[**Music**]

Female: Welcome to Conversations on Health Care with Mark Masselli and Margaret Flinter, a show where we speak to the top thought leaders in health innovation, health policy, care delivery, and the great minds who are shaping the health care of the future.

This week Mark and Margaret speak with Dr. William Haseltine, Chair and President of ACCESS Health International, a global think tank dedicated to expanding quality care to all people, a renowned scientist, entrepreneur, and philanthropist. His latest books are must-haves for families grapping with this pandemic, A Family Guide to Covid: Questions & Answers for Parents Grandparents and Children, and a Covid-19 Back to School Guide, two important resources.

Lori Robertson also checks in, the Managing Editor of FactCheck.org looks at misstatements spoken about health policy in the public domain, separating the fake from the facts. We end with a bright idea that's improving health and wellbeing in everyday lives. If you have comments, please e-mail us at chcradio@chc1.com or find us on Facebook, Twitter, or wherever you listen to podcast. You can also hear us by asking Alexa to play the program. Now stay tuned for our interview with Dr. William Haseltine here on Conversations on Health Care.

[**Music**]

Mark Masselli: We're speaking today with Dr. William Haseltine renowned scientist, philanthropist, and president of the global health think tank ACCESS Health International, built on the vision that all people in the world deserve high quality affordable health care. He's also the founder of Human Genome Sciences and serves on the advisory boards of the Brookings Institution and the Council on Foreign Relations.

Margaret Flinter: A former professor at Harvard Medical School, Dr. Haseltine founded Harvard's HIV/AIDS and Cancer Research Institutes. He has written over 200 peer reviewed articles and many books including his latest, A Family Guide to Covid: Questions & Answers for Parents, Grandparents, and Children and a Covid-19 Back to School Guide. He was named one of Time Magazine's 25 most influential global business executives. Dr. Haseltine, welcome to Conversations on Health Care.

Dr. William Haseltine: Thank you. It's a pleasure to be here.

Mark Masselli: Yeah, you know I think our listeners know that you're a scientist and entrepreneur, health innovator, and global health advocate. You chaired the Global Health Summit in Wuhan, China in October of last year, sort of gathering some of the leading scientists in the world. I assume little did you know what was to come just a few months later

as Wuhan became the epicenter of the outbreak for COVID-19. Timing is everything. I'm sure you must stay up at night sometimes just thinking what if that was a couple of months later. But I'm wondering as someone who is part of this larger global scientific community seeking to prevent such catastrophes like COVID-19, how did we fail both as a country and sort of globally in our ability to prevent this one or to better control it, how could we have addressed the response more effectively?

Dr. William Haseltine: I'm the chair of the US-China Health Care Summit, that is an organization that was created as China reached out to the United States to help it address its issues with SARS. In particular, it drew upon the expertise at Harvard School of Public Health and many of my former colleagues there. From that they would send their health experts from all over the country for education and learning sessions. Many of the people who are managing the COVID epidemic in China were trained at Harvard, specifically for that. They even went so far as to give courses to the Central Party School, so there has been a very close relationship.

The other thing I would say about Wuhan and when I think about Wuhan, I'm really sad. Wuhan is a lovely city. It's a garden city. It’s a big city. There are three rivers that come together. It's in the center of China at the Yangtze River. It’s got mountains, it's got forests, it’s just a beautiful city. That's where the Sun Yat-sen revolution began. It's where all LEDs come from and they know it, because at night the whole place is lit up. It's just sad for me because the head of my foundation is from Wuhan. He lost three grandparents in three weeks in January, and couldn't go to their funerals. I was in touch on a daily basis with what was going on in Wuhan in the early days.

Let's transit from that to what's gone wrong in the United States. Things don't have to go wrong, there's nothing inevitable about what's happened in the United States. China had a big epidemic first in Wuhan, about 80,000 people got infected in Wuhan, and about 4000 people died. The numbers outside of Wuhan and Hubei province are virtually negligible. Maybe in their number no more than 100 to 200 people infected, that says something right away they contained it to Wuhan. Now, when I think of the history, everybody hears oh the Chinese covered it up, they did this, that, and the other thing. It is true that the Wuhan authorities covered it up for the first few weeks because they were going to have a big party congress. It was a big mistake. They got fired. When the central government heard about it, they shut the whole place down.

If you compare the US and the Chinese current epidemic, there's just no comparison. On a daily basis a thousand people plus in the United States get infected or reported to be affected. In China, it’s no more

than 30. When you look at the number of deaths, it's over a thousand a day in the US. It's zero to three in China. That's an enormous difference. With the tools we have, not the ones we're anxiously waiting for, you can squish this epidemic down to close to zero. I'm actually writing a piece right now where we analyze how they did that. I'll give you an example of how they did that.

I have a good friend in a senior position, an American who traveled from Frankfurt to Shanghai. There was one person in the flight who had symptoms. Everybody in the plane got on their cell phone a note, show up downstairs tomorrow morning, you're going to be going into mandatory quarantine for up to 14 days from the time you stepped off the airplane. A car picked them up, hazmat clad, took them to a hotel where they were in separate rooms for the 14 days. They didn't see another human being who wasn't hazmat clad, and the only one they did see came to clean their room once a day. In that story, there is no test. There's wonderful contact tracing and mandatory controlled isolation. They had to disinfect their feces and their urine, something we don't even think about, but we know the virus can be transmitted by sewer gas. That's the detail that they have, that's how you do it. It's so far from what we do.

Even if we had the right leadership say you got to protect yourselves, we just aren't simply prepared to execute at that level. The Europeans did a pretty good job. They had a big epidemic. They didn't take it seriously at first, then they realize they had to. They forced people to stay at home. They forced people to wear masks. If you went out in France, and it wasn't your hour to be at the grocery store, you had $1,000 fine or more. The second time you might go to jail. We could do that, but we didn't do it. What did they do? They pushed the epidemic down to not down to zero a day, a couple of hundreds a day, and they're getting the infection back because you got to really push it down all the way.

They're going to have a big problem this fall, and it's already showing up. You have to remember one person started this all epidemic. If you have a hundred people a day, each one of those can start the epidemic and that's just the people you're catching. It's not the people who are really contagious even. When I say you need a good leader in war time or any crisis, one who's clear, one who is credible, compassionate, those are all things that you need in a leader, and we don't have that. Our leader is incredible, and he terrifies his political party to follow his nutty line. It is horrified to see these people who I know, know better. They're educated at our universities. They were my students. They know better, but they're terrified for their political lives.

I'll give you one final number. More people have died in the United

States than got infected in China. When I say that, most people say we can't believe the Chinese numbers. Well, I can see Chinese reality. I see my people who work for me going to movie theaters, going to restaurants, showing up at our offices to work. That's, I think, a long answer to your question, but it covers a good chunk of ground.

Margaret Flinter: Well, we appreciate that. But Dr. Haseltine we are -- though it takes my breath away to say it, we're approaching 200,000 deaths from COVID-19 in the United States. We have this kind of looming date that is already here about the decision about whether to send kids and teachers back into school buildings that were not designed or are not equipped for this level of threat. You wrote this book, a Family Guide to Covid: Questions & Answers for Parents, Grandparents, and Children, to give people something they're really craving, some clear guidelines for navigating these uncharted waters. What insights might our listeners gain from your book?

Dr. William Haseltine: Well, the book is actually kind of -- it's constructed in an interesting way, and the surface is pretty simple, but there's links that can take you right down to the primary source. If you really want to know what all the experts have actually written, you can just link yourself right through. The other thing about this book is it's a living e-book. You buy one and every time you go back it should be updated.

Margaret Flinter: Nice

Dr. William Haseltine: We're continually updating and that's wonders of modern publishing. I'll give you an idea of why that's important. In the first book, Family Guide, we changed about 25% of the questions and answers. Here's an example, if I'm pregnant am I at a higher risk? When we wrote it, the answer was no. In the second edition, the answer is yes. Why? More data. If I'm pregnant, if I do catch COVID I'm getting seriously ill higher, the answer originally was no. It's now yes. You've got to change as more knowledge comes in and knowledge is just pouring in from all over the world. I think this e-book format, a living e-book that continually adapts to understanding new knowledge.

Let me get to the heart of your question, because we failed so miserably in controlling the epidemic, first thing to realize is a pandemic is local it's like the weather. We're used to looking outside or asking Alexa or asking Siri about the weather all the time. Think of COVID like a lethal weather. If there's a hurricane and the analogy is more than 25 people a day in your area getting infected, you hunker down in the basement and you don't even think about going out with your kids, so don't send your kids to school if you're in a red zone. We have maps and we give you descriptions of how to find what your level of infection is in your zip code, in your county. Know what that is and multiply by a hundred to know what your chances are of encountering somebody who's contagious. The reason I say by a

hundred is we miss 90% of people in the way we test. People who are infected contagious for about 10 days, so if there are 10 people in your county, there is thousand times 10 people walking around contagious that your kid or you may infect.

Mark Masselli: I want to pull the thread on that hyper local levels that you're looking at, because you've also written a companion book for families, Covid Back to School Guide, which I think is perfectly timed because you're really saying that it's really about this local environment. I think what we're seeing now, at least with the older kids who are in college, we're seeing already a couple of schools who have said, look at, we've got to postpone this. It's too much partying going on or whatever. Some schools have done it. But I want you to really talk to the parents who have grammar elementary high school children and really approach it in terms of keeping track of the data. There are older teachers who come in, what's generally your advice to parents right now who are really making a Solomon like decision?

Dr. William Haseltine: Right, and they are making it with a lot of different kinds of conflicting pressures across a very broad spectrum of capability. Economic capability, can they afford daycare, are they sending their kids to public or private school. First one is know your community, know what the weather is outside, know the number of people that are getting infected daily. If you're in a red zone, do not send your kid to school. If you are in an orange zone, do not send your kid to school. That might not be the advice the CDC gives. It's the advice I give based on really practical understanding of what the chances you or your kid will meet somebody who's contagious. No matter what precautions you take, you're likely to get infected.

Then in a yellow zone where it is still possible to encounter somebody who's contagious, then you'll make two other judgments. The first one is very clear. Am I in a red or orange zone? I don't send the kid to school. I don't care what they say they can do to protect your kid they can. The second thing is, is anybody in my family, myself, my child or anybody living in the household at high risk for contracting and getting ill if they do contract it? Is somebody obese? Does somebody have asthma? Does somebody undergoing cancer therapy? Is somebody over 75? You make that as your second judgment. If it's a yellow zone the higher the risk that somebody is at risk for infection and disease, the less likely you should be to send your kid to school.

The final thing is, what are they doing to protect my child? There's an enormous range. There was an article that came out on The Boston Globe analyzing all the things the high end private schools in New York are doing. All schools should be doing that. But you and I know that we've under resourced our public education. A lot of the classrooms are overcrowded. When you child's life is at stake you

should know who's in that school. There are hardworking dedicated people, but not all of them. You are putting your child in their care to save them from a lethal disease that could get you and your family. Especially in poor areas are not the safest environments even when there's no disease. It's a terrible quandary that we got ourselves into because we did not control this epidemic.

Then when you re-congregate it pops up again. That's what's happening in these universities, these colleges around the country. It's going to be like popcorn popping. We've just turned to first pops. Wait until a lot of people go back to school. People are going to be upset when their kids have to come home from school and can't go back. The guidelines, I think, are clear, the problem is clear too.

Margaret Flint: Well, we so appreciate your sharing your opinions with us. One of them really is, as you just mentioned about college and university, we've seen what already happened where parents drop their kids off and then kind of had to go back and pick them up in a couple of states. I guess the question is, is it really possible for residential universities and colleges to open up safely or is this really a pause here? The pipeline of getting people through for all of our professions, it's a big loss to close things down for a year. What are you saying to your academic institutions at the college and university level about reopening this year?

Dr. William Haseltine: Initially, most people don't address the need for young people to have sex, and we don't talk about it with COVID. But what are young people doing getting together? That is something you have to look at and you look at really clearly. With AIDS, it was a lethal event. Now it might be lethal too just to hold hands. That's a lot scarier. You put young people together and they can't keep themselves apart, they can't do it, and we have to recognize that. You can say all those crazy fraternity guys, well, it's not just the fraternity guys, it's those, I can guarantee you, it's those nerds too. They have the same urges that everybody else has, and that is why it's especially for the high schools. I've talked to a lot of friends when writing these books, and I think maybe the funniest one is that my 17 year old is convinced COVID is a plot to keep him from his girlfriend, and that's how it feels.

Mark Masselli: I hear from my 18 year old all the time. We're speaking today with William Haseltine, renowned scientist, philanthropist and president of the global health think tank, ACCESS Health International. He's founder of the Human Genome Sciences. He's written over 200 peer reviewed articles and many books and his latest, a Family Guide to Covid: Questions & Answers for Parents, Grandparents, and Children. We've had a number of guests on the show who've really been speaking about this accelerated pace of research and scientific discovery that's associated with this pandemic. You yourself were

really on the forefront of genomic research that led to the development of drug protocols now used to control HIV and AIDS. I'm just wondering how you look at, one, the vaccine development, and then the second, what are the unintended discoveries that might be coming out of all of this research foundational level of new discoveries that might be out there?

Dr. William Haseltine: For me, it's like a summary of all the things I've done in my career, from fundamental molecular biology right through to public communication, and the interaction between universities and pharmaceutical companies, drug development, etc. I developed drugs for infectious diseases. I developed the drug to protect us from anthrax attack, and actually that was the first drug following 9/11 that our new legislation allowed us to do. We had legislation in place. They made it possible from idea to FDA approval in two years. Yeah, I don't know if that's warp speed, but it's pretty darn quick, because we put in a whole pathway for accelerated development that would protect us against bio weapons for which we had no defense.

It was my post office that got attacked. I used to teach a course on anti chemical biological warfare. I know about this stuff. Put together a group and in two years we had a drug, had it approved to protect us against anthrax, so I've been here and seen how it's done. But vaccines are really a little bit different category from most drugs, and the reason for that is you're treating people who are fully healthy and young people, old people, and who is most vulnerable to this disease are the older people. But it’s also a special problem because this gets in through your nose. But anybody who's fought AIDS hand-to-hand like I have for a long time comes to respect the virus. The natural history of HIV it gets in you, you make a huge immune response, T-cell, B-cell every kind of cell and you don't stop it. The question there was why do you think a vaccine is going to stop it? But we still, 35 years later, have not figured it out.

How about COVID? The virus is a coronavirus. We know they have a special trick. They get into you and a year later the same guy comes back and gets you again and gives you another cold. That's nature. I can tell you if you're an immunologist and you look at what's happened to the people who are infected with this virus, it's growing. If you look at SARS, there's nine different proteins we already know about that mess with your immune system. Some of them mess with in two or three different ways. The one thing that we don't have is the 35 years of research that we have on HIV/AIDS or coronavirus, we just didn't do research on coronaviruses. We had a brief flurry around SARS and then people couldn't get funded anymore to do the work.

How does each one of these at least nine and probably 12 viral proteins mess with your immune system? What does that tell us

about the immune system and how it controls itself? HIV taught us fundamental things about how cells do things and viruses just adapt to that. It turns out that the AIDS virus has a special way of getting its messenger RNAs from the nucleus to the cytoplasm. There's a protein that the virus makes that actually attaches to signals. It's a whole level of regulation. We had no clue of it. We'll get the same harvest when you go deep into these viruses.

I'll give you another puzzle. When you do a PCR test you're measuring genome RNA, and one of the big puzzles is you can measure genome RNA for many weeks after infection, but you can't find viruses more than 10 days afterwards. What's going on? They can't be detritus RNA sort of fragments, because they don't last very long. These things keep on going. This is a mystery. The way we test is cockamamie. We use a very expensive research oriented therapeutically oriented test to screen. There's only a short period of time when you make enough virus that you're contagious. You don't need the most sensitive instrument in the world, PCR. You can do that with something equivalent to a 5 minute, 10 minute pregnancy test. They should cost 50 cents to take 15 minutes. Everybody takes it every day if they want, when they go to school. Why don't we have those? We could have made them long ago. In fact we can produce 100 million a day. Those are what we should have, so you spit on a little card and you check 15 minutes later of the color if you're infected or not. That's coming. But why don't we have it now? Another major failure, and it's a conceptual failure. I mentioned earlier, we probably missed 90% of the infected people by testing the way we test now.

Margaret Flinter: Well, Doctor, I wonder if I could just pivot for a moment to talk about a reality that you have sought to address throughout your long career and that’s the deep inequities that we have in access to affordable quality health care for a large sector of the world's population. You're the co-founder of ACCESS Health International, a think tank dedicated to leveraging scientific discovery and technology that improves access to quality health care for all people. We would welcome your sharing your vision that drives that work.

Dr. William Haseltine: I've always been interested in global health. As a molecular biologist and drug developer, tried to find some way it will be comfortable for me to work on those problems. Also driven by the realization that there was so many wonderful opportunities in science that I could see open up through my lifetime work in the genomic work, the precision medicine, the use of robots to speed the work of drug discovery, I mean, just fantastic things we can do. Really, every year, there's a new chapter opened up of wonderful technologies that speed our ability to understand treat and cure disease.

My fear was that as prices in the United States and health rose and

people didn't have the benefits of a investment we're making, the impetus to continue that discovery would fade. I think we've seen some of that. Even though our budget of NIH is very healthy, and it should be what it is, it's something that's bipartisan and I think it's one of the best things we do, it's not a guarantee. I was really worried about the fact that in the United States there are many people who are going to say, I'm not benefiting from this research. Then if you look around the world you understand that in most parts of the world getting access to good health is not about getting the latest drug, it's about getting any drug. It's about getting access to any doctor.

I was on a board at a place called One World Health and we developed an old antibiotic to treat visceral leishmaniasis in India. They got approved in India. However, nobody ever would benefited from that because where it was needed Bihar had no infrastructure to deliver. You have a region of the world that needs it. You solve the problem conceptually but not practically. Those experience led me to say it's really important to get the whole health system right, and so we started doing research. The way I did the research was to find what works best around the world. What is the best health delivery system, highest quality, lowest cost? Answer clear, Singapore, one quarter of the US cost and the top five of the world. I wrote a book about how they did it.

I tell you the reaction. I gave it to Mayor Bloomberg and he's got a good sense of humor. I handed him the book. He said, why did you write it? I told him. He said, what makes you think people want to know? That is pretty profound comment when it comes to these kinds of books. If you look around the world, you find some great examples and you look in this country, you see great examples. I believe that from years of doing deals, collaborations, talking to governments that if you are lucky enough to have the right information you can find people who've already decided they need it. I've come to the conclusion, I can't influence anybody's desire to do something but if they have that desire I can help them do it.

Mark Masselli: We've been speaking today with Dr. William Haseltine, Chair and President of ACCESS Health International and author of just released a Family Guide to Covid: Questions & Answers for Parents, Grandparents, and Children, and a Covid Back to School Guide, two extremely important resources for families navigating everyday life through this pandemic. You can learn more about his work by going to www.accessh.org, and you could find his books at the website William Haseltine. Dr. Haseltine, thank you so much for the scientific research and discovery you've brought, but also today for your clear and consistent message and the compassion that you bring to everything you do, and also for joining us on Conversations on Health Care.

Dr. William Haseltine: Well, thank you very much.

[**Music**]

Mark Masselli: At Conversations on Health Care we want our audience to be truly in the know when it comes to the facts about healthcare reform and policy. Lori Robertson is an award winning journalist and Managing Editor of FactCheck.org, a nonpartisan, nonprofit consumer advocate for voters that aim to reduce the level of deception in US politics. Lori, what have you got for us this week?

Lori Robertson: President Donald Trump exaggerated American's comparative success battling the Coronavirus, falsely saying in a press briefing that the US per capita death rate is lower than most of Western Europe. The President made his comments in an August 10th press briefing at the White House saying, "we have fewer deaths per capita than the United Kingdom and most other nations in Western Europe and heading for even stronger numbers". Trump is right that the US, which has had about 50 deaths per 100,000 people has a lower per capita death rate from COVID-19 than the UK, which has had 70 deaths per 100,000 people. But he's wrong when he adds the same is true of most other nations in Western Europe.

According to statistics compiled by Johns Hopkins University, the US has done better on cumulative per capita deaths than Belgium, Spain, the UK, Italy and Sweden, as well as two tiny microstates Andorra and San Marino. But the US also has done worse than France, Ireland, the Netherlands, Switzerland, Luxembourg, Portugal, Germany, Denmark, Monaco, Austria, Finland, Norway, Iceland and Malta. The following day Trump altered his claim during a press briefing to exclude the New York Tri-state area from the nation's per capita death figures.

It's not clear why the President would remove New York, New Jersey and Connecticut from the country's statistics, and then compare the per capita rate to other countries that aren't being given a similar handicap. While Trump says that the US is heading for even stronger numbers, it's worth noting that deaths per capita will only grow for nations as more deaths accumulate in ongoing outbreaks. That's my fact check for this week. I'm Lori Robertson, Managing Editor of FactCheck.org.

Margaret Flinter: FactCheck.org is committed to factual accuracy from the country's major political players and is a project of the Annenberg Public Policy Center at the University of Pennsylvania. If you have a fact that you'd like checked e-mail us at www.chcradio.com we'll have FactCheck.org's Lori Robertson check it out for you here on Conversations on Health Care.

[**Music**]

Margaret Flinter: Each week Conversations highlights a bright idea about how to make wellness a part of our communities and everyday lives. When Wichita Kansas nurse practitioner Michael Wawrzewski learned of the harsh and often fatal conditions that expectant mothers endure in Sub-Saharan Africa all because they live too far from a medical clinic he thought there had to be a way to fill that need. He came up with a solution, Clinic in a Can, transforming shipping containers into fully equipped mobile clinics and operating rooms that can be shipped anywhere in the world where there's a need.

Michael Wawrzewski: When you walk in the inside, you will believe or think that you're inside at the clinical environment for which maybe you're in an emergency room or an ICU unit. They look exactly the same.

Margaret Flinter: Wawrzewski learned from his early iterations that gas power generators could be problematic and low resource areas and switched all of his portable clinics to solar power, which he says was a game changer.

Michael Wawrzewski: There's no part of the world that does not have sunlight, and so solar power has become the cornerstone of how we power clinics so that now every piece of equipment including the air conditioners, we can run it off of 500 watts of electricity, which means six solar panels on the top is enough to run a clinic for 18 hours.

Margaret Flinter: Since its founding a decade ago, Clinics in a Can have been delivered to war torn Sudan, to earthquake ravaged Haiti, and more recently to Santa Rosa, California, an area decimated by the wildfires that also destroyed the main community health center there. Santa Rosa Community Health Center CEO Naomi Fuchs says that the portable clinic provided a lifeline for her patients, and it was a godsend for her providers.

Naomi Fuchs: This has been an outstanding way to respond to emergencies and to set something up very quickly.

Margaret Flinter: The roughly 120 square feet shipping container clinics are designed to become a permanent fixture in low resource areas.

Michael Wawrzewski: We equip it with the best equipment and we ship it as a completed project that once on the ground within 20, 30 minutes it’s ready to be used.

Margaret Flinter: Clinic in a Can, fully equipped with medical and surgical equipment ready for deployment anywhere in the world providing quality state of the art medical facilities in a low resource area. Now that's a bright idea.

[**Music**]

Mark Masselli: You've been listening to Conversations on Health Care. I'm Mark Masselli.

Margaret Flinter: And I'm Margaret Flinter.

Mark Masselli: Peace and Health

Female: Conversations on Health Care is recorded at WESU at Wesleyan University, streaming live at www.chcradio.com, iTunes, or wherever you listen to podcast. If you have comments, please e-mail us at www.chcradio@chc1.com or find us on Facebook or Twitter. We love hearing from you. This show is brought to you by the Community Health Center.

[**Music**]