

KEEN ON RETIREMENT



When Can We Expect a Covid-19 Vaccine?

Welcome to Keen on Retirement
With Bill Keen and Steve Sanduski

Steve Sanduski: Hello, everybody, and welcome back to Keen on Retirement. I'm your cohost, Steve Sanduski and joining me as always is Bill Keen and Matt Wilson. Hey, guys, how are you?

Bill Keen: We're good, Steve. How are you doing today?

Steve Sanduski: I'm doing great as well. And gosh, we've got another great show lined up here today. And this one is another very important and serious topic. We're going to be talking about COVID-19, we're going to be talking about the vaccines, the different types of treatments, what can we expect? We're going to talk about herd immunity. We'll talk about some of the implications of the development of vaccines for the future. So, we're not going to pretend that we're scientists or epidemiologists, but we've got some good material here that I think will be very helpful for you listening and how this applies to how we're thinking about what's happening here, how that can affect your financial planning situation. So, I think we've got a great show, but before we get to that, Bill, I think there's a couple of things that you want to share with us first.

Bill Keen: The FBI, here late in September, has just issued yet another warning about the latest phone scam that spoofs the FBI's real phone number on victim's caller ID. Scammers were posing as special agents from an FBI satellite office here in Kansas city. And they reported that these folks had built someone in St. Louis out of more than a hundred thousand dollars. The scam went like this. They suggested to the person on the other end of the phone that their sort of social security number had been stolen and used to purchase property stocks and open bank accounts in their name.

Now, the fix to this, the scammer said, was to safeguard the victim's money. The scammers would give instructions on how to wire the victim's life savings to the quote, FBI for safe keeping. So, I know these are old scams that keep evolving

with a new twist. The FBI made it clear. That they would never ask for money for any reason over the telephone or really ever. And that anytime somebody asks for money like that to just be suspicious and verify the legitimacy of the request.

Steve Sanduski: Yeah. That's pretty amazing and pretty brazen on the part of those scammers. So, yeah, anytime something sounds fishy, it probably is. And if you have any concern, what would you say, Bill? If you get a call like that and it's like, "This just doesn't sound right," should you just hang up or what advice would you give on what they should do if they feel like someone's calling they think it's a scam situation.

Bill Keen: They're going to try to create a sense of urgency to keep you from ending the call. A legitimate caller would never create that sense of urgency. They would give you time to verify anything they might be calling about. But once again, the FBI is never going to be calling, asking for you to wire the money, just like the IRS. We've done episodes before, we've talked about the IRS. People try to scam and act like the IRS as well, very similar.

But hanging up immediately would be one option. If you really wanted to investigate whether this was potentially maybe variation of this kind of call you're receiving is legitimate, do not call the number back on your caller ID that you're seeing. Even if you look that number up and see that it's to a legitimate association or a company, look for another means of communication with that company where you can call and verify directly with the specific organization that they're representing there with some information.

But again, being really, really careful not to give any pertinent data. So, you're kind of in a catch-22, you call one of these companies, you're given information. Now, they're asking you for identifying information. In my mind, hanging up was probably going to be the best plan. In addition to that, you always are encouraged to file an online complaint with the FBI's Internet Crime Compliance Center. So, you can Google the FBI Internet Crime Compliance Center and get that information and be able to at least file a complaint and get something documented.

Steve Sanduski: Yeah. Sounds good. All right. What else you got going on? You did some flying, I think, here recently.

Bill Keen: Yes, that's correct. We've talked before about, this training. I believe that training education currency is very important when it comes to being an aviator, being safe up in the air. I also believe that education and training and preparation and thinking through all of the situations that could occur, even ones you don't want to occur, how you would navigate those is very important as well in the financial world.

So, we were recently up doing my recurrent annual training. This is something that you do with a specialized instructor in your airplane and you get up once a

year. It also is part of an insurance requirement as well, recurrent training, but we were up just last week and doing maneuvers and emergency procedures. And these are things that you don't typically do every time you fly, but you do walk through things in your mind as the pilot, you're walking through, "What if this will happen?" Or, "What if that would happen? What would I do?" You're thinking of that. You're not voicing that to your passengers generally, but I believe a good pilot is going to be thinking about all the things that could go wrong and what would we be doing next and have those checklists very handy exactly like we do it in the financial world as we ponder what might happen next in the financial world, in the economy, in the markets.

But I had a situation come where we were flying at about 11,000 feet, a nice training altitude. And by the way, it was a clear day in Kansas City, but at 11,000 feet, there was a layer of smoke, Steve, from the fires that had come clear over into Missouri from the West Coast. I'll tell you, it was quite a reminder of what folks on the West Coast are going through right now.

Steve Sanduski: Yeah.

Bill Keen: But-

Steve Sanduski: It's just kind of amazing that it can travel that. I mean, we know we it can't travel that far, but just you being in the plane and all of a sudden, just almost out of thin air boom, you're right in the middle of all this smoke.

Bill Keen: Yes. From about 8,000 feet to about 12,000 feet, the layer occurred. And it was quite interesting because my trainer, I think he might have done it on purpose, decided that we should be in it to do our maneuvers. So, the maneuver was this, "How does this sound? We're going to simulate a fire, an engine fire and smoke in the cockpit," probably one of the worst things that you want to have to deal with. But the question is exactly what are you going to do next to navigate out of that? And on top of simulating smoke in the cockpit and an engine fire, my instructor went ahead and decided that we would and simulate that the engine had failed so that we now need to descend and find an airport and land and not touch the power control. So, really simulate that the engine had failed, and you have a fire on board, not a good day.

So, when he alerted me this is what was happening, and this was the simulation. I want to repeat this is a simulation. I realized the next 10 to 15 minutes were very important. So, the first thing that we do when we are in a pressurized aircraft. So you don't have to wear oxygen when we get to higher altitudes, 11,000 feet. First thing we do is we do what's called dump the cabin. We press a button, we take all the pressurization out of the cabin that doesn't feel the greatest on your ears, and then we go into what's called the emergency descent where we're descending now about 4,000 to 5,000 feet per minute.

And for those aviators out there that listen, they'll know that's a pretty good descent rate. That's a pretty impressive well or depressive, however, you look at a descent rate. And then he instructed me that we would not be putting the power back and that we would be finding an airport via what we call best glide. And we would find that airport as if the engine was out and we would make an approach and a landing. And so, that next moment we dawn an oxygen mask and it looks like something you'd see out of a fighter pilot movie, where we put this mask on, it sucks down to your face. You can hear yourself breathing into this mask, you're speaking through it, you're getting oxygen.

Of course, if you were at 30,000 feet, you would have to have that before you depressurize the cabin and major emergency descent. So, all these things are happening and we're trying to find an airport to glide to, and I'm happy to tell you that I passed the training. He checked the boxes, I was successful in earning my recurrent training credential to be qualified to continue to fly the airplane. But I'll tell you that 15 minutes was a pretty interesting time. You know what it felt like? It felt somewhat like the financial markets, Matt, in March, April.

Matt Wilson:

Yeah.

Bill Keen:

You know what I mean? I mean, you're in a position where you don't want to be there, but you have no choice and you've got to have the training and implement the training and execute the next moves to navigate the situation. And I thought it would be interesting to share that with you all that that is a reason. That's an example of a situation outside the financial markets that preparation and intentionality and recurrency is life or death. And just like what we do here in the podcast and the work that we do, our webinars, even in the book that I have out there last September, we're trying to educate people to think ahead, to be proactive, to be intentional, to be thoughtful, to not be caught off guard, to identify what could happen and heck the pandemic we did not know.

I don't think anybody had that on their radar, but what do you do when the financial markets start being very volatile and it's uncertain and you're in a situation you don't want to be in, how do you act. Who are you and what do you do at that point could essentially be life or death. That's why today, I think that it's important that we talk about, like you said, up front, we're not epidemiologists, we're not physicians, but we are folks that are in charge of making decisions on a discretionary basis as fiduciaries for folks investment lives. So, we stay very educated with lots of research that we bring into the firm and lots of opportunities to understand and learn about the things that are going on that will affect those financial markets.

And without question, the status of a vaccine is one of probably the most important things we could be talking about today.

Steve Sanduski: Yeah. And I think a good place to start here would be with what's happening in the sports world because we've seen the NBA has been playing, we've seen the NFL has been playing, even the College Football has started to play some games here. So, Matt, what are you seeing here as it relates to some of the sports? What's happening there as it relates to COVID-19?

Matt Wilson: There were so much talk on whether they're going to play or not, and what's going to happen. What we found, that the professional organizations have actually helped foster some of the technology and the developments towards bringing to light certain contact tracing methods and also testing that is working. The NBA actually helped fund a lot of the different types of nose, throat swabs, saliva tests because they wanted to play. And so, they wanted to come up with something and they kind of worked with Yale to come up with these tests. And now, the testing is a big deal.

And testing has been kind of peaking here in the US around 600,000 to 700,000 tests a day. Some of that's relative to symptoms. If there's less people who have symptoms, they are getting as many tests, but also, there's a capacity issue there too. And we're finding companies are coming out with, and actually very soon, some cheap tests, 15 minute results. And it's allowing people to feel more comfortable going and participating in doctor's offices and doctor's visits and things like that, that are requiring these tests prior to coming in, so they make sure everyone's safe.

The NFL on the other hand they've done their contact tracing. I don't know if you've noticed they wear wristbands that monitor where they're at. And it's a German company that came up with these wristbands and they actually developed them to use in large factories so that they can monitor their employees. And if there's an outbreak somewhere, then they could kind of quarantine those employees and prevent the spread of the virus. And the NFL kind of picked up on this as well and it's working, it's working very well. I mean, we're not seeing cases, some explosion of new cases in either of the professional teams.

Steve Sanduski: Yeah. We are seeing a little bit of action happening at the college level, but hopefully they'll pick up on some of the things that the pro sports teams are doing to keep things under control there. So, let's talk about the vaccine. Let's talk about how our vaccines developed and then how are they distributed to the public?

Matt Wilson: So, this is directly from the CDC, you start with the exploratory stage, the preclinical stage, clinical development, regulatory review, and approval, then manufacturing, and then finally with quality control. Now, the clinical development stage is where we are hearing the most about currently. And that's the three-phase process.

Phase one is when small groups of people receive a trial vaccine. Phase two, the study is expanded and it's given to more people who have characteristics of those who the vaccine is intended for. And then phase three, it's given to thousands of people and it's tested for safety and results. And we are hearing now in the US that there are four promising vaccines in phase three, which is very important because that is really what leads us to larger distribution.

This process does take some time because the pharmaceutical companies, I mean, one, they're testing this out and while they're starting to see some results, they're building up their capacity to manufacture it too. I mean, they don't put the cart before the horse and create all this capacity manufactured before they understand, is this something that we need to continue to pursue, or is this not working? We need to pair back.

Bill Keen: Matt, these are 30,000 plus patient trials. Are they not? This isn't something they've thrown together with a very limited amount of people, is it?

Matt Wilson: That's right. They are very large trials, 30,000 and potentially a lot more. And where we are now is there's this concept of emergency use authorization. That process is basically a midway step between allowing patients in clinical trials to receive it, to getting approval. So, it expands the use of the vaccine beyond the trials, without receiving FDA approval. The FDA has some requirements. They want to see at least two months of data, especially in multiple dose vaccines. We're looking at these phase three results here, and they want to have at least a 50% reduction in risk of the vaccine or at least in solving the vaccine to think about approving it for emergency use. So, it's a way to speed up the process, but again, in a safe manner, because I think as I talk to people and we kind of take clients' temperatures around, "Hey, how are you feeling about-

Bill Keen: So to speak.

Matt Wilson: ... Yeah, "your risk level? And then also, if a vaccine were to come out, would you take it?" There is a lot of people that are just hesitant right now because they just don't understand the risks. They want to be safe with it, but also know that this is something that has a lot of economic impacts and of course, health impacts too, to getting this pushed out in a timely manner.

Bill Keen: Steve, would you take a vaccine if one was approved? Let's say one of these four that are in stage three, would you take the vaccine or would you wait? We've done a lot of asking, I'm just curious about what your opinion is on it.

Steve Sanduski: Yeah, I would wait and I'm not an anti-vaxxer by any means.

Matt Wilson: Sure.

Steve Sanduski: But I feel like I take pretty reasonable precautions. I feel like I'm in pretty good shape. I feel like there's probably other people that are at higher risk category

than me that probably need it before I do. So, I would definitely wait. I think that's one reason. And then a second reason is, yeah, I'd like to see if there's going to be any side effects from it. So, I'm not in a hurry to take it, but I would envision at some point I will.

Matt Wilson: Yes.

Steve Sanduski: Yup. All right. Matt, so you talked about the vaccine, so let's talk about the treatment. So, one of the good things is early on with the pandemic. We were seeing some pretty terrible death rates from this, but it seems like even though the number of cases has spiked up again here recently, it's not as deadly as it was early on. Now, I know there are some reasons with maybe a lot of younger people are getting it and they tend to not have as bad of a case, but I think we're also improving some of the treatments that we have. We're getting a better understanding of the virus and how to treat it. So, what are you seeing in terms of the different types of treatment we can be looking at here?

Matt Wilson: The first one is an antiviral treatment. So, it is people that have COVID-19 and then how do we stop it from continuing to reproduce inside their body? So, that was the treatments that we saw with the-

Bill Keen: Remdesivir?

Matt Wilson: Remdesivir was one of them. And also, they were trying to use some of the alternative drugs that were used for malaria and lupus too to kind of prevent that because it's like, "Okay, we have people that have it. So, we're just trying to stop it from continuing to infect them in a worse way." The other is where people are more familiar with when it comes to a vaccine is antibody treatment. So, that is where the antibodies are created to mimic, essentially this is kind of technical here, the spike protein, and that's the protein that allows the virus to bind to and infect other cells. And so, they're trying to mimic the immune response is if you were confronted with the virus and build up those antibodies within your body.

And then lastly, what we have what most people are familiar with is really what is the vaccine and that's not necessarily giving the patient the actual virus, but you're just giving them a part of it that gives your immune system a clue as to what it's fighting against. And the idea behind that is then the patient mounts their own immune response to create their own antibodies. And then they're able to fight this off in a much better way, in a stronger way, over a longer period of time.

Steve Sanduski: Yeah. And with the idea of the vaccine, it's really kind of amazing when you think about the human body's ability and its response to be able to fight off infection. So, we're just allowing the body's natural mechanisms to be able to do that. So, it's really pretty amazing when you think about how our bodies are

designed. So, okay, Matt, I am going to ask you the 64 million or \$64 billion question here, which is, when can we expect a COVID-19 vaccine?

Matt Wilson: Yeah, that's what's on everyone's mind right now. And so, according to the World Health Organization, there are about 33 vaccines that are in clinical testing, and then there's over 100 that are preclinical. So, they're not even being tested on humans yet. So, just kind of focusing on those ones that are in the clinical testing periods, there's about eight of them that are showing very high likelihood to be impactful. And there are some criteria to look at it to say, "Well, if we have these eight and we think they're impactful, what are we looking at?"

Well, one, they have to have the ability to enter into late stage development. So, showing the results of its people or showing good signs in the early stages, which is leading to more testing into larger groups that leads to phase three trials. But then also, are we able to manufacture it as well? Because if there's a vaccine out there and a specifically one relative to COVID-19 and our capacity to manufacture it is only in the tens of millions, that's essentially not enough. We have to be in the billions of doses when we think about this on a global basis to be able to essentially wipe it out, or at least vaccinate everybody against it going forward.

Now there's been some media discussion around ones that are developed in China and Russia. They don't necessarily have the same testing requirements and everything, and the data is not as clear or so. We're not as confident that they've advanced as far as the other ones that we have here in the United States.

Bill Keen: It might be kind of tough to find too many in the US that would want to take a vaccine that was brought over by China and we don't expect.

Matt Wilson: I mean, to Steve's point earlier, about waiting and seeing, I think there'd be a lot more waiting and seeing if a vaccine wasn't created here in the United States. We have a very strong buyer farmer of industry. And some of them though are having clinical trials outside of the US. It's just certain areas I think are a little bit better when it comes to the trustworthiness of the data.

Bill Keen: Right. No rush for that matter.

Matt Wilson: Exactly. Now, it is looking like emergency use authorization, as I mentioned, there's four of them in phase three that we could see that in December. That's not that far away as we get later in the fall and the winter here to see that. So, that is very good. And essentially, they're taking healthy individuals, their volunteers, and they're injecting them with the treatment and they're showing strong levels of antibodies. And they're able to create the antibodies in the same way as someone who's had COVID-19 and recovered from it.

So, the data is pointing to, "Hey, this is working, we've created something that's mimicking the response that the body would naturally have if it was infected with COVID-19." So, that is why I think we're very close to hearing something announced in the next few months when it comes to, "Hey, we've got something that actually works." Now, then it's distributing it and getting it out there and getting people vaccinated is the very next step.

Looking at the different types of solutions, there's pros and cons. One of them is a new technology and it's called RNA. And that treatment needs to be frozen. So, after which creates a whole nother logistics kind of nightmare about getting that distributed on time in a way that doesn't prevent the vaccine from going bad. So, it's a pro that this is getting created, but it's a con kind of that we may not have the infrastructure in place to be able to make that sufficient.

Bill Keen: Especially for folks in certain regions around the world. I would see that could be a difficult task.

Matt Wilson: Yes, exactly. Now, of the four that I mentioned in phase three, though, a couple of them they only require refrigeration, which is very common, so that's already in place. Now, the other factors too, are a lot of vaccines are two doses. So, you take one dose and then three to four weeks later, you take another dose.

So, having a one dose solution would be even better. And again, one of the phase three trials has a vaccine that has that. Now, there is a common theme that the pharmaceutical industry wants to work together on this.

And so, if we were faced with a situation where only one of the solutions was approved, they probably don't individually have the capacity, the manufacturing ability to distribute it to the entire country here in the US but even worldwide. So, it is believed that the pharmaceutical industry would come together and help that manufacturing process out to be able to deliver, we're talking two, three billion doses around the world.

Bill Keen: Oh that would-

Steve Sanduski: That would be nice to see, we get to that point.

Matt Wilson: Yes, yes. Yup. I think it's good to see that. Not every company is just in it for the dollar in it for themselves. They are able to work together. It's not like they aren't going to make any money off of it, but again, they're willing to work together. And several companies have already talked about creating this on a not-for-profit basis.

Steve Sanduski: And you're specifically leaving company names, I can tell that today. We didn't brief on this before we went live. But are you doing that on purpose, Matt? And I think it's okay that you are because we don't want to create some sort of-

Matt Wilson: That's right. I mean, one, there's a lot of different companies involved in this and two, whether one's a good investment or not is kind of irrelevant, it's more about where are we at? What are the solutions?

Steve Sanduski: Got you. Yes.

Matt Wilson: Yeah. We have a lot of options out there. Here in the United States, we've already prepaid for 800 million doses. That's through our Operation Warp Speed Program. So, we have more doses than we would even need here for every individual here in the United States. So, that is another encouraging sign. Again, we're throwing a lot of money at this to get the solution out.

Steve Sanduski: Yeah. I think that's a good point to make there, Matt, is that the federal government has been actively involved in this and lots of dollars have been allocated to this and made available to some of these companies that are working on these vaccines to try and get this thing cranked out as fast as possible. So, I'm glad you shared that. All right. So, we're talking about vaccines. There's also this idea of herd immunity. So, people have been talking about that. So, what does that look like?

Matt Wilson: From a high level, enough people got infected or have the antibodies and there's less contact points for the virus to latch onto. So, it just naturally kind of goes away on its own. Well, we can also get to herd immunity through vaccinations. It's estimated right now about 70% of the population would get a vaccine. Now, the timeline is also different. As you mentioned, Steve, you would get it, you just maybe want to wait and see. And so, if 70% of the population were to receive the vaccine and we're talking Q1 2021 and 70% of the people who received it actually had the results needed. So, again, it's only that it's effective to 70% of it. So, there's 30% of the people who received the vaccine who don't develop the antibodies.

Well, right there, you kind of multiply those together, that gives us 49% of the population that's effectively immune now to COVID-19. And I've seen estimates that herd immunity could happen around 30 to 40% but more likely it's around 60 to 70% of the population would need to have immunity to say, "Okay, this thing is not going to spread anymore." So, there's still a little delta there that we would need to see, and that would be made up, I think, by people that already have it because there are people who have had it and recovered from it. They have the antibodies naturally. And then also people who may not have had specifically COVID-19, but maybe had another version of a coronavirus that have the antibodies to fight it off. If that's about 20% of the population were at herd immunity, I would say by the end of Q1 2021.

Steve Sanduski: So, just one more question for you here, Matt. So, think about the space program from decades ago, all the development work that was done by the government and all the contractors for our space program, ultimately, a lot of the work that came out of that ended up having some really significant use for

the public and for industry. So, is something like that possibly going to happen here as well with all of the development work that's being done with the COVID vaccine? Is it possible that there might be some future benefit for all the work that's being done today that goes beyond just COVID-19?

Matt Wilson:

Yes. So, I mentioned the RNA based kind of solutions and that is new technology, that has not existed before. And they do have some drawbacks right now. They do have to be frozen. They call it plug and play. So, RNA is really just a delivery mechanism and they can inject a genetic sequence into it that does the spike protein and the spike protein then attaches itself to the virus or mimics the virus. And so, it creates the antibodies.

Well, now, if this technology continues to grow and expand, we would then have the ability, the manufacturing, the capacity that's already been created to create a vaccine and distribute it much quicker for other future situations. The way I think of it is like a capsule, and putting something else in the capsule and giving it to everybody.

Steve Sanduski:

Yeah. Well, that's good to hear because we're going to have another virus I'm sure sometime down the road and if we've got some technology that's being developed now that we can use it to quickly turn around a vaccine. That would just be amazing. So, great. So, Matt, thank you. Very, very important information. Thanks for all the research that you've been doing to stay on top of this. Bill, why don't you take us home here? What are some final thoughts that you have for us?

Bill Keen:

Well, we know that all of this has been very confusing and very unsettling this year, 2020. We're concerned about our health and the health of our loved ones and our community. And we're also concerned about the economic markets. And we just want to be in a position to make good, solid quality decisions about our own health, about our own safety, about our financial resources and have confidence in the future.

And I think that having an understanding, having dialogue in an objective format around these things gives us the ability to control the controllable. Like we always say is to say, understand the discussion and make decisions that are in the best interest of you and your family on all these fronts. And again, it's very confusing because we talk about vaccines here today. I anchor back to the flu shot every year. We have to get a flu shot every year because the way it was explained to me is that the strain of the flu evolves and they try to get out ahead of it and they deliver a new vaccine each year.

So, we're hoping that one vaccine takes care of this COVID-19 and it's a forever thing, but the not knowing is what creates anxiety. If we can get our minds around the facts that we do know, it gives us a basis for thinking, and decision making, and planning, and looking toward the confidence in the future that is there if we can get through a lot of confusion, and a lot of the things that we see

in the headlines that are designed to distract and create clicks and sell advertising. I think we've done a decent job with it today.

So, we sure appreciate you all listening into our program. I think we're somewhere, Steve, around 125 episodes now. I might be off by two or three, but it's just an honor. We have so many people that listen to our program and that send us notes. Most of the notes are nice. Every so often someone sends us a note, they disagree with something we say and I like getting those as well because we enter into a dialogue there respectfully as well.

So, with that, we sure thank you all for listening in today, and we look forward to the next episode of Keen on Retirement.

Steve Sanduski: All right. Thanks, Bill. Thanks, Matt. You can get all the details at keenonretirement.com. So, guys, thanks and look forward to the next episode.

Bill Keen: Thank you.

Matt Wilson: Thank you.

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