVID-19 exposure to consumers and workers. On May 4, 2020, the Governor announced that,  
2 based on the state's progress on the six indicators, the data now support moving into early Stage 2.  
3 The Governor has announced guidelines to allow some lower-risk workplaces, such as bookstores,  
4 clothing stores, florists, and sporting goods stores, to reopen with modifications on May 8, 2020.

5 22. When making these announcements, the Governor also said that while the state begins  
6 moving from Stage 1 to early Stage 2, counties can choose to keep their more restrictive measures in  
7 place based on local conditions. This is not the time for the Bay Area to back away from the  
8 measures that are working. While data shows that the curve in the region is flattening, case rates  
9 have not fallen consistently across the Bay Area and some counties continue to report increasing  
10 average number of cases per day. Lifting shelter-in-place measures too early in the Bay Area could  
11 lead to a resurgence in COVID-19 cases and deaths, similar to the second wave of influenza cases  
12 experienced in St. Louis in 1918 after the city first loosened its restrictions.

13 I declare under penalty of perjury under the laws of the United States of America that the  
14 foregoing is true and correct. Executed at Piedmont, California on May 7, 2020.

15  
16 Dated: May 7, 2020

Respectfully submitted,

17 DocuSigned by:  
18   
19 918FC331CDE1479...  
20 GEORGE W. RUTHERFORD, M.D.