**Harlan Krumholz:** Welcome to *Health & Veritas*. I’m Harlan Krumholz.

**Howard Forman:** And I’m Howie Forman. We are physicians and professors at Yale University, and we’re trying to get closer to the truth about health and healthcare. This week we will be speaking with Jason Schwartz, an associate professor in the Department of Health Policy and Management at the Yale School of Public Health. But first we’d like to check in on current health news. What has gotten your attention this week, Harlan?

**Harlan Krumholz:** Howie, you may know that I’ve got this fascination about sleep and what the role of sleep is, why we need sleep. I mean, it’s not been my major academic focus, but going without sleep has been a major competitive advantage in trying to get work done, but it’s always been accompanied by a concern about what would it be doing to my health and what does it mean to deprive yourself of sleep.

Anyway, a couple articles have come out recently that I thought were terrific around illuminating some of the issues around sleep, and I thought I’d at least just share some of them. Two of them were focused on this issue of how sleep relates to obesity and waking. In [one case](https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2788694), they took a bunch of people who were sleeping about six and a half hours a night, and what they did was they randomized them to an intervention that extended sleep for about half of them by about an hour or so. They actually wanted to get them even up higher, but they were able to get them a little bit more than an hour more of sleep a night, and over a really short-term study, just a couple weeks, what they noticed was that the people who were sleeping more consumed fewer calories. Now there’s about 300 fewer calories a day, but there was no intervention there around diet, but they were assessing diet in both groups.

And so this was an additional clue that going without sleep sort of somehow stimulates people to consume more. There was [another study](https://pubmed.ncbi.nlm.nih.gov/35361348/#:~:text=Conclusions%3A%20Sleep%20restriction%20combined%20with,predisposes%20to%20abdominal%20visceral%20obesity.) in which they did the opposite. They took a bunch of people, youngish—from my perspective—youngish healthier people, and they divided them up. This was a really small number of people, something like 12, and what they did was they did a design where each person was their own control. So they took them, they measured some stuff, and then they had randomized them to continue doing what you’re doing or less sleep, and then they flipped it. But the lower amount of sleep was about four and a half hours.

So this is the opposite of the last one. Last one: let’s lengthen your sleep. This one: let’s shorten it. And what they found was that the people they shortened sleep in, again, only over a couple weeks, shorter sleep was associated.... I guess the way I should have said the other article was, people consumed less when they got more sleep. In this study, when people slept less, they consumed more. So the people who got down to four and a half hours again consumed about 300 calories more and had actually no change in total fat, but more abdominal fat deposition, both superficial and deep fat, than the times where people were sleeping more. Again suggesting that there are these strong metabolic effects.

And then finally, there was [a really good study](https://www.nature.com/articles/s43587-022-00210-2) that came out of the UK Biobank. Now this is a study that is being performed within the United Kingdom where about 500,000 people volunteered to give blood, give information, and then subsets have undergone imaging studies, and it’s created this remarkable data resource. And this group from China actually dove in and saw, how did self-reported sleep, the amount of self-reported sleep, relate to brain structure, to cognitive function, to physical function, and a whole range of different outcomes. And they found that almost for everything they measured, on average there was an optimal point, that is, too little or too much were associated with worse than the optimal point. What do you think that optimal point was, Howie? How much?

**Howard Forman:** Seven and a half hours.

**Harlan Krumholz:** Seven hours. So how many years have we been saying seven hours seems like about the right amount? Some people talk about seven to nine. We talk about seven. Obviously there are some people who just, by their own biology—and they investigated this, by the way—there’s some genetics associated with this, have more or less need, but the average was seven hours. So anyway, for people listening, I thought this was a really good paper that sort of reinforced the general wisdom of saying that people should be getting about seven hours of sleep, getting a lot more, getting a lot less, probably not best for you in the long run. And anyway, I thought these were a good set of papers.

**Howard Forman:** I’m excited to introduce Jason Schwartz. Jason Schwartz is an associate professor in the Department of Health Policy and Management at the Yale School of Public Health. His research focuses on vaccines, vaccination policy, medical regulation, and public health policy, focusing on how scientific evidence translates into policy. His research has appeared in *The New York Times, Washington Post*, CNN, NPR, BBC, *Time,* and more. Before Yale, Professor Schwartz was the Harold T. Shapiro Fellow at Princeton University Center for Human Values and served on President Barack Obama’s Presidential Commission for the Study of Bioethical Issues. He is currently a member of the State of Connecticut’s Governor’s COVID-19 Vaccine Advisory Group. He has degrees from Princeton University and the University of Pennsylvania.

And when I was reading over your bio and your publications, I was struck by how prescient you have been. You have been writing about issues like vaccine hesitancy and about vaccine adoption, and even how our government’s ability to synthesize information and do it in a way that conveys trust is so incredibly important. And you were writing this like 15 years ago. And I’m just curious, for this moment in time right now in 2022, how are we doing compared with how well prepared you thought we were? What have we done right? What have we done wrong with our vaccination efforts for COVID-19?

**Jason Schwartz:** Oh, boy. Well, first of all, it’s great to be with you. Thanks for having me. Yes, it’s been quite a time for those of us who have been thinking and writing about vaccines and vaccination policy. These past few years have sort of brought a focus and a renewed sense of purpose to work that a small but sort of noble group of us had been thinking about for a long bit of time. I think it was surprising to hear the outgoing NIH director, or now recently former NIH director, Francis Collins, mention sort of his surprise at the challenges the vaccination effort has faced over COVID or the concerns and his surprise at the level of vaccine hesitancy and the politicization of the vaccination effort and the barriers that it had created—because we knew this was coming.

We knew that vaccines, because of this unique role that they play as both medical interventions and public health interventions, and the ways in which they’re entangled with all sorts of questions about our responsibilities to one another and the role of government and protecting public health, and how we know what we know about the safety and risks of medical interventions, that vaccines have been this crucible for challenging issues in public health, in policymaking, in healthcare, really since their creation. So sad to say, I’m not terribly surprised by the fact that we’ve seen the challenges we’ve faced in a broad, equitable, robust vaccine rollout.

But I still think the level of vitriol, the rancor, the way in which it’s become sort of almost part of a right/left orthodoxy, that’s new and different, and I think that’s caught me off guard. So that’s how I sort of think about where we are with respect to these challenges of vaccination programs a year and a half into the vaccine effort and two years into the pandemic.

**Howard Forman:** So what have we done particularly well or that you feel like we did what we should have done and where did we fall short? We must have some lessons learned at this point.

**Jason Schwartz:** I’m smiling because I taught a course here at the Yale School of Public Health on vaccine policy and politics, and Howie, you’ve asked one of the questions that was on my final exam, asking our students to imagine they were applying for a job on the White House COVID Vaccine Task Force and answering this very question, so I’ve been reading lots of responses to this effect. And I think the students have hit upon the themes that I’ve seen as well. You know, let’s not understate what a remarkable triumph the research and development was in 2020, that the idea that we got to where we got by the end of 2020 with two and then three highly effective, safe vaccines, two of which used a new vaccine platform, that we were able to get those through testing without cutting corners on the evidentiary standards to get them authorized. We were able, not as smoothly as we would’ve liked, but we were able in pretty short order, within about 16 weeks after that first authorization, to have vaccine supply that exceeded vaccine demand.

Those are remarkable triumphs, and it’s hard to imagine how bad a situation we would be in sitting here in 2022 if not for those successes. Good work, good investments, some good fortune as well, and lots of technology and research before COVID-19 that got us into a good position. So that’s been a triumph. I think we saw a couple challenges, and I’ll just focus on the vaccine effort, but these are connected to all of our public health responses to COVID. We were certainly caught flat-footed as a country with respect to that initial period of time in January and February of 2021 where all of the efforts that went into getting the vaccines tested and authorized was not met with a similar effort to get those vaccines into arms as quickly as we were able to produce them.

That mass vaccination push should have been underway. Those plans, those infrastructures should have been put in place well before the first vaccines were ready to be distributed. And so we caught that period of time where we literally couldn’t get vaccines out as fast as we were making them. Thankfully, that was short-lived, and we were able to move through those supply constraint weeks pretty quickly. But then since then, I think we’ve hit a wall of all sorts of challenges of trying to get movement and acceptance for the vaccines from what’s proven to be a particularly obstinate segment of the population where our policies, our tools, our measures, our incentives, our attempts at legal mandates have either been rejected, ignored, struck down by the courts, and we find ourselves in a spot right now that’s perilous because we do have a significant fraction of the population who has had zero doses and, even more troubling, tens of millions of Americans who did complete the primary series but haven’t yet been persuaded at the importance of at least the first booster dose as a really critical adjunct to their adequacy of their protection.

And so those are unique challenges, but it does suggest that the messaging has been confusing and complicated and the efforts to continue to sort of underscore this primary importance of vaccines probably needs a reboot, frankly, as we look ahead to the summer and fall in the sense that we might be at this again with a need for another push through vaccines on a large scale.

**Harlan Krumholz:** You know, Jason, I feel we’re really lucky to have you at Yale U and actually a cluster of colleagues who are focusing on this issue that’s of such importance to the country right now and has been important for a while, but it had been brought into bright relief more recently. You’re one of the people on the faculty who is able to manage both outstanding scholarly work and to be able to communicate to the public and to be able to bridge that gap. Anyway, I just wanted to say that out loud that I really think it’s so important, especially in public health, for you both to be pushing forward the science and the concepts as well as being able to translate those in ways that might affect policy or people’s behaviors as they learn and hear about the information you’re conveying, and really appreciate that.

One thing I was wondering whether you’d be willing to share with listeners is just a little bit about your path because I think what’s interesting to me is that you have a PhD in history and sociology and a master’s in bioethics. And actually, if I would think what would be the perfect combination of background to help prepare someone to actually engage the public, to push forward scholarship, and to help us get vaccines in people’s arms would be someone who had a sense of what’s happened in the past, someone who understands sociology, how populations and people sort of interact, and then with a firm grounding in ethics. But how did you get there? I see so few people with this kind of a combination of background.

**Jason Schwartz:** Oh yeah. Well, thanks. No, it’s been circuitous, to say the least. I’m a professor of health policy in a school of public health and honestly I have no training and never took a course in either of those fields. But what I’ve been thinking about throughout my career is how health and medicine and public health are structured and organized and delivered. And how folks use evidence, think about evidence, digest evidence, process evidence, think about values and value judgments, and how they evaluate questions about risk and safety and value and cost-effectiveness, and that’s what ties my work together. And it began, as we were talking a little bit about before we recorded, I was a Latin major in college, but a pre-med, and went straight to medical school after my undergraduate years at the University of Pennsylvania.

And during those two years of preclinical medical school coursework, I was fascinated by the structural and systemic and cultural and political and historical aspects of health and disease, but I found that actually the day-to-day work of clinical medicine was not what caught my attention. So I started taking courses in bioethics at Penn with the wonderful program and department there, and that scratched my itch as something that felt interesting to think about these really hard questions about what our healthcare system looks like, the moral and ethical judgments embedded in how we structure and pay for and deliver healthcare. And just the hard questions that don’t have easy answers that aren’t the product of algorithms but are products of considered judgment.

So I didn’t want to be a philosopher or political theorist. I was too grounded in sort of the practical policy implications of how we think about health and healthcare. And fortunately, again still at Penn, there’s this wonderful program in the history and sociology of science and medicine filled with folks who are thinking about just that, about how knowledge gets made and used and deployed and evaluated in our scientific systems and our healthcare systems and beyond. So that got me the opportunity to begin thinking about this process of evidence to policy in medicine and health, and off we went.

**Harlan Krumholz:** Let me ask you something about this, just before Howie jumps in, just to sort of finish my thought about this. So we bemoan the state of public health in this country, and we are constantly feeling frustrated that we’re not doing better and things aren’t moving faster and so forth, but you’ve got this arc of history and this perspective on this. Isn’t there an argument to say that actually it’s never been better? I mean, it’s not that we don’t feel that we could do more, but when you look at the speed with which we created vaccines, the degree to which we disseminated them, our focus on equity, I mean we of course feel horrible that there are these massive inequities and disparities, but at least we’re servicing and talking about them, trying to address them, as opposed to maybe where we would’ve been 40, 50, 60 years ago, even when people were experimenting on certain populations without even involving them with their autonomy.

Does it give you optimism? What do you see about this arc of history to where we are today in public health? I mean, is there a reasonable argument that we’ve never been better, or should we be bemoaning the state of it, or can both be true?

**Jason Schwartz:** I think both can be true. I think what we find ourselves in, as we are probably more acutely aware, and thank goodness we are, of the opportunities, the needs, the urgency of continuing to address blind spots in our healthcare system and deficiencies and inadequacies in ways that probably evaded and escaped notice decades ago, and only now, and through looking backwards respectively, we can say, “Oh my goodness, think about our shortcomings.” I think we’re much more sensitive as a community, as a healthcare and medical and scientific community, to thinking about the hard work we still have to do, while at the same time, we can recognize that there is this vigilance, this attention, committed researchers and practitioners and policymakers who are calling for reform and improvements and trying to do things better, both in the quality of care, the equity of care in our health system and beyond.

So I think we’re making great progress while at the same time we’re recognizing that the mission goes on and there’s a long list of areas where we need to continue to keep our head down and continue moving forward.

**Howard Forman:** We have a lot of experience with vaccines now, not the COVID-19, but I mean just going back over decades and you’ve written around about many of them. One of the ones that’s always been most interesting to me, that turns out you wrote many of the papers on it, were the several rotavirus vaccines that came out. And in one of them, I think you wrote this about nine years ago now, you struck this very optimistic tone where you said basically that the fact that there are side effects that affect children could be a real threat to a vaccine program, but instead, by being really open with the public and having discourse about the risks and benefits and why the benefits far outweigh the risks, that we have had successful adoption of that vaccine, that this was a positive step forward.

Now this is nine years ago, and right now we’re in the same corner where I would argue that we’ve been extremely transparent about side effects, about outcomes, about risks and benefits, both in adults and in children, but the sheer volume of misinformation, disinformation, aggressive antivax individuals, and probably bad actors out there have made this so difficult.

First, just tell us briefly about the controversy over rotavirus at the time and what can we do going forward to push back against misinformation or even good information that is misinterpreted or misrepresented?

**Harlan Krumholz:** And because you have the answer, this will be the most popular podcast of all time. I just want to just take a pause while you tell us about the answer to misinformation because I think that’s what Howie just asked you.

**Jason Schwartz:** Yeah. Yeah, if only I had the answer, we’d all be in a better place. You know, the rotavirus vaccine briefly, really interesting, complicated story, but it’s this instance of where the vaccine safety surveillance systems were able to detect a rare but serious adverse event after the licensure of a vaccine against a rotavirus in 1998, one that, intussusception, as it’s called, that can be serious, can be fatal, and that prompted a rapid evaluation and assessment by our public health officials of saying, “Can we move forward with this vaccine, which can do a lot of good, not just in the United States, but around the world, notwithstanding the fact that we know that it creates this severe, even potentially fatal risk?”

The decision made at the time was that moving forward with the vaccine and that circumstance just wasn’t viable and that vaccine was withdrawn from the market, and a subsequent generation of rotavirus vaccines are now available. That got me thinking about the way in which these value judgments, these questions about risks and benefits and how safe is safe enough, and what kinds of risks are we willing to tolerate and when should risks be determined by policymakers versus left to individual patients and families to consider. It’s a great example of lots of questions I’ve been thinking about throughout my career.

But to your second point, Howie, I do think, yes, the information environment has been just a cacophony over the past year or two, especially around COVID vaccines. And it’s hard. I can imagine how hard it is for folks who don’t live and breathe this stuff every day to just make sense of where the facts are, where the guidance is, what’s the best practice, what’s the best recommendation. It’s been a deluge. I continue to believe that a good, sound, strong decision-making deliberative process that does lean towards transparency in terms of helping communicate why decisions and guidance documents and policies are made by health officials, that continues to be essential at helping to distinguish the facts that help inform decisions, what we know, what we don’t know, and what we’re still learning, gives us that base to be able, hopefully, to respond to the hypotheses, to the allegations, to the factless claims that are competing for oxygen in this environment.

It’s been a challenge. It’s been a strain. No more so with respect to vaccines to help sort that out and work to be done, but I still think coming back to a transparent, open, deliberative process that is honest about the facts that we know and what we don’t know about how to think about vaccine dosing strategies, or who boosters should be recommended for, or when. Messy and noisy as that process is, it gives us the best fighting chance for confidence in the outcomes compared to something that is left opaque and in the shadows and outside of public scrutiny.

**Harlan Krumholz:** I wanted to ask if you thought, looking back on all this time, is there anything you would’ve done differently that you think could’ve made a difference in the way in which all this got deployed, or I’ll broaden it a little bit, you and us, I mean all of us together. We’ve been writing a lot about it as a faculty and trying to possibly influence, but as you look back, is there something we could have done more that would’ve... I mean, a million deaths, a million deaths, all these excess deaths, the U.S. performed arguably one of the worst, and I would say the worst given the resources that we had and where we were positioned. It’s sort of like we were watching a train crash in front of us and we’re sitting there on the sidelines trying to redirect the train, but the train was still going to go. And granted, there could have even been more loss of life if some things hadn’t happened, but you have had a really front-row seat on this and have lots of good thoughts about it. Was there something different we could have done?

**Jason Schwartz:** I don’t know if there was a single inflection point and a decision made or decision not made that got us on this pathway, which it does seem like we’ve been trapped on it from the beginning. But I still find myself surprised as I think about other sort of just transformative moments in our history, ones before my lifetime. When you read and hear about sort of the World War II effort and how sort of the world stopped and folks pivoted their attention and their energies to this idea of shared sacrifice towards a common goal and this notion of solidarity and communitarian spirit to help support this critical moment in our history.

And I contrast that with a sense here that our individualist ethos that’s so dominant in so much of our American discourse seems to have largely gotten the better of us and this idea about the extent to which one worries about how their actions affect other people or what they can do to help protect their community, that seems to be a tough sell in our moment that we’re living in now. And I think that’s led to so much of the fatigue and disgust and disdain with sacrifices that were fairly modest. Wear a mask, use testing before you go on public transportation or you’re going to gatherings, these sorts of things that even if folks might feel at relatively low risk of severe cases or infections theirselves, things that we can do, little things, that in the aggregate could make a difference.

I think we’ve lost that, and I think we’re seeing the consequences of it. So, I think about these policy decisions in the context of what’s been a dispiriting sequence of events that I think explains so many of the challenges there are and hard to know how to undo that or how to change that narrative, or whether this is the path that we’re going to find ourselves on as sort of a polity for the foreseeable future.

**Howard Forman:** So, I want to end on an optimistic note here, and as Harlan pointed out, you have an eclectic background. I mean, you have this clinical background, a humanities background, social sciences, so on. I’m really curious to hear what your advice would be to a younger you who sees this world in front of us right now with so many challenges. What advice would you give them about career paths, about choices of didactic education, experiences—you’ve had them all—what advice would you give?

**Jason Schwartz:** I have lots of these conversations given that eclectic background with students, undergraduates, master’s students, and the answer is almost always to keep an open mind, keep doors open for as long as you can. We all have from an early career stage and lots of our students here at Yale and others have clear ideas of what they’re going to be doing at 30, 40, 50, and beyond. And in some cases, that might happen and that’s amazing, but what I’ve found are just these opportunities that pop up, these paths, these relationships or classes, or invitations to contribute to something, sets into motion interesting connections, and not just professional connections, but intellectual connections and ideas that I never could have anticipated 5, 10, 15, let alone 20 years ago.

So that idea of availing yourself of opportunities, saying yes. We all have to say no as life gets more complicated and busier, but early in one’s career saying yes to things that seem intriguing and being open to the ways that can expose you to new ideas and opportunities. That served me incredibly well, even though the path again has not been one I plotted out when I was 18 or 20 or 25 but has proven to be immensely rewarding and gives me things to draw upon as we’ve talked about today and how I think about the things I think about and what I think about that I’m really grateful to have and I couldn’t have gotten it any other way. So it’s been promising and rewarding as much as it’s been unpredictable.

**Harlan Krumholz:** Last question just as we end here. Where do you think we’re going to be a year from now with regard to the pandemic?

**Jason Schwartz:** I think we’ll be continuing in this kind of uncomfortable liminal space where we’re still probably going to have a lot of virus circulating. We’re still going to be dealing with challenges. We’re still going to be having to sort of think about the tools at our disposal, and I think we’ll be continuing to really emphasize vaccines and other strategies. But I think this will be a long tale in terms of what the next six months, year and beyond looks like. And I think as most folks agree, this is a virus we’re going to be living with for many, many years to come and managing that risk with the tools that we have—pharmaceuticals, vaccines, and otherwise—I think will be something we have to saddle up for a long time to come. Hard as that might seem and fatigued as everyone is understandably at this point.

**Harlan Krumholz:** No, that’s really appreciated. And thank you so much for taking the time to be with us. And it’s been great talking with you.

**Jason Schwartz:** Pleasure to talk with you both. Thanks for having me.

**Harlan Krumholz:** And that was great with Jason. So now let’s transition to our next segment, and Howie, what’s on your mind generally?

**Howard Forman:** Yeah, so obviously this is a big topic in the news right now. There are serious threats to our global economy right now, including supply chain issues, closure of trade between Russia and most of the rest of the developing world, inflation pressures, which derive both from fiscal and monetary stimulus, as well as from these sort of geopolitical events. We see this day to day in the stock market, but we also see this in the news and healthcare has not been spared at all.

### We may not have unique reliance on certain commodities—for instance, like oil—but the changes in the world over the last two years have had a brutal impact on our ability to sustain our already dysfunctional healthcare system. And I give a few examples. One, our own hospital just announced that they’re expected to lose about $350 million this year, which is an enormous sum. We’re not a particularly large corporation where a few billion dollars in annual revenue, $350 million is enormous. The Mass General Brigham, a competing academic health center and one of the most prestigious in the world, where you trained, just announced $193 million loss in the first quarter alone. Personnel are in short supply, often burned out, making recruiting and retention a greater challenge than at any time in my personal lifetime.

And just recently, due to the COVID outbreak in China, IV iodinated contrast media, the contrast that we use to do CT scans and other diagnostic procedures, is in fragile enough supply that we locally and nationally are talking about how to ration it or otherwise change how we deliver care because of this shortage and impending shortage. And then add to this the shortage of baby formula and the macroeconomic factors are having a direct impact on health and wellbeing of a large swath of our country. So while we attempt to adjust to these immediate crises, we also have to start to consider whether these financial challenges and shortfalls in access should force us to rethink healthcare financing in our overall country.

How do we develop sourcing of critical elements like the baby formula or contrast that are not overly reliant on one country or one company, and how do we afford the higher prices that are associated with changes like that? I went to business school in the 1990s after medical school. I’ve been a fan of globalization. I’m not ashamed to say that globalization has brought billions out of poverty and/or greater access to goods and services that were once out of reach to the all but rich. But many of the changes that it brought, along with the efficiencies imposed by capitalism, have proven to come with substantial risks that we need to reckon with, and there are no easy answers here, but we will be in a worse place if we don’t attempt to address them with an eye beyond a single election cycle.

**Harlan Krumholz:** Yeah. I think those are really good points, Howie, and just to hit on some of them, I was on a panel this week at the American Association of Thoracic Surgeons with the CEO of Cleveland Clinic, who was suggesting that 95% of the hospitals in this country this year will lose money. I don’t know where that came from, but he was expressing concern about that. The commissioner of the FDA, Rob Califf, was also on that panel, and he actually couldn’t even concentrate on what we were talking about on the panel because he was being pinged about the infant formula issue and again, supply chain problems that we’re accruing from that and the concentration of the supply chain within a few groups, like you said, contrast, a whole range of issues that are coming up right now that I think are going to give us pause about the way in which we’ve tried to optimize supply chains in the past.

And look, globalization is fantastic. It just happens to require a world at peace and sort of a harmony among nations and a willingness to engage positively. That’s not the only reason we’re having problems. Of course, the COVID itself is some of those issues, but it’s something that’s going to be rethought. I fear that all that’s happening right now is causing retrenchment in the kind of relationships that different countries have. I mean, many of us are hopeful that those connections would serve to promote peace because everyone had economic interest in the whole, and so we’ll have to see. But I think all those are really great points. I really appreciate you bringing them up.

**Howard Forman:** Thank you.

**Harlan Krumholz:** You’ve been listening to *Health & Veritas* with Harlan Krumholz and Howie Forman.

**Howard Forman:** So how did we do? To give us your feedback or to keep the conversation going, you can find us on Twitter.

**Harlan Krumholz:** @hmkyale, that’s H-M-K Yale.

**Howard Forman:** And I’m @thehowie, that’s at T-H-E-H-O-W-I-E.

**Harlan Krumholz:** By the way, I don’t know if you guys have noticed, but Elon Musk is [tweeting at Howie](https://twitter.com/elonmusk/status/1526975113597489154) now, so that’s a very popular handle. Anyone whose listening can go take a look and see what Elon Musk is saying about Howie.

**Howard Forman:** I’m not sure that our listeners really want to see this, but we’ll put it in the link nonetheless.

**Harlan Krumholz:** *Health & Veritas* is produced with the Yale School of Management. Thanks to our researchers, Sherrie Wang, Jenny Tang, and to our producer, Miranda Shafer. So Howie, guess what? We’re at the end here of the academic year and our terrific researcher Sherrie Wang’s about to graduate, so we want to wish her congratulations and say hello to Jenny Tang, our new researcher, another terrific individual Yale student.

**Howard Forman:** I really want to thank Sherrie personally. I mean, she was my student. We hired her into this role. We didn’t know what we were doing when we started this about nine months ago. We didn’t. And Sherrie and Miranda have helped us enormously to get us to where we are right now. Thank you, Sherrie. Congratulations on graduating from Yale, and welcome to Jenny. We look forward to a great year ahead.

**Harlan Krumholz:** Sherrie, do you want to say anything to our listeners?

**Sherrie Wang:** Yeah, of course. Thank you, Howie and Harlan. Those words mean a lot to me, and I’m constantly in awe of how hard you guys work to translate what you guys know to the public, and I hope you continue to do that. And I’ll definitely tune into the podcast.

**Harlan Krumholz:** And Jenny, thanks so much for joining us. And do you have anything you want to say to listeners?

**Jenny Tang:** Yeah. I’m just super excited to keep working on this and hopefully fill in Sherrie’s shoes this next year, but so excited to work on this.

**Howard Forman:** That’s so great. We’re lucky to have you.

**Harlan Krumholz:** We’re lucky to have both of you, and Sherrie, we’re sad to see you go, but thanks so much.

**Sherrie Wang:** Yeah, and thank you all for giving me this opportunity. It’s truly been a pleasure.

**Howard Forman:** Thank you.

**Harlan Krumholz:** Talk to you soon, Howie.

**Howard Forman:** Thanks Harlan, talk to you soon, and welcome to Jenny.