

Teneo Insights

Coronavirus: A weekly update from Teneo

A discussion between William Bratton, Bradley Connor M.D., and Kevin Kajiwara.

Thursday, May 21, 2020

Kevin Kajiwara (KK): Good day, everyone. Welcome to today's Teneo Insights call. I'm Kevin Kajiwara, Co-President of Teneo Political Risk Advisory, dialing in today from New York City. I want to thank you for joining our weekly call on the coronavirus. We've hit a milestone today. We've been doing this call basically every week, every Thursday morning throughout the crisis today. Believe it or not it is our 10th call stretching all the way back to the end of February. Today, we are 166 days out from the U.S. election. The coronavirus and its related illnesses are continuing. A pandemic that continues to raise scientific epidemiological and pharmacological questions of course. And supported by massive monetary and fiscal liquidity, we are reopening either by government action or in an ad hoc fashion. Anecdotally, I can tell you that in my neighborhood, Manhattan's West Village, basically almost all restaurants have now reopened or are showing signs that they are about to imminently.

Even if that's still only for takeout or delivery. A big test obviously looms this holiday weekend, as no doubt, pent up cabin fever will result in, let's say less than prescribed social distancing. The big news of the week positive early results on a vaccine from Moderna and Dr. Fauci's National Institute of Allergy and Infectious Disease, that partnership. My two guests today bring very valuable perspectives on all of this. So Teneo Risk Chairman,

Bill Bratton. He served two terms as the Commissioner of NYPD under Mayors Giuliani and DeBlasio. He was the Chief of the Los Angeles Police Department, and he was the Boston Police Commissioner as well. He is currently the Vice Chairman of the U.S. Secretary of Homeland Security's Advisory Council. I'm also joined today by Dr. Bradley Connor who's a Senior Advisor to Teneo. He's a specialist in gastroenterology and tropical medicine.

He's a clinical professor of medicine at the Weill Cornell Medical College. He's an attending physician at Cornell Presbyterian here in New York City and he's the founder of the New York Center for Travel and Tropical Medicine. I know many of you expect Jerry to be on this call each week. Jerry and Dr. Connor work a lot together. Jerry, I guess, is out today, hunting down the original bat, that started this whole thing off. So I want to say that we will have time for your questions. As always please submit at any time by clicking the moderator chat button at the top of your screen. Dr. Connor today is on a hard stop at the top of the hour, just before 9 o'clock. So, if you have a question for him, please get it in soon so that I can get it to him.

So today we had hit a milestone of sorts. The world hit its five millionth confirmed case, that number doubled in the last month. The U.S. remains at about one third of the total cases, but that's still



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five times higher than the number two country, which is now Russia. Dr. Connor I want to start with probably the most eagerly received news of the week, the early results on the vaccine from Moderna. Obviously a lot of us get excited when we see a headline like that. It's a light at the end of the tunnel kind of thing. But when you read what they're actually saying and with a professional's eyes such as yours, what can we actually derive so far from the news on this front?

Dr. Bradley Connor (BC): Well, thank you, Kevin and good day everyone. So the holy grail, I think of this disease is development of a vaccine. I think in order to be assured that we can go back to work and restart the economy with confidence we need to make sure we're able to vaccinate and develop herd immunity. So the so-called arms race for vaccine development hit a milestone this week when Moderna reported that eight participants who received their vaccine developed what we call neutralizing antibodies. So these are antibodies that will actually protect you against, against the virus. So it was a dose ranging study, meaning they use three different doses of the antigen or of the vaccine and determined that even at the lowest dose, it produced antibody responses equivalent to people who have gotten the disease. So just by way of over simplifying things, perhaps any infectious disease will cause an antibody response.

These are proteins in the blood that will protect you from a second infection. The questions and this also gets into discussion of the antibody test, which we can discuss later. But when you develop an antibody, the questions are, is this antibody protective? Will it protect you against being reinfected? How long does it last? So this vaccine was remarkable in several ways. The typical scenario for vaccine development is 5 to 10 years. The quickest we've ever had a vaccine developed is 4 years. That was the mumps vaccine in the early 1960s. But we're at a very different place now in terms of vaccine development, such that we have at

least a half a dozen different technologies, which have already been developed. So, it was just a question of latching this virus onto existing backbones of vaccine technology. That's why we were able to get to this point as quickly as we did. I want to contextualize the Moderna report. It was obviously very exciting and the news created ripples on Wall Street.

But I want to just caution you that this was not peer reviewed data. This was just a report from the company. Nobody really looked at the scientific findings, there were 45 people who received the vaccine. Why were only 8 reported? I think if you do a little bit of a deep dig into this, you'll see that the 8 were selected so that they could look at what's called neutralizing antibodies. That's a very long process. So rather than looking at all 45, they selected 8 participants who received different doses. This is very encouraging, but as with any news of this kind, you have to be able to put it in perspective. There are several dozen vaccine manufacturers racing to produce the vaccine that's going to work. But I think there are several pitfalls that we have to be aware of. So that's sort of the overview of where we stand. I can dig a little bit deeper into that. I know you probably have some questions about where we go from here with vaccine development.

KK: Yeah. I mean, I guess just a couple of followup questions. I mean, one, it seems to me that even in this kind of good news scenario, as you suggest, there's still a long way to go. They haven't tested all of the different potential age groups. The good news as it was sort of the lowest dosage amount looked like it was effective, which has the potential to be extremely important when it comes to scaling. But I guess one question here is what does this even say about timetable, even under a best case scenario, we're not talking about actually sticking needles into arms at scale for quite some time, is that fair?

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BC: That is fair. You're quite right in terms of the age groups, this was 18 to 55 and we know that those over 55 are probably most susceptible to severe disease. Your immune system begins to become senescent. It begins to wane as you get older. Will that lower dose work in the older age group? The high dose, the 250 micrograms caused a lot of adverse events, muscle aches or arm fever, that sort of thing. So there has to be a sweet spot in terms of the dosing, the lower the dose, the more doses you can produce and typically the safer the vaccine. This is a very unique technology. It's a surrogate for messenger RNA, which allows the body to produce the spike protein with instructions that are encoded. It's a very, very interesting perspective of a scientist vaccine technology. But it's never been used before to mass produce a vaccine.

So, my concern is we are very eager to get a vaccine, but we have to be very, very careful about not letting our enthusiasm get in the way of proper science. Now you can imagine if millions of people are vaccinated with a vaccine that later turns out to cause terrible side effects, that would be an absolute disaster. So, I actually have to just inject a note of caution, I think into the whole process. We saw this back in the 1950s, polio was a terrible illness that ravaged our communities back in the late '40s, early '50s. When the polio vaccine came out, people lined up to be vaccinated. And then there was a bad batch in the early 1950s causing side effects. It almost took the rose off the bloom completely with vaccinating. I think in this environment where people are so concerned about vaccination, we have to be very, very careful. So I would inject a note of caution into the whole process.

KK: At the outset of your remarks, you talked about the need for the vaccine to come out so that we could ultimately develop herd immunity. When you're talking about a global pandemic of this sort, what percentage of the world population actually needs to get vaccinated to achieve that?

I ask that question because just to give everyone on the call a sense of the scale that we're talking about. I believe on thus far, what we've seen on the Moderna example, that ultimately, they're using two shots. In other words, you get a shot and then a week later you get another shot implying that you need double the dosages or double the supply essentially for any given percentage of the global population.

BC: Yeah. So actually it's a dose and then a dose one month later and this is unprecedented. A global pandemic of this scale. The modelers tell us that we need to achieve at least 75%, maybe even 80% protection in order to get herd immunity. So that would be a combination of people who got infected and recover, plus those who are vaccinated. But we're talking about an enormous number of vaccine doses. That's another issue, production. Even if you have the vaccine itself. I'm told that some of the very basic elements like medical glass for vials, we're talking about millions and millions and millions of doses is not available. So I'm hopeful that supply chain production is moving along in tandem with vaccine development. Because you don't want to get to a situation where you do have a vaccine and you don't have the means to get it to people.

KK: So, all the news this week has been focused primarily on the Moderna announcement. But we've seen other developments as well. AstraZeneca today announced \$1 billion coming in from BARDA in the U.S. to develop the Oxford vaccine that had gotten quite a bit of attention a couple of weeks ago. I know BARDA is also supporting Johnson and Johnson and Sanofi developments. There was news out of CanSino. I know that there are five Chinese trials that are in phase two right now. It seems to me that it's good on the one hand that we're getting as many irons in the fire as possible to find something fast.

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On the other hand, there's a bit of a vaccine arms race that is going on that's got political overtones and economic overtones, quite frankly, as well. In that race how concerned are you that the safety element of this could get compromised somehow along the way as government's race to be first and to get their populations vaccinated first. And then that obviously has implications, not only is it horrible from a medical perspective, and again, to your point about the tainted polio vaccine. It makes people less willing to stick their arm out.

BC: Yeah, no, I'm quite concerned about the so-called arms race. You heard about the Oxford vaccine today. That's a very different technology. It's a virus vector vaccine. So you use a sort of a mutant adenovirus and you attach the spike protein. All these technologies are very novel technologies. None of them have been used to scale vaccine development. They are very unique, very novel, scientifically valid techniques. But my concern is, and I think what's going to happen, is there'll be a few best candidate vaccines that rise to the top. The others will fall by the wayside.

The sort of utilization of resources to support 100 different vaccines is a waste of resources, quite frankly. But we have to know which one or two or three or four or a half dozen are going to be the most effective. The rush to create the vaccine has me quite concerned about short cutting safety. Even the Moderna vaccine was not tried in animals first, which is almost always what you do with a vaccine. It went straight into human arms and it was safe and it worked and that's fine. But I think we have to sort of push the pause button a little bit on safety. I think the downside risk of immunizing millions of people with a vaccine that has an unknown adverse event is just too serious. So I share that concern with you.

KK: I want to pivot here for a minute. I thought after recent results that we had heard the last of hydroxychloroquine, but clearly this week it's

come rushing back into the news. The President has asserted that he's continuously tested negative, so the timing of his taking of this suggests that he's taking this prophylactically after some people in the White House tested positive. And so what can you say about this? Both in terms of its efficacy, its safety, and always when someone who has the bully pulpit that the President has starts talking about a treatment it can get people excited. I'm assuming this is not something that people should be taking without medical oversight and the like, so what can you talk about on this front?

BC: So, I actually, I like hydroxychloroguine. I'll just state right away I have a bit of a contrarian view to some of the other scientists who've chimed in on this. Let me talk a little bit about hydroxychloroguine. We're part of GeoSentinel, which is a global emerging infectious disease network. It was our site in Marseille, it was Didier Raoult and Philippe Gautret that published the first clinical data on hydroxychloroquine and COVID-19, back in February. There's very good data that it reduces viral load in vitro data. I think it has a very unique place. Now you're right. When the President said, "It's a game changer" that politicized it. Scientists chimed in and said, well, you can't say that without randomized clinical trials, there's political fallout. This is a drug that we believe works sort of like Oseltamivir or Tamiflu, in so far as, if you give it in the first 24 to 48 hours after diagnosis, it may have an effect of reducing viral load and reducing the chance of the virus adhering to the ACE-2 cell of the lung.

We also feel like also Oseltamivir or Tamiflu, you can give it prophylactically. If somebody has influenza in your household, your doctor will prescribe Tamiflu for you to take on a prophylactic basis. I think there's a lot of evidence that this works well in that setting. However, we are about to embark our group at Cornell at New York Presbyterian on a hydroxychloroquine prophylaxis prevention study in healthcare workers.

These are people exposed to COVID-19 day after day, we're doing a randomized, double blind placebo controlled trial of hydroxychloroquine. The studies so far have used hydroxychloroquine, the dosing was not optimal, the timing was not optimal. If you give hydroxychloroguine to somebody who's already hospitalized, it's too late. It doesn't work. So we've seen that, it doesn't mean it doesn't have a place, I believe it does have a place here. And I do think if somebody in your household or in your workplace tested positive, now, look, it's done off label, but you know, at least in the example of the White House, it's done under the supervision of the White House Physician, the Director of the White House Medical Unit. So yes, don't take this on your own, this should be done in concert with a doctor obviously. But my view is a bit contrarian. I do think there's a role for hydroxychloroquine. And I think we'll show that.

KK: Very interesting. The other part of this story. of course. And this is something that concerns everybody, as they think about going back to work, is that at the White House, in the West Wing, people were being tested regularly, and yet still we had a situation where a couple people tested positive and sort of sent everybody into a flurry over there. What do we know about again, on the testing front, I can't believe we're still having this conversation, but we are, both for the virus itself, but then obviously the other thing, especially in places like here in New York City and other places, even the walk-in clinics are now offering the antibody test to anybody who walks in. What's positive, and what are the kinds of the pitfalls of the testing process?

BC: Yeah. So I'll speak briefly about that. First of all, the virus test, the PCR, I think some situations in the White House was included in this. We're trying to have a point of care test that was very rapid. There's a test Abbott ID NOW, you get results in 15 minutes.

The problem with that test is if you get a positive, it's positive. If you get a negative, there's about a 20% or 25% chance, it's a false negative. It's just not as sensitive. The good PCR tests, the BioFire, the Cepheid, the ones that are used in the commercial labs, have a much higher sensitivity. And so if you get a positive, it's positive, you get a negative it's negative. But be careful of the rapid test, the ones that are 15-minute tests. That was one of the pitfalls that the White House fell into. Antibody testing presumably tells you whether you've been infected, and again, as I mentioned before, the antibody presumably will protect you from a second infection. How robust is the antibody response? How protective is it? How long does it last? These are questions we still don't have the full answers to.

Along the lines of antibody tests; there were about 75 or 80 fingerstick tests that flooded the market over the past month or so, none of these were reliable. They had way too high, a false negative, false positive rate. The current antibody tests, there are four that are Roche, Abbott, Architect, Ortho Diagnostics, and Diazyme; these are the ones that are used at the commercial labs now, Quest, Lab Corp, BioReference. These are validated, these are good antibody tests. So, when you're lining up at City MD, they're sending the blood sample to one of these labs. So the antibody test now, if they're done this way, seem to be reliable.

KK: I know you've got to run here momentarily, but I want to just squeeze in the last couple of questions. If I could. A lot has been made in the last in the last couple of weeks about a newly named illness that's related to coronavirus that now appears to be striking young people, who up until this point had been seen as relatively unscathed by the illness. So, it's now being called Multi-System Inflammatory Syndrome in children, or MISC. Some governors have already discussed the role of this play in the risk to schools

reopening come fall. But on the other hand, the numbers to me appear to be very, very small. But you can see how it's becoming politicized already. I mean, one of my colleagues only half-jokingly sort of suggested, whoever can figure out how to get the kids out of the house will win the election. So, what do we know about this new disease?

BC: Yeah, so this really speaks to the virulence of this virus. You know, initially we thought this was like influenza; an upper respiratory or lower respiratory virus. We know this virus has effects in almost every organ system. We see cases of hemorrhagic colitis, we see kidney failure, we see inflammation of the heart muscle, we see blood clots, we see microthrombi; this is a systemic disease. And the multisystem inflammatory syndrome in children is another manifestation of what we call an endothelial disease. This affects the linings of the blood vessels throughout the body.

Fortunately, the numbers have been small, as you say, there have been a few hundred cases perhaps. And if we can identify who is at risk for that, that would be very helpful. Are there factors that we can identify; genetic factors, other factors, that might make a child at risk for this? Then we would be a lot more confident going forward. But right now there's still a lot to learn about this. Every day we're learning more about this virus. You know, when I was in medical school, we used to have an expression, "If you know, syphilis, you know medicine." Because syphilis had all these multisystemic effects and caused chronic disease. Now the dictum is, "If you know coronavirus, you know medicine." So we're learning. And it is scary stuff. Fortunately, the numbers are low, and I think we'll probably figure out who's at risk and who's not, but remains to be seen.

KK: Finally, obviously we're about to hit the summer season, as I suggested at the top of the call, and with reduced social distancing, and people going back to work, etc., there's a distinct possibility that we could see a spike in cases, again. Just very quickly. Do you think that, now that the big wave of the pandemic at least in places like New York, have been passed, is there greater resiliency built back up in the healthcare system to address a second spike?

BC: Yeah. So fortunately, the worst case scenario of running out of ventilators and running out of ICU beds, didn't materialize. It could very well have materialized if we didn't lockdown when we did. I think the amount of virus circulating now is a bit lower. I think hospitals do have the capacity should there be a second wave. But that gives me only a small degree of confidence because we've seen in Europe and in China and elsewhere when restrictions were lifted. varying degrees of second waves. And we have to be prepared for that. So I think we can't let our guard down completely. I think we have to do whatever we can to continue some of the social distancing that we've already started. I think we have to be very vigilant because what happens is, the cases will lag a couple of weeks after the restrictions are lifted. So we're not going to see, it's not going to be a cause and effect immediately. So we have to be very careful about timing and about following things closely. And being able to shut down at least temporarily, if we need to.

KK: I know we have one minute. We've got a question from our audience, that just wanted to clarify something regarding the commercial antibody tests. You're suggesting that they seem to be reliable, but the question is, aren't they still just about 80% accurate?

BC: So, no. The commercial antibody tests have a specificity of 98, 99%. So if there's a positive, that's pretty good. If you're positive, you're positive. If it's negative, it could be anywhere from 85% to 95% sensitive. So, there is still a possibility between 5%, maybe and 15%, that if it's negative, it's a false negative. So what I would say is, and that's a good question, so thank you for that, if you have a negative and you had symptoms that just seemed like coronavirus, you should repeat the test with another platform. If it's positive, it's fine, if it's negative and there's any doubt whatsoever, you just repeat the test.

KK: Well, great. Thanks so much. I know you've got to hop off, so thank you for your insights today. Very interesting, very helpful.

BC: Thank you.

KK: And we will have you on again soon. So, thank you, Dr Connor.

BC: Thanks very much. Bye bye now.

KK: Commissioner, let me turn to you now, because I'm obviously, you know, one of the things we've been talking about here today has been the reopening of the economy, the reopening of cities. You as Police Commissioner and Police Chief in LA and in Boston, you've got a very good sense of kind of how population socially motivates to different stimulus. And then government's action as well. What are the big things that you would be taking into consideration, or your colleagues now at NYPD and others, are taking into consideration as the lockdown starts to get lifted?

Bill Bratton (BB): Well, understanding that we're talking nationally and internationally, let me give some generic responses from a policing perspective. Some of the concerns of the police in many cities, they're

being asked to effectively be the enforcers of the social distancing rules that are being put in by municipalities, states, countries in some respect. It's a role that makes them uncomfortable. And it is met with mixed reaction. I think early on, most people are responsive, we are now starting to see, not only for police trying to enforce it, but unfortunately it seems to be now a nightly occurrence on the nightly news, people working in environments that are reopening; Walmart, etc. That we have people, employees are asking customers to please put on a mask, or keep the distance. And we're seeing a certain portion of the population is very resistant to the masks, social distancing, being told what to do.

So, for employers going forward, this issue of social distancing, mask enforcement, it's a new environment. It's going to require new training. It is going to, for police, require new training, in many respects. Fortunately, and I'll speak for America, I speak for New York where it's been put in place, the vast majority of people have been responsive. All the polling indicates that the significant majority of Americans understand the need for it, and even in places where it is being relaxed in terms of masking, social distancing, that many are doing it on their own because they are concerned for their safety. But we're moving into uncharted territory going forward. We have the last two months to learn from in the sense of places where it's worked successfully, where it hasn't, experimentation. In one park in New York City, a large lawn area, they put circles in which about six people could congregate if you had a family, but the circles were all six feet apart from the other circle, so that was one way of crowd control.

A big experiment is going to be this holiday weekend around the country. But speaking specifically to New York, which is the epicenter, unfortunately, of the virus for the country and indeed also the world, that New York City, the Mayor here has indicated he will not

open the public beaches. For people not living in New York think Coney Island when you think of the million people that crowd onto that beach on a hot summer afternoon. Fortunately, this weekend, it's going to be cool so you might not have the crowds normally that you'd expect in any event.

But with New York City beaches closed for the foreseeable future, adjacent counties that have beaches, adjacent states, Connecticut, New Jersey, are already putting in place and restrictions that beaches will only be open to residents, will not be open to outside populations. So, as we're going forward, we are creating additional tensions between people, between classes, in some respect, between politicians. The Mayor of New York is already basically lambasting the people heading up the county governance adjacent to New York for not allowing New Yorkers to use their beaches. It's going to be a very interesting weekend, Kevin, to watch. It will be the grand experiment, if you will, about social distancing in the epicenter of this crises in America and indeed the world.

KK: Now, you've just said a lot in all of that, and I want to unpack a little bit of this. Your division within Teneo is working with a lot of clients with regards to various elements of reopening, everything from office layout and staggered work hours and how many of your employees come back into the office or into the facility or what have you, but you brought up this issue of employees as enforcers, in a sense, whether they're working at a store or a restaurant or coffee shop or whatever, either requesting/demanding a customer put on a mask or even doing temperature-taking. How are you advising companies to approach this because it's putting employees in a potentially dangerous situation, not only from regular health, but also with a potentially belligerent customer, and it's got civil liberties element to it as well. What's your advice on that front?

BB: Well, in terms of the thinking of the various environments in New York City office buildings where people are used to having to interact with a security officer at a concierge desk going into building, showing an ID or using an ID on automated turnstiles. A lot of facilities in New York and indeed in other parts of the country, this is a post 9/11 consequence, if you will, much more security around getting into a building.

I'd see those as being less problematic in the sense of the building itself. The landlord is requiring, before you come into what is effectively private property, you're going to have to subject to wearing a mask, some instances temperature-taking. In terms of temperature-taking, I think one of the things that's going to happen is a lot of the resistance and controversy around the issue of facial identification systems are now going to come to the forefront once again. There's a lot of technologies being developed to test temperatures, to identify people, whether be less hands-on use of ID tags on turnstiles, etc. Facial recognition in the private sector in particular I think you're going to find much more commonplace.

The subways in New York are talking about touchless turnstiles to get into the subways. We're going to see the controversial technologies of artificial intelligence, facial recognition, temperature taking. China actually is probably leading the world in this and has for a number of years, and it's been resisted in many democracies around the world, but I think there's going to be lessening of the resistance in the private sector. Public sector it will still be very controversial, and it's going to be part of the ongoing dilemma that's been created by this virus.

In terms of stores, stores are still technically private property, but they are open to the public, but at the same time, they can put in place requirements for entry. In terms of what role employees will take or will be expected to take, that is really going to be really up to the individual store owner, corporation. Our advice is really the idea of it is going to require training,

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it's going to require policies, procedures, protocols, training. It's also going to involve lawyers, lawyers who are going to have to look at the litigation aspect of this, understanding what are the rights of the customer, what our the rights of the employees. Unions will end up getting involved in this, definitely. How do you protect the employees who are being asked to control this?

We're heading into a whole new world. There is noone-size-fits-all answer. It is literally on a case by case basis. We're watching that firsthand here in New York, which is kind of a bastion of the liberal community in the sense of access and huge public spaces where they're now going to try to control public spaces using public police or public enforcement officers.

Our advice, in the Teneo Risk Division, I head up that in the clientele that we deal with, which has been principally the Fortune 100, Fortune 500 rule that each company, despite any advice that it gets from us or anybody else, are going to have to make their own decisions going forward. There's not going to be a generic solution to this. There'll be a lot of individual solutions. We are watching very closely not only what our clients do, but what others are doing so that we try to bring best practices, best thinking to the process where ultimately, in our case, a client will make the ultimate decision. Our role is to constantly be scanning for what are the best practices that seem to be working around the world, what are the best technologies, what are the technologies that are accepted with existing laws, guidelines, etc., and then building up recommendations around that.

We also try to, dealing with our clientele, try to give total solution, not just to focus on one issue, but the totality of going forward. We have an overused expression, the new normal. I would say that we don't have a new normal, and we will not have one for quite some time. Similar to 9/11, all the changes that came about after 9/11, even 19 years after that event, we're

still implementing new ideas and thoughts about how to basically control safety on our airlines. Instead, I think we have, which would best be described as the evolving normal. Constantly changing, some things that work, some things that don't work. The good doctor was on just before us. In some respects, it mirrors what's going on in the medical community. Some things are going to work. Some are not. Some things may work in certain circumstances but will not work in other circumstances.

Similarly, when you're looking at risk prevention, we've living in much the same world. The evolving normal, the idea is to constantly be scanning. In some respects I'm known for myself and my team at the NYPD in 1994 creating the CompStat system, the system that changed the crime situation in America for now almost 25 years about reducing crime, timely accurate intelligence, rapid response, what the intelligence tells you, effective tactics, and relentless follow-up. It's how you deal with a cancer. It's how you deal with the plague, as we're dealing with now, and it's also how you deal with adjusting, whether it's what an office of the future's going to look like, what security's going to look like getting into the building.

In terms of even into the sports world, that one of our clients, Oak View has a very large presence in the sports world, stadiums, arenas, and they're working very aggressively to adjust the stadiums they're building. The ones that they help to currently manage and once they advise. Prevent Strategies, their security arm, I'm Chairman of that group. They are really working very aggressively to adjust to the evolving norm in the sports world. So many people want to get back into those stadiums and arenas, but it's going to be a little while because we're going to have to adjust to the evolving norm.

KK: In a number of countries in Asia, and this is particularly true of countries that have been very effective in getting control of the virus, we have

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seen new clusters, new outbreaks, and what we have seen is very rapidly going back into either lockdown or other restrictions on public behavior. Both you and Dr. Connor have brought up the impending Memorial Day, but really, the summer season that's coming. I can even just speak from what I've observed in my part of town, here people have got cabin fever.

It's clear that there's kind of a new level of risk tolerance when you see the number of people gathering who aren't wearing masks, and people going back to work, they're just going to come into greater contact with each other, and so this question of, I think sometimes, erroneously, people think of it as a second wave. It's really just a new spike in the first wave that we'd been talking about here. But as far as the United States is concerned and cities like New York, how easy, once restrictions are lifted, to go back into a lockdown scenario, or are we kind of a one-and-done because of our approach to civil liberty as being somewhat different?

BB: I don't think it's a one-and-done. Let's use 9/11 as a recent example in terms of the phenomenal changes that were made and how we get on planes, travel, how we get into buildings, the idea that it was not a oneand-done. Similarly, with this disease, you're correct, the virus, that predicting a second wave of significance in the fall, a lot of the medical experts, but you are correct that there's a continuing evolution of the first wave as we start lessening the great response that was initially to the crises and scaring the hell out of everybody. A lot of Americans, a lot of people around the world are less afraid now as we get to understand the disease better. It's quite clear that so many of the deaths in this country among the elderly, minority populations, among those with preexisting conditions, and so that's somewhat emboldened the younger part of the population.

What I worry about going forward is this, in a country, what's intriguing about America and is becoming incredibly politicized over the last 15, 20 years, and in the run up to a national election that the novel politics of everybody being in their own tribe might be exacerbated by this issue. The idea of the haves and the have-nots, the haves being the ones that have had the disease and are now recovering, the haves being the ones that have not had the disease, but are not particularly fearful, and then the have-nots, the at-risk populations, the elderly. It's just going to create more divisiveness and the element that speaking from the criminal justice perspective, the police perspective, the security perspective that I'm concerned with as I stay very involved with my former colleagues in policing were very worried in the run up to the summer as we always are where historically that, really, until recent years, we've had an increase in crime.

We're already seeing that increase in crimes as people are starting to emerge. Many, many cities around the country have much higher shootings and murder rates already, and we've had a cold spring. We're very concerned with the increased tensions around this election, the increased cast of characters showing up at state houses, demonstrating, looking like they're going to walk on to the chief. That as we've seen some of these incidents at Walmart, elsewhere, where a security officer has somebody to put on a mask. Well, in terms of you tell the wrong person to put on a mask, God knows what you're going to end up dealing with. We are very concerned with that, because back to your earlier question about how do we train personnel to try to keep control, but deescalate at the same time.

This summer is going to be a test for everybody as people try to deal with the virus, try to deal with the very tense political climate, and try to deal with the second virus. The second virus that I've written about particularly here in New York State, but many other states as we try to basically reduce our prison population were costs have accelerated dramatically

these last two months. There's a large number of individuals coming back into the population. Population where there are no jobs, there is very minimal housing for them, and the limited control over their activities that I'm very concerned about a second virus. That is the crime virus.

In New York City, once again, will be the, if you will, the petri dish to watch because this state, I think, foolishly was too aggressive in its criminal justice reforms moving forward. Reforms that were needed but not well-thought-out, and we started to see some of the negative impacts of that. That's the same as seeing some of the negative impacts of how we try to deal with this virus with the political controversy about do this, don't do that. We're in for some interesting times and to people that are on the call, clients, etc., you're going to have to stay informed. Those of you that are listening in on these calls, hopefully you're finding that, whether it's the doctor or myself or others. that Teneo is attempting to present during any of these calls, take in as much as you can, but ultimately you're going to have to make your own decisions, but I hope the decisions are based on being informed, being engaged and here at Teneo that's what we're attempting to do.

KK: At the outset of this thing, there had been some who were opining that the virus was going to be the great equalizer. We're all in the same boat. We're all vulnerable. But I think if anything, it is showing that from both a health perspective and an economic perspective that it's exacerbating existing fault lines and existing inequality, certainly.

I want to follow up on a couple things that you just said, but I did want to just ask one logistical question here as well as we go back to work.

Again, focusing on the major metropolitan areas.

There will be fewer people going into any given facility, more people working from home, at

least part of the time, perhaps staggered work schedules and the like, but in a city like New York or in Boston or what have you, that if anybody who can avoid getting on public transportation, especially subways, can avoid it, they will and therefore there's going to be absolute gridlock in the streets with all of the collateral impact that that has from an efficiency perspective to environmental perspective. But you were the Head of the Transit Police in New York at one point as well. I mean, what are your thoughts on the public transit system?

BB: Well Kevin, two thoughts. One response to your specific question, but first going back to your comment about differences that different communities are experiencing with this virus. The phrase that is very commonplace here is, "We are all in this together." I hate that phrase. I hate it when I watch it on the nightly newscast and see it on the highways. That applies we're all in this together equally. We are not. Clearly we are not when you look at the death toll, the illness toll, that this is impacting different communities differently. We are all in it together in the sense that we are all impacted by it, but many are impacted, the 40 million, I think, the labor department is coming out this morning of the unemployment, they give us now 40 million. One out of every five Americans is unemployed. We're all in it together, but I'm working, 40 million people aren't.

I don't think the minority communities, particularly African American, Latino feel that they're in it together equally. That phrase is, I think, the wrong phrase for this one. We need to be mindful of that difference and well, that's the same as policing. Policing is all about hotspot policing. So much of the focus needs to be on the hotspots, the veteran's hospitals, the homes for the elderly, the poor neighborhoods that in terms of the assignment of resources, so that we can equalize that phrase, "We're all in this together."

We had an expression when I was police commissioner in New York, that our goal in New York was to make it safe and fair everywhere for everyone. I think that's the goal we should be striving for, safe and fair and healthy for everyone everywhere.

In terms of the issue of the transportation issues, particularly in a city like New York, Chicago, Philadelphia, any city that has a subway system, or relies heavily on mass transit. It's ironic for 50 years we were trying to get people out of cars and onto public transit. New York has been phenomenally successful in that regard. 6 million people a day were riding the subways and buses.

Now we're talking about this distance incentivization that with the social distancing, the mass and MTA, the entity that basically oversees the commuter rail, bus and subways here in New York City is really wrestling with how many people can they safely accommodate on the subways or the buses. Talked about redesigning, that's the same as we talked about redesigning offices for distancing, talking about redesigning of subway cars, platforms, buses, that's really more in the future.

Delta Airlines, last night watching the news, basically the feature was about all the things they're doing to procure safety and I think the goal is that they will not have more than 60% of the seats on planes occupied. There's also the idea of redesigning the interior of planes once again. I noticed Qatar Airlines, that their employees that had some of the best uniforms of any airline in the world, the uniforms were gorgeous and they're all wearing hazmat suits instead of those uniforms.

The transportation one, that's going to be, I think, the biggest dilemma that if people want to go back to work, let's face it, all of us want to. I miss the office environment, Kevin I miss our chit chats across the

desk with each other. We want to get back. But the majority of Americans are going to look at safety first before coming back. Some of the subsidies are going to have to come back, the essential workers, others who have lost jobs that now need to get those jobs back to take care of their families. But the issue of how to get to work is going to be almost like a Sophie's Choice type of situation. The idea do I take my car, but if I take my car then I have to put that car in the garage, additional costs. There's going to be an attendant getting in and out of that car, so what do I know about that attendant in terms of his health issue or her health issue? These are dilemmas that everybody is working with around the world. This goes back to my evolving norm, with the evolving norm, normal. The idea of constantly scanning to identify best practices, things that seem to work, things that seem to work but are also doable that and you know, New York is going to be, I think, the litmus test of this. Those 6 million people, 3 million in the morning, 3 million in the afternoon, as offices start opening here, as restaurants and all the things that make the city so great begin to reopen, we don't have those answers yet.

Each industry is trying to work it out on their own. The airlines industry, sports industry, office buildings, something we're very involved in. Transportation we're staying very closely involved with that. Teneo right now is advising one of the largest cities in America on their transportation issues. We put together a whole package of thoughts. I've got a lot of background in transit as you may be aware, the Head of the Transit Police in Boston, in New York, Senior Vice President of the New York Transit Authority, then for a few years worked over in London for the Transport for London. I've got an appreciation for it, love it, but at the same time because of that appreciation, I just recognize the extraordinary Rubik's Cube of issues that have to be addressed.

KK: Well, we're almost out of time and I want to finish with you with a big question, if I can. I mean, you and I are both adopted New Yorkers. I'm from California and I think it's pretty obvious to everyone on the call that you're from Boston. But the point is that there's a concern that the big cities could go into, after having made so much progress over the last 20, 30 years, that they could go into decline again. There's less reason, perhaps, for people to stay in the cities. Why, if I don't have to go into the office, should I live in a cooped up small apartment that's overpriced? With a lot of the reasons why we come to this city, crowded, social restaurants, the theater district, the arts, those things being the last to return and there's this flight to the suburbs.

We're already seeing some anecdotal evidence of that. I don't know if the real data supports that as yet, but it's certainly something that's on people's mind. A lot of conversations I have with friends and colleagues here about whether they should stay in the city. We've seen the cities get hollowed out before. Do you think that that's a concern here? When you look back at when New York city hit its kind of depths back in the 1970s, when the city hit bankruptcy and then we went into the crack epidemic and the like, it took a concerted effort of visionary mayors, visionary business people, financiers like Felix Rohatyn, cultural leaders coming together to reinvigorate the city. How do you see urban life developing here?

BB: I think it's going to dramatically change for a number of years going forward, particularly for major cities. By way of example, there's some estimate that 40% of the people living in Manhattan have moved

out. As to how many will come back, the apartment building where I live is at one-third occupancy as an indicator of how many people have left. The building where you and I work, Kevin, most of the businesses there have basically switched to people working from home and are not hurrying to get back into the office environment. Visa yesterday, worldwide company, announced that it will have its people working from home through the end of the year.

This new normal is as I'm saying, it's an evolving normal. Ultimately, it's going to come down to a lot of individual decisions. Rikki and I, we're both working from home. She's a Legal Analyst for CBS News. I run with the Risk Intelligence Division at Teneo, and Rikki and I are in our seventies, so we're very conscious that we're at that at-risk population. Thank God we're both in very good health.

Fortunately, both of our respective employers at this point in time are allowing us to work from home. But the idea of when the office is open, I think we're going to see phased reopening, that those that have contracted the virus and survived and have the antibodies, a vaccine when it develops. I think the vaccine is going to be the tipping point. The tipping point, where the questions you're asking where people are able to make a truly informed decision with minimal risks that the vaccines work and I can come back to work and not worry about being infected, I think that's when we're going to see resolution of some of the questions you're asking. By all accounts, the earliest we're talking about that, depending on which doctor or which lab you listen to, is certainly not in 2020 and more likely in 2021, by the time they get everybody vaccinated.

We're in for a long haul. Good news is, however, that many of those who are unemployed, the estimates I've been looking at, the economic reports, is that many of those people will be back to work and understanding this disease better. If we do practice the social distancing, do use the masks, we do wash our hands and we are careful that even if the virus were to begin occurring at hotspots, it won't be as dramatic as it was when we first didn't understand, weren't even aware who's here. This time, I think, we'll be much more aware and hopefully much better prepared.

KK: Well, thanks for that. We are at the bottom of the hour, so I want to thank you for your remarks today Commissioner, and I want to thank everybody for joining us today. We will be back next week. I hate to say, with our 11th consecutive call on this. So, please join me and my guests next week. Everyone, hopefully you have a great holiday weekend and a great rest of the week. Thank you very much. Have a great day.

BB: Thank you, Kevin. Bye-bye.

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