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Notes on the Pandemic
March 16, 2020

Dear DCI Community,

First and foremost, I hope you and your families are all well. Our DCI Community is scattered around the world and thus we are experiencing this exceptional pandemic from many different perspectives. On March 16th I wrote to you about what has been unfolding and in this communication I will provide some additional information for you. By way of context, during the dozen years I served as dean of the School of Medicine, I sent a communication to the entire community every other week updating them with things that transpired during the interval days and weeks and addressed issues that I thought might be of interest to School of Medicine community. These Deans Newsletters are archived in the Lane Library and while I am not suggesting that you review any of them, they set a stage for what I plan to be a series of communications to our current, past and future DCI Community during this current crisis.

I am also hoping that we will have other opportunities for shared communication - and thus we will be sending you separately an invitation to a **Zoom-based DCI Town Hall Meeting on Wednesday March 25th (12pm Pacific)**. I recognize that while this will work for our community in the US and Europe, that it is not convenient for those in Asia. We will be happy to set up a time for our community in Asia if there is interest in doing so. Just let us know – and also feel free to send questions or concerns to me directly if that is helpful (ppizzo@stanford.edu).

SARS-Cov2, the coronavirus that is the cause of COVID19, has no national boundaries or barriers. In case you didn't know, there are actually now 7 coronaviruses that can be transmitted from human-to-human. Four of these coronaviruses cause cold-like symptoms and are not associated with mortality. Two of them are associated with serious disease including SARS (Severe Acute Respiratory Syndrome) which came on the scene in 2002 and caused 5,327 cases and 359 deaths in China, 17,55 cases and 299 deaths in Hong Kong, and 346 cases and 73 deaths in Taiwan, as well as cases and deaths in other countries (including Canada, the US and Europe). Public health policies were rapidly deployed and for the most part infections were contained to about 8,000 cases worldwide. Notably, once contained, SARS has not returned. The second serious coronavirus is MERS (Middle Eastern Respiratory Virus) that was first seen in Saudi Arabia in 2012 and with the exception of an outbreak in South Korea in 2015, this coronavirus has remained in the Arabian Peninsula. Both SARS and MERS have symptoms similar to COVID with fever, cough and shortness of breath (SOB). The mortality with SARS and MERS has been notable but neither have come even remotely close to what is transpiring with SARS-CoV2 in transmission. That said, SARS served as an important lesson for Taiwan and contributed to its ability to contain SARS-CoV2 – but that lesson has not been shared by most of the rest of the world. I will comment on that further in this communication.

Because the data is changing constantly it is hard to describe the current pandemic figures with temporal accuracy. On March 21st The Johns Hopkins Coronavirus Resource Center (https://coronavirus.jhu.edu/map.html) reported 303,816 confirmed cases worldwide with 12,966 deaths. The highest number of deaths being in Italy followed by China. According the New York Times (which has been doing an excellent job in reporting on the pandemic) there are 17,935 cases in the US, the largest number being

in New York followed by Washington and then California. But in my opinion these data are highly incomplete because testing is still not broadly available and where it is being employed, it is done in still restricted level so that only some of individuals with symptoms are being tested, meaning that we still don't know the true prevalence of infection in our communities. That said, some of what we know has remained intact whereas other features are being better clarified. From the outset we have known that children (especially less than 10) are not having severe disease but they are getting infected and some, especially children <1 or who are immunocompromised can get serious and even fatal infection. Second it has remained true that individuals over 60 years have a much higher risk for fatality (as you know it is worse for individuals in the 70s (8%) and even more so for those in their 80s (where it can be nearly 15% mortality). Immunocompromised are also vulnerable to increased mortality. And while young adults and those in midlife generally have milder disease, some develop serious and even fatal infection. Of course, that means that we are all in this together, even different communities or generational age groups, have behaved in varying manners. But in the past week different parts of the US (and world) have adopted more stringent social distancing practices. This began in the Bay Area six counties (that includes Stanford) on May 16th (effective 12:01am, Tuesday) and this policy is now being adopted throughout California and also in New York and other areas of the nation in varying degrees. And while the social distancing is important as we all seek to "flatten the curve," the question is whether this is still too little too late. But I would quickly add that the stringent social distancing now in place or going into place is important, and we should, at this point, all be doing it. While we may not benefit as much as we could have if appropriate policies were introduced weeks ago, we know that strict mitigation policies can work.

For example, it is worth noting that Taiwan, which was impacted significantly by SARS in 2002, learned from that experience and prepared for the future. They developed national policies that included a centralized command center that aligned government leaders with public health leaders using technology, big data and rigorous policies to literally prevented all but minimal invasion of SARS-Cov2 into their country. This is despite the fact that Taiwan is 80 miles from the epicenter of the coronavirus infection in Wuhan, to which it is connected by a bridge that has bidirectional travel between China and Taiwan. As documented by my Stanford colleague Jason Wang (see: https://jamanetwork.com/journals/jama/fullarticle/2762689?resultClick=1) a coordinated response virtually completely blunted the infection and protected its citizens. At the other extremes, of course, are the horrendous events unfolding in Italy and parts of EU and the shrouded but likely even more serious events taking place in Iran. And then there is the US, which has the knowledge, resources, technology and innovation to have set a global example, but which has failed to do so in ways that are shocking and even devastating. Sadly, unlike in Taiwan, the lack of leadership at the highest levels of government along with an unaligned public health system, that is articulated state by state and even county by county, have yet to develop a national response. This is coupled with incredibly poor decisions on developing, planning and contracting for testing kits, which has forced us to operate without real prevalence data (and which is still a problem) and equally poor planning on the availably of essential equipment and resources (the latest being Personal Protective Equipment [PPE]) including masks, gowns, gloves etc.) to protect health care workers and individuals who are exposed in family or communal settings where transmission is highest.

In addition to the limitations of testing and now supplies, we have varying degrees of information and misinformation about what is transpiring in the US. As I have noted, I think *The New York Time*s is doing an excellent job and you can subscribe to its daily COVID report (https://www.nytimes.com/news-event/coronavirus). I also cited above the Johns Hopkins Resource Center and the Centers for Disease Control and Prevention (https://www.cdc.gov/coronavirus/2019-ncov/index.html) which has a lot of practical information and guidance, recognizing that aspects of it change regularly.

In my opinion, one of the most reliable sources of scientific and medical information comes from Dr. Anthony Fauci, who has been a colleague for more than more than 45 years. He and I worked on parallel paths during the earliest days of HIV/AIDS (I focused on children) and during his long and illustrious career, Tony has been a voice of reason for virtually every emerging infection that has impacted the US and world – as he is today. He is in the difficult place of having to qualify or correct information coming from other government sources, and he

had done this adroitly – so far. His recent interview for JAMA is worth listening to (https://www.youtube.com/watch?v=EXY76TKNy2Y&feature=youtu.be)

I am also reminded that for a handful of years I taught a Freshman seminar entitled "How Discoveries and Innovations Transformed Medicine and Created New Challenges" (which was the header for our DCI Colloquium last October). Although not part of the 2019 Colloquium, in my class the first sessions focused on emerging infections and pandemics and at the time, Ebola came on the scene. You may remember how much fear there was in the US even though it impacted so few individuals. At that time and in prior years there has been appropriate focus on Influenza with frequent recollection of the 1918 pandemic, which has similarities to what we experiencing today. The irony is that we are in the midst of these events and once we begin to see the light of recovery, we frequently make promises that we will learn from what went wrong so we can do better next time – but then fail to do so, as we have with this pandemic. For example, during my class we discussed an essay from Bill Gates entitled "The Next Epidemic – Lessons from Ebola" https://www.nejm.org/doi/full/10.1056/NEJMp1502918 which provided highly useful information and guidance. It is consistent with what was embraced in Taiwan – but obviously not the US. Even his Perspective article in the New England Journal of Medicine on February 28, 2020: Responding to Covid-19- A Once-in-a Century Pandemic? https://www.nejm.org/doi/full/10.1056/NEJMp2003762 also went unheeded. Unfortunately, even though these lessons were included in decisions made at the end of the Obama Administration (July 11, 2016, Memorandum for Ambassador Susan E. Rice - "NSC Lessons Learned Study on Ebola") were ignored or dismantled.

I focus on these issues to highlight that while emerging and global infections have been part of human history (and may become more frequent and severe with climate change), we do have the ability to respond early and effectively. And while it is unlikely to be in the manner that Taiwan did, we can use technology and leadership to do better that we have today.

It is also important to note that while the infection in China quickly reached an exponential curve of expansion, highly rigorous controls were put in place that ultimately mitigated the infection. It took over three months, but by the middle of this week there were no new cases. That should give us hope that we will get beyond this current crisis, I think sooner than some are projecting – but only if we respond with ever greater rigor than we are today – and more consistently across the US.

For now, nearly all of us are sheltering in place. While I might like to be in the hospital helping sick patients, it would be unwise for someone of my chronological (but thankfully not athletic performance) age to do so. So, like you, I am using technology and learning resilience as I commented on in my first letter (March 16th). I do think that our governing principles of purpose, community and wellness can guide us.

This is a good time to reflect on our purpose – and to do so beyond ourselves. I am thinking about that not only in relation to what I am doing in the moment but also in what I envision for the future – including 2-3 years from now.

I am aware that for our DCI Community and, in a unique way, the shutdown of in-person classes for the Spring Quarter and inability to meet as a class had dramatically changed their DCI experience from that of all earlier classes. We are all very sorry about that and exploring ways to provide meaningful opportunities for the 2019 Class in the future. I am also impressed by how DCI Fellows in different classes are meeting and connecting in chats, virtual events and beyond. I hope we can share some of these experiences with each other and all benefit from turning lemons into lemonade.

This is the time to focus on wellness and to do so proactively. Stress and worry – and of course isolation and loneliness – can negatively impact our health. I detailed these and related issues in my recent essay, which include here in case you want to reread it or read it for the first time (see: https://jamanetwork.com/journals/jama/fullarticle/2758735?resultClick=1). As you know I view wellness

from a physical, emotional and spiritual perspective. Even though gyms are closed, there are lots of things you can do. Here are few suggestions from today's New York Times (https://www.nytimes.com/2020/03/19/sports/running-exercise-coronavirus.html). As I know others of you are doing, I am using this opportunity to get in more running time. That was always impacted by frequent travel – but I am taking advantage of that now. For me exercise has always been source of stress reduction and mood improvement. I am also trying to sustain my spirituality. Thankfully our Congregation Beth Am has a number of online or Zoom events. I hope you are finding the same in whatever area of spirituality you have – or if not, there is lots of important philosophy to reflect on.

I hope this update has provided some information that is helpful. While I want to provide context, I am mostly interested in further fostering our DCI Community – with the hope we can all find ways to be of help to each other.

So, stay well and look for the invitation to our Town Hall Zoom meeting on Wednesday, March 25th that is open to our entire DCI Community.

Best wishes,
Phil