Vickie Rice

Marsha Hystead: I'm going to introduce Vickie Rice. I've known Vickie for a couple of years now. We were given the amazing opportunity to work with her organization out of Tulsa, Oklahoma and help them with their storytelling and letting the world know a little bit more about them.

I'm going to read this because it is pretty impressive. Vickie is the vice president of innovative strategies for CareATC. And CareATC is a national leader in working with companies, employers and municipalities, school districts around the country and bringing health clinics into their organizations and near their organizations. What it does is it results in some pretty astonishing health improvements for employees. Well I'll let her tell you about it. But it's at a lower cost. So she has a lot of things to share with us.

She's a 20-year veteran of the benefits business and an expert in health care claims, analytics and product management. She is passionate about using data and technology all in the realm of helping to save lives. And she has told us many stories about how that happens. She spent a decade in key administrative roles at Blue Cross and Blue Shield of Oklahoma and then served as product manager for data and analytics at BenefitFocus where she helped create innovative data tools to help both benefits administrators and consumers make fact-based decisions about their health care benefits.

In 2015, she joined CareATC as director of analytics and her current role is VP of innovative strategies. She has brought her passion for using data and technology to help patients live their healthiest lives to the organization's product strategy team. Leading them in their mission of offering world class health care services and solutions to their patients, providers and employer clients.

So, give a warm welcome to Vickie Rice.

Vickie Rice: Thank you so much Marsha, that was very kind of you. And thank you to the whole Hailey Sault team for bringing us all together and giving us this opportunity to talk about these things and exchange these ideas with each other.

I too am going to talk about trying to move us from "sick care" to "health care." But I am going to talk about it from a slightly different viewpoint.

My experience is in data and technology. And I want us to be able to use those things at a primary care level to make a difference for the people that our providers are trying to take care of.

My title is innovative strategies. Most of the time when I am introduced to people they say, "Ooh, that's a cool title. What is it you do?"

So, several years ago I was the product manager at a software company for data analytics related to health plans. And, I got a call from a man named Philip Kurtz. Those of you who were here last year, you might remember Philip from his presentation. And, I had worked for Philip previously and he called to tell me, "Hey, I've become CEO of this new organization and we're focused on primary care and population health management. And after learning the business I figured out if we can bring data, if we can bring technology into the primary care space, we can really make a difference. We can change the way health care is delivered in America."

So, this spoke to me. All the way back in my very first job, Marsha sold me out and said it was 20 years ago, it's important I tell you that I was 12. Why did you all laugh so hard at that? That wasn't nice. But all the way back 20 years ago when I had my first job at Blue Cross as a claims examiner, I felt like if I could pay this claim properly, I could make a difference in the life of someone who at a minimum is having a bad day. At maximum they might be going through something catastrophic in their families. And, you know, I can play some small part in helping them feel a little better. Not a big thing, but it was the way that I felt really rewarded by the work I was doing and made me really care about doing a good job.

And all the way through my career, I have looked for how will this next opportunity allow me to make a bigger difference for people or allow me to focus on making a really big difference for a few people. And I have to admit that by the time I was the product manager for an analytics platform for health plans that connection was pretty tenuous at that point.

So, when I had this call from Philip who said, "Hey come work with me, I want to change the way we deliver health care." I was all in. You couldn't stop me.

So, I started out working data with Philip and figuring out how do we get all the data that's out there available about a patient and put it in the hands of our providers? And, after a couple of years we added a product strategy to that and so now what I get to

do as innovative strategies is I get to go out to all kinds of different conferences HMS and connected health and all kinds of really good conferences where a lot of technology is on display, and I get to see what cool things people are creating and imagining to use technology and data to make a difference. And then, I get to go out to various health systems and see how they're utilizing those tools. How does this stuff work in the real world? Does this idea work in the real world?

And the best part of it is that I get to come back to CareATC and bring these ideas, and I have a team of amazing people that I get to work with there. And we work together to figure out how to make those things make sense in a primary care setting.

It is by far the most rewarding opportunity I have ever had. Not a lot of data analysts which is what I am by training get to spend their time literally helping to save people's lives, one step away from actual point of care.

So, it's pretty rewarding stuff and very exciting for me. And, so what I wanted to talk with you guys about today is—I think Nick did a great job of setting up for us that we are a "sick care" system and how can we be different about that and certainly addressing the social determinants is an important piece, but I don't think it is the only thing we need to do.

When we think about health care in general, health care is just the delivery of medical services to people or communities. It's one of the most important things a society does. But yet it is one of the few systems that we have that are built where we sit and wait for the catastrophic event to happen before we do anything about it.

If you think about other examples, even just with education. We put children in school, elementary school so that they are prepared for high school. And we put them in high school so that they are prepared for college. They go to college to be prepared for the workforce.

If you think about air travel. There is a whole checklist that the crew goes through to ensure that the plane will make it safely to its destination. We don't wait until we are halfway through and say, "Uh-oh, need a new plan."

Even the automotive industry—you know when you buy a new car you get a list of you need to do these things to your car this often, so that your engine doesn't seize up or your tires don't go flat. There's even a whole set of bells and whistles that are dedicated to helping us know that we need fuel so that we don't wait until we're

halfway to our destination to check and see—do we have any gas? Are we going to run out? Okay, I see some of you do wait. That's okay. I mean, you still get my point. Right? Actually, those of you who wait are proving my point a little bit.

All of these systems of course have failures. But the systems themselves are designed to ensure the successful outcome as often as possible. And, unfortunately I don't think health care is that way. I think that health care is set up with the bulk of the resources waiting for the bad event to happen. And, I want to be sure that I say that I know that we have preventive services and I'm not discounting that and I don't want to—absolutely, I don't want to knock oncologists, cardiologists, surgeons and the teams and facilities that support them, all of that stuff is important and is going to be needed no matter what we do. You know, thank goodness for these people. Gosh, I'll be bold, thank God for those people. Okay.

But what I am saying is that if we took some of those resources and we shifted them to the primary care setting, we could avoid a lot of waste in that other system. And I'm going to take it out of the system and out of the dollars for a minute and I'm going to say, we could make a real difference for humans.

Every person who ends up with a major event. That event just doesn't happen to that person. They have families. And those families go through those things. And I believe that the changes we could make to bring technology into the primary care setting can save moms and dads lives. Can save children's lives. And I don't think there is anything more important that we could be doing as a society than focusing on that.

So, I had a lot of support for why I think the system is lopsided. But one of the main ones is statistics, right. And there is a ton of statistics I could provide to you, but I'd like you to all stay awake and I know you're not all data people like me, so I'm only going to give you a couple. One is the Association for Aging tells us that 80 percent of all older Americans have a least one chronic condition. And they go on further and they tell us that 77 percent of older Americans have at least two chronic conditions. Now, in the spirit of Mark Twain, I read that and I said wait, what this statistic is really saying is three percent of people (older Americans) have one chronic condition, 77 percent have multiple chronic conditions. So, that's kind of amazing.

And then if you go further, they will also tell you to Nick's point 20 percent of our GDP is spent on health care, well 75 percent of that is spent on treating chronic conditions and only 1 percent is spent on improving overall health.

Now this can certainly spark kind of a chicken and the egg discussion around the fact that people are already sick so we have to spend our money there. Or, are we having to spend all of our money there because we didn't spend it in the right place in the first place. You know, and like the chicken and the egg, we may never know what the original cause and the original effect were. But, I believe that the current cause is that our health care system is built lopsided and that the current effect is the declining health of our population.

One of the reasons I believe that is just simply based in the structure of the system itself. ICD-10, everybody know ICD-10? So that is the diagnosis code system. Right. I'm sure most of you in this audience remember all of the hullabaloo a few years ago when we traded from 9 to 10. We went from having 10,000 codes to having over 65,000 codes. Now as a data person—this is amazing! Ya, right? My statistics will be so much more accurate. I'll be able to classify left arm breaks from right arm breaks, be able to tell the difference between people who have a first encounter and then have a follow-up visit. Great stuff! But unfortunately, we still don't have it right. We have 68,275 codes-ish and some of the most important and most prevalent conditions in America have no code.

So, this is a pretty in-tune audience with health care statistics. Does everybody know that 30 percent of adult Americans are prehypertensive? Did you know that 84 million American adults are prediabetic? That's 40 percent. Did you know how many diagnosis codes are dedicated to those two things? None. None!

I mean 40 percent you guys. Where there are three of you together look to your left, look to your right, one of you is prediabetic and you probably don't know it. The CDC tells us that 90 percent of pre-diabetics have no idea that they are marching towards a lifetime of diabetic management.

Now, I want to take a couple of minutes and explain my soapbox. I want to tell you why I am passionate about the fact that these two things don't have codes. First of all, they're "pre" conditions. What does that mean? That means, you're developing the condition. But is also means you could stop the condition from developing. If you knew about it. If you took care do to so.

So, the reason this really upsets me from a coding perspective. Well, what I'll do is I'll show you a few examples of things that do have codes and you can see why maybe there is some passion here.

This is the code for pecked by a chicken. And, I'm going to tell you guys, there is also a code for pecked by a chicken subsequent encounter. My feeling is if you didn't get rid of the chicken after the first time he sent you to the hospital, you deserve the subsequent encounter. But really, I'm not saying that this does not happen in America. Maybe even daily. What I am saying is I don't think it happens to 84 million people a year. Though this is an important code—probably for a subset of providers in certain places in the country—where prehypertension, prediabetes would be important for every provider all across the country.

So, this brings me to my next code. This is the code for injured at the opera. Now again, I'm not saying this doesn't happen. I mean think about everybody's all dressed up, you're in your high heels, your long dresses, and there's always stairs. And, that is not ever a good combination. This is another code that probably has a need for a subset. But I'm going to go out on a limb and I'm going to say to you guys, I think there is more people in danger from the chickens than from the opera.

And that brings me to my last example, which is the code for injured in a spacecraft crash. There are literally 38 people in America who could be impacted by this code. Thirty-eight, I checked. I went to NASA's website and I counted all of the active astronauts, there's 38 of them. And they have their own code. But again, they might need that code. Let's hope not, but they might need that code. All I'm saying is, if there's 38 people and they get their own code, then a condition that impacts more than 38 percent of adult Americans should have a code dedicated to it.

In the long run, we're just talking about codes and statistics, right? What does it matter, you might ask yourself? Who cares if there's a code, if a person has a condition, they have a condition, they should get treatment.

Well, I'll tell you why and you guys know this answer. In our current fee-for-service system. In our current insurance claim based world. If you don't have a code, you can't bill for it. If you can't bill for it, you don't get paid for it. And, if you don't get paid for it, you can't do it.

Now I realize there are a handful of primary care practices left that are independently run and can make their own choices. But they're still businesses. But, most of our primary care is now managed through larger health systems and those larger health systems have productivity requirements for those primary care docs. It's a lot like billable hours for lawyers. You know, you've got to meet a certain number of encounters. And those encounters have financial targets tied to them. And, ultimately

you know maybe a doctor could squeeze in a little off the books care if was just one or two patients that were impacted by this, but it's 40 percent of Americans—adult Americans.

There isn't time in the day for them to meet their targets and address these needs. And so, that brings me back to our system is lopsided, with the services, the resources, the money, the technology focused on the "after I'm sick" part.

And, when we talked about this earlier, I was really just talking about what primary care has time for. I'm going to move into the second part of my thesis now. And, I want to talk to you about the fact that I believe technology is one of the main keys to making that scale be balanced again. To putting power in the hands of primary care physicians to be able to actually make a difference.

Now we all know that our industry, the health care industry in general is slow to adopt new technology. I was amazed when I went to work at CareATC and found out we had to print and then fax documents between doctors, offices and hospitals. Because that was only four years ago. You know, what was wrong with email communication or secure record transfer. But, when we do start adopting, it is the health systems that generally drive those investments. They have the funds to spend. What I wanted to do was give you some examples of some of the really cool technology that I've seen working live in hospital systems. And then talk about what could we do with that to improve primary care.

The first one is eConsults. Is anybody familiar with an eConsult? This is a software system essentially that is connecting one doctor with many. You could have it set up with an ER doc for example and connect them to specialists throughout the hospital. So, the program that I learned about was using this that was really interesting to me was a patient would come into the ER and the ED doc would manage their condition and input the information and contact multiple specialists throughout the hospital and each of those specialists would give their feedback. The doc would run the tests and do the work that they recommended and ultimately in a lot of cases those patients went home in three of four hours instead of three or four days. Because in a traditional setting, you guys know, the person who needed multiple specialists to weigh in would be admitted to the hospital, and they'd wait for this one to come and do their tests and tag in the next specialist and they'd all collect—and so this patient goes home with the right meds and the right aftercare instructions in a few hours. That's better for the patient. That's better for the providers. But yet, we waited until the patient needed to

go to the ER and potentially get admitted to the hospital before we use this really cool technology.

So, my proposal is, let's get this equipment in the hands of primary care doctors. Every time I as a primary care doc have a patient I think I might need to refer to a specialist, what if I could go online and submit my records, my photos, my videos of this patient to, maybe I'm not sure, is it a pulmonologist or a cardiologist that I need? I can submit it to both at the same time. In a few hours get feedback, get direction. They might be able to tell me run these tests and then take these actions based on those results. Or, they might tell me that patient needs a referral.

But what could that do for us. That could make sure that patients who ultimately don't really need the specialist, don't spend their time doing that and worse than that waiting the three weeks it takes to get the appointment to wonder if they are really sick. And it would free up the specialists' time to focus on those people who need them. Better for the patients. Better for the doctors.

So something similar, but different is what I refer to as connected virtual visits. Connected virtual visits are the opportunity to improve telemedicine. What this is it's a video visit like a lot of traditional telehealth but it comes with this little extra piece of equipment that allows the remote physician to actually hear the patient's heartbeat live, to look in their ears, look down the throat, hear their breath sounds, just everything short of manual palpation you can do through this device. Very cool stuff. Again, hospital systems I've seen using this relate around speciality care, so when you've got a rural based hospital who just does not have access to certain specialties—I find this to be really true around pediatric specialties, especially in rural areas. So, you don't have access to certain specialities, but you're affiliated with a larger health system who has those folks. So, these devices are in the primary care doctors' office and they are able then to set up these telemedicine appointments with specialists. The specialist can do that initial exam live, first hand visualization of everything. Hear the heartbeat and the breath sounds directly and at least make a more informed referral. An awful lot of people get carved out and never need to make the 120 mile one way trip into the city to go see the specialist. And those who do need it, they walk away knowing a little bit more about what's wrong with them and what their problem is and what's going to happen when they get to see the specialist, because they've had their initial consult already. Great program.

But instead of waiting for that to be in place in hospital systems what if primary care docs could use these. Or, what if we could expand traditional telemedicine providers

with these. I know a company that makes this device right here, it's dishwasher safe. So you could, if you were a primary care doc, send one of these home with each patient in your panel. They cost 500 dollars. I'm not saying that's cheap, but I'm saying if you're part of a health system, it's not a lot of money. What if you could send one home with each of your patients and then in the middle of the night when they had a flare-up of something or on the weekend when something went wrong, think about how we could revolutionize the on-call process. On-call results in our doctor getting woken up in the middle of the night, maybe they can write a script, they aren't completely sure it's going to help, and usually they end up scheduling an appointment for getting that patient into the office tomorrow, or sending them on to the ER. But, if they could see the patient, and hear their heart, and take their temperature live, at the minimum they could provide better prescriptions and advice and at a maximum they avoid a visit altogether except for the follow-up visit a week or two later.

And then finally, artificial intelligence. A lot of hospital systems are using artificial intelligence today and one of the main focuses of it is radiology related right? There is some cool things happening out there with being able to store data off of images and that's really neat stuff all by itself. But there are other hospital systems that are expanding their use of this and they are looking into people who are at risk for things to happen while they are in the hospital. At risk for a fall, at risk for a 30 day readmit, at risk for a hospital acquired infection or complication of some sort. And they are doing this, with millions of patients have been through these cognitive learning machines and they're starting to recognize when a patient has these things in common then the machine knows that they are at risk. So, these hospital systems are then able to, once they know this patient has a high risk they can put in protocols to help avoid those negative outcomes.

In fact, there is one company. Some of the most sophisticated cognitive learning machines actually not only tell you who's at risk, they tell you why, and what we're finding is so much of the why is social determinants. So much of it is. And then the really best systems, the company I am most familiar with what they do, they offer suggestions, the machine says in these conditions for people that look exactly like this person these three things help avoid the negative outcome most often. Wow.

So, there is a hospital system in Atlanta that has my favorite hospital based program. What they're doing, they know who's at risk for 30 day readmission. So they are using off-duty EMTs and empty ambulances and they send them out to the neighborhoods and in those neighborhoods, those EMTs are knocking on the doors and meeting face-to-face with those potentially readmitted patients. These are patients that have a

ton of social determinant risk. They don't have transportation so they're likely to miss their follow-up appointments. They don't have other adults living in the household with them, so there is no one to help them remember to take their meds or even help preparing food or they live in one of those food deserts and if they're diabetic and can't get fresh food, what are they going to do? So, these EMTs come out and they check on those things, they monitor their vitals, they check their blood pressure, and have really specific conversations about how those meds make you feel, how's your aftercare going, right? And they know exactly what to focus on with each individual patient because the machine told them what was driving that specific person's risk. Not just, well they live in this zip code, so probably. It's a really cool program. And it's pretty proactive right? I mean sort of. Because still, we waited for that patient to be admitted to the hospital and need post discharge care before we started using the really cool technology.

So, my proposal is let's get that information in the hands of the primary care physician. And, let's tweak the logic to not worry about 30 day readmissions, but let's focus on who's about to go to the ER. Who's at risk, who's on the verge of being admitted to the hospital and what are the three or four things that we could do that would most likely change their health care trajectory. That would most likely keep them out of the hospital system altogether.

There's always going to be sick people. Someone asked the question earlier about the financial incentives, right? There is always going to be sick people. Let's keep the people who can avoid it out of it, so that the resources are focused on the people who need it. And if we move technology into primary care, we can do that. Better for the patients. Better for the physicians. And, I believe in better. And I hope you guys do too.

Marsha Hystead: Thank you so much, Vickie. That was fascinating and if we go back to Philip Kurtz inviting you to come and help change the way health care is delivered in America, what things have you done through your current position that have started to do that?

Vickie Rice: We have done several things. We've married a lot of data with the data that is available inside our medical record system. We have the advantage of being employer sponsored primary care clinics and population health management programs. So, what that means is—I don't want to say negative things about the health information exchange system, but it can kind of speak for itself a little bit, right? We all know that it hasn't come to fruition the way it was envisioned. Great idea, not as great

execution. So, because we are employer sponsored, we actually have the opportunity to get the claim data from the employer. Our primary customer is self-funded, they own the data, they can share it with us. And, I understand the latency issues, but I'm telling you if you're a primary care doc, you'd rather 60 day old data than no data at all. Our chief medical officer, Dr. Hutton, she would tell you all patients lie. Some of them don't mean to, some of them do it on purpose, right? So, maybe they just forgot that they were taking that antibiotic for two weeks, six months ago. But, it might have influence on the decisions the doctor makes today, and they really need to know about it. Sometimes they want the doctor to be proud of them. "I jog 17 hours a day every day, I don't know why I can't lose weight." Other times, they just, maybe they're on a medication that has 26 letters in the name, and they don't know how to spell it and they don't want to be embarrassed that they wrote it down wrong. And, they don't realize how important it is. So, by bringing in that claim data and marrying it with the data that's in the EMR for our docs, when a patient comes in, the doctor has the ability to see has this patient been to the ER, have they been admitted lately? Do they have—we also use some technology, I don't know if anybody is familiar with the Johns Hopkins ACG system? It's an episode grouper, risk assignment system and one of the things that it does is it finds people who have a chronic condition and then it also determines whether or not they are compliant with their meds for that condition. And that kind of data is available to the doc at the time of the visit. And this stuff is important because in this room maybe you wouldn't be surprised, but a lot of folks are surprised at how many patients don't admit they have high blood pressure or diabetes from a prior visit with a different doctor. So, this information then is all available to the doctor and it helps them make more informed and better care decisions. And then I'll be honest and say that the three technology types that we talked about at the end are all technologies that we're bringing in to our organization as well.

Marsha Hystead: Questions for Vickie?

Audience member: So, I work as a pediatric hospitalist at Essentia and I know that a lot of our, though pediatrics, we have a lot more compared to adult, on the adult side probably more acute situations—kids don't come in that necessarily have as many chronic issues, but I think my adult colleagues would also say that a lot of our time is spent with our patients in the inpatient setting is on education. We have more time, the luxury of the time to be in and out and to really gain an understanding of their understanding of what their issue is and their health is. And so we can address that whereas in the outpatient setting time is extremely limited per episode or each encounter. So, is there innovations and technology out there that can help address the

education component and how that happens maybe a little more efficiently? Or, sometimes our hospital admissions are primarily are focused on education.

Vickie Rice: Right. It is a great question. And I'll answer the technology part in a second. Don't let me forget that. But I want to tell you that your point is very valid because in my work with the predicted people who are likely to be hospitalized, one of the top five interventions that is suggested most often across our book of business calls it speak back instructions. And, what it is all focused on is did the patient really understand what you told them to do? So, don't just hand them the material, don't just tell them, make them repeat back to you what they heard, to be sure that they understood what they were supposed to do. So, it is a very common problem. So, technology wise, I've seen multiple different platforms that allow whether it's a provider or some type of health coach or an RN or a social worker to either do video—so, the provider's in the office, the patient's at home or work or in their car, not driving but parked and having video or phone conversations—video is always better though. The face-to-face interaction has been shown to increase commitment level as opposed to just telephonic. But, there are also systems where you can create videos, speaking to the time management piece of it. You can create videos or podcasts or pdf type material and you can send it out directly to the patients that need it. Whether it is the doc or the health coach choosing the patient and sending this very specific thing to them or in our case, what we're doing is we're using a data filter to find everybody that meets certain criteria and we're sending that education out to them—whether or not they've actually been to see one of our PCPs. It just goes through their health and wellness program through their employer and it shows up on their phone. Maybe they'll read it, maybe they won't. But more of them will read it than would've if we never sent it in the first place.

Audience member: In follow up to that, a question in terms of there's been a lot of really outstanding technology that has been introduced into American medicine. And anybody can get up there and talk about their platform and how wonderful it's going to be and it's going to move the bar. The reality is that it hasn't happened. So, I'm going to follow up on your example of this technology that you are talking about in terms of sending videos and things to the provider, to the family. There's a product out there called Good to Go which absolutely had all the power and the potential but did not actually take root in terms of having a significant impact. It's a beautiful technology. So, what's the problem? And, why is it that we have all of these technology solutions, but we aren't really making a significant impact on the end game that we all hope to make? So, I just appreciate your thoughts on that.

Vickie Rice: That's a really hard one. Nick, you want to come do that one for me? Look, kind of what I said earlier, there's always going to be patients who are sick and they're always going to need the impatient care and part of that is because there is always going to be people who choose not to be compliant. There is always going to be people who don't prioritize their health. And, I feel like that's one small piece of why the type of communication technology for education has struggled. But, I think the bigger piece of it kind of goes back to Nick's approach to things. We're designing the outreach from a provider's perspective. We're not designing that outreach from a patient's perspective. "How do I want this information? What would I do with it when I got it? Why would it matter to me?" So, similar to what his organization did to go out and find what matters to this community, maybe that's the approach we need to start taking with these communications technology platforms for patients is what do they need, not what does the health system need.

Marsha Hystead: I would just make a comment about the way CareATC begins working with a patient. And the personal health assessment that is taken comes back to you in the form of a video with a live nurse explaining what they found. And the first thing is you know your cholesterol level. So, first she'll talk about, what do these levels mean? Like what is HDL? What is LDL? And then, if there is a flag for you in any one of the areas, you get a phone call from the doctor. Well, that to me, that's engagement. And so, I think that is pretty powerful stuff.

Marsha Hystead: Nick, do you want to comment?

Nick Dawson: First of all, I think your comment is spot on. Most of the stuff that we've seen for a long time was not designed with the real end user in mind. And I think you nailed that really well. The other things that I see quite a bit is the B to B cycle in health care is insufferable. We put smart start-ups out of business because they can't get on the right legal paper or they don't want to litigate in our jurisdiction. We do these things and they find themselves running out of venture capital because the venture capitalists say this is not a market we want to play in. And then the third challenge that we see a lot is, I wish I had a more elegant way of putting it but, is kind of like an intellectual superiority in the industry where we say, "Your technology can't possibly be as good as our institution full of experts and training." And, so it feels like those three things to me are a big part of the driver of why we aren't adopting stuff as readily.

Vickie Rice: I think that's true.

Audience member: Hi Vickie.

Vickie Rice: Hi.

Audience member: My husband is 26 and he has lost three grandparents from heart attacks and he is already prehypertension with high blood pressure, high cholesterol, things like that. So, my question for you would be as we're talking about preventive care and you mentioned with prehypertension and how many Americans are affected, what would something like that look like under that umbrella, just because he's 26, he's never had any preventive care and now he is already at this point versus how soon could we have known and how soon should we have done different things to prevent something like that?

Vickie Rice: So, he's been diagnosed as prehypertensive? Okay, so that's one of those that he is creeping towards and you know when he is 30, 35 is likely to be full-on hypertensive. So, I'm not a doctor, I don't even play one on TV. I'm not going to tell you what he should or shouldn't be doing. But the difference would be that with a provider having full knowledge of these things the technology, the systems, the AI could identify. He knew his grandparents died of that. There is an awful lot of people who don't realize that that happened and they don't have it checked. So, being able to make that outward call to someone to say, "Hey, we see some risk, we'd like you to come talk to us about it." Because, I think that's something—I mean has his doctor ever called him and said, "Hey, come talk to me?" I think that is something we are missing. Now to be fair to all of the providers in the room, I am going to go back to fee-for-service. And, the amount of time that they have. And, the financial commitments that they are required to meet. And that's ultimately, if I'm honest, that's what needs to change, right? I mean, forget technology, it needs to not be about how many people in a day you can see and how many you can refer into our other systems. But, there are things that you can do if your lifestyle is contributing, but if it is hereditary then he's got to be under a doctor's care and he's got to be monitored and they've got to make the right decisions for him. So, I'm sorry I can't give you a specific prescription for him, but in general my hope would be we would be able to find more people who are 26 and don't know to be worried. I feel like he is in a good spot already because he knows and he can go get a doc to help him.

Audience member: I have a question around technology and data sharing and things like that. I actually work in the field of human services and it kind of exists in a separate silo from medical services. What ideas or thoughts do you have on how those two institutions can actually work together to support a person rather than separately or at odds from each other, like they often do now?

Vickie Rice: That's a great point. I think it is sort of the marriage between Nick's presentation and mine. And, I don't want to do a commercial in any way, but I want to say that we're developing our care model, because we have all these suggestions coming to us—who's at risk and what to do about it and so many of the interventions are socially related, you know, and so much of the risk is driven by those social determinants. And so, we're putting patient advocates in each one of our clinics and that term means different things to different people, but to us it is a person, they might be an RN, but they'll have some social background or they might be a social worker. And, they are going to be the person responsible for that outreach, when we find these problems and maybe all they need to do is make an appointment to come see a doc, but maybe they need some referrals into community based services or maybe they need to see a behavioral health specialist. Or, maybe they just need help getting their groceries every week. Whatever it might be. So, we are trying to marry that. And, what I would want to see happen in America is to have that role in every primary care clinic in the country. Whether that's practical or not in today's fee-for-service world, you know I get that, but that's what I would like to see happen to address it.

Audience member: Hi, we are talking about these kinds of things a lot in our multi-speciality clinic. What we're finding is that our primary care providers just feel so overburdened with all of this. They have limited time, the EMR systems are much more complicated than promised, you know, work life balance and all of that. They need to see X number amount of patients and now they have to pay attention to all the social determinants as well. And, that's an argument that those of us who don't practice medicine, you know we really can't answer, but would serve such a great purpose. So, you know, what kinds of conversations do you have with primary care providers about those challenges?

Vickie Rice: You know we're very lucky that we're employer sponsored and not insurance based. So we aren't fee-for-service, we get an administrative fee to manage our patients and we don't have that burden of you have to see eight patients in an hour. Our docs are required to see two, two-and-a-half in an hour and they have the time to address those situations. But I think your question leads back to the previous answer. If we could have another body in each clinic whose focus was those social issues. And, so you've finished your time with the doc and now you get a few minutes with a counselor of some sort, an advocate of some sort who could help you address some of those things and feed the data into the EMR so that once the doctor figured out what the right buttons were to push on those complicated systems that you

referenced, he could have that information while he's treating the patient next time as well.

Audience member: I'm a nurse practitioner in women's health. I actually lost a job many years ago because I wanted more time with my patients. So, sad as it is to say, I am now a professor at a local college and when we talk about bringing patient advocates into the clinic I want us not to forget also to tag into the best model that Nick was talking about: our local health care system, our city, our largest employer in the city, and the universities. I'm knew at one of the local universities in their graduate nursing program and I've actually got a three-credit, they are paying me three credits' worth to go out into the community to use my nursing services. So, my colleagues and I do different kinds of things. This is so stimulating to me because I've worked in large health care systems, multiple, very interested in integrative, holistic nursing care, functional medicine, functional nutrition and I've been involved in models that have not been successful, primarily because of the insurance set-up and just timing. So, I would say let's tap into the colleges and the city as we look at who could those patient advocates be. And when I think of my role as an NP a lot of my work was coaching and counseling and connecting patients to local resources. I'm just thinking out loud. Thank you.

Vickie Rice: Ya. That's great.

Audience member: I think we keep talking about the fee-for-service but with the changing economy, I think you both alluded to there is also this sort of straddling the fee- for-service with the value based organizations because of how things are going right now, we are having to do both. Putting extra pressure not only on the management, but on the nursing and on the doctoral side of things. So, I was just wondering your thoughts on if the value based concept continues to move forward, do you think that's the right direction to go? And, I think that is why a lot of organizations are straddling both because insurances are sort of saying both, but there's been no clear direction on what movement we'll be going to.

Vickie Rice: I certainly think it's better. I don't know if it's best. But, I think it's better. Because the emphasis is on better care, better outcomes as opposed to number of hours or number of claims that you can submit. One of the biggest problems with value based is that it is mostly Medicare focused. So, what about those working-age people who are supporting the communities and keeping the employers and services up and running? I think ultimately if value based is where we go for Medicare, employer-sponsored plans will have to switch there too, because just as you said the

payors are going to want to have one major system not multiple different systems. But, it is definitely an improvement. Do you have feelings on that, Marsha?

Marsha Hystead: I was just going to ask for a little clarification, being a sort of novice at that. Is that what we are talking about with Medicare for all—what's value based versus.

Audience member: Making sure, spending the extra time with patients to sort of see them. Not really looking at how many encounters you can get into a day like you do for fee-for-service. But really making it the value of seeing a patient and making sure they are getting everything is sort of, I guess, how you could look at it. Medicare started it, but I think more and more health insurers are looking at whether that's where they are going to move to. So, health care systems I think are struggling right now, they are trying to figure out if they have to do everything, which puts more stress on the organization. And trying to focus on what's the best option.

Marsha Hystead: Thank you.

Vickie Rice: Primarily the payments then come from similar to ACO or patient center medical home, the health of the population, more people in compliance with their treatment protocols is how you get rewarded as opposed to number of claims you submit.

Marsha Hystead: Thank you.

Audience member: I think one of the problems with health care systems adopting technology is that it is hard to know and figure out how to then bill, basically, and how to be able to fit that into our current process of billing and compensation and that sort of thing. So, with a platform like eConsult, I think that the idea is great, but you have a length of stay in the ER that is shorter and you don't have admissions that are unnecessary but how does then that consult on the other side of things, how does that get reflected in billing? In situations where that's been used is that possible? And then one other comment sort part of it also is I think that affects the ability to embrace technology is that, I mean I like practicing health care because of the human contact and so I feel like there has got to be some sort of limit, where you've got patients that also really value, and there's lots of value in that face-to-face conversation. So, I feel like that is also probably a limiting factor to the ability to embrace technology in this sort of field.

Vickie Rice: You're right and that's where I was saying earlier the video type telemedicine is usually much more successful, because the commitment level is there when you're making eye contact. But in reference to the billing. There are telehealth procedure codes now and there are consultation procedure codes. I'll be honest with you, when I go to the hospital systems to learn how they're using it, I don't have to bill for it, so I don't spend any time digging into that. My assumption would be that they're billing for it that way. I do know of one system that I interacted with where they hired residents, not hired residents, they used residents for this purpose and in those cases the residents were dedicated to this program and they had two or three specialties where they did that. Now, clearly the residents are going to need help and it's not, you're still going to have patients get admitted. But, the goal is not never have another patient in the hospital bed ever. People need care. We just want the folks who end up in the hospital bed to need to be there, so that the providers are not worn out from taking care of all the people who don't need to be there and can really focus on what they went to school to do. Someone else made the point earlier, everybody went to school and became a provider of some sort because they care about taking care of people. So, we want them to be able to use their time better. There is a lot of things to work out. But, I think we should be trying to work them out. Instead of saying it's hard and we're not going to do it.

Audience member: Just a comment along those lines. I think it's a matter of the system catching up with each other so that telehealth, we do telehealth visits, at The Emily Program where I work and the reimbursement is significantly lower and significantly less successful if it is a face-to-face visit. Not because people don't believe it works, and you're right the video piece seems to work almost as well as in person although in person is still the best. But there's not to your earlier code, there's not quite the right code or it's not a reimbursed code unless it's Tuesday and it's sunny and it's 6 a.m. between that and 2 p.m. That I think our systems have to catch up. And it strikes me the same with value based care, when we have a lot of conversations with payors about value based care and it really is, can you get a better value for what we're paying you for? But the conversation around, what are we measuring, what are we valuing is a really important question and I think that needs to catch up. That some of the measures that we've been asked by payors to measure, like—that's what you want us to collect? That seems a little simplistic. Don't you want a fancy measure or something that actually reflects health versus that measure that doesn't reflect health at all? So, I think it is the matter of systems colliding, we really need to have those collaborations. You know I really love the idea of cities and communities and employers coming together, we really need to have a conversation around what it is that we're measuring and how can we and does it have any meaning that will really take us forward, so that

we're getting there, but it is awkward. We're in the sort of puberty section of sort of telehealth and reimbursement and a lot of these things. So, that's fun.

Vickie Rice: Ya. Great point. Ya.

Marsha Hystead: Puberty is always fun.

Audience member: Great presentation Vickie. I just want to add to one of your examples of coding from a personal experience. My daughter was run over by a deer at soccer practice and when I took her to the emergency room, talking to the admissions clerk and explaining what happened, she looked at me with horror and said, "How am I going to code that?"

Vickie Rice: But, I'm willing to bet that there's a code for encounter with a deer. It might not be as specific as, but I bet there's one out there.

Marsha Hystead: All right, I thank you so much Vickie for sharing your insight with us today and all of you for such a good conversation.