

David Pogue

Moderator: Welcome to Conversations on Healthcare, 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 healthcare of the future.

This week Mark and Margaret speak with personal technology expert, David Pogue, founder of Yahoo Tech and Science host on PBS's NOVA, we will discuss the potential of technology from fitness trackers to wearables and smart watches with EKGs and fall detectors to be game changers in healthcare. Lori Robertson also checks in, the Managing Editor of FactCheck.org looks at misstatements spoken health policy in the public domain, separating the fake from the facts. And we end with a bright idea, its improving health and wellbeing in everyday lives.

If you have comments, please email us at www.chcradio@chc1.com or find us on Facebook or Twitter, iTunes or wherever you listen to podcast. You can also hear us by asking Alexa or any smart speaker to play the program Conversations on Healthcare. Now stay tuned for our interview with David Pogue, founder of Yahoo Tech on Conversations on Healthcare.

Mark Masselli: We are speaking today with David Pogue, the founder of Yahoo Tech, technology, news website run by Yahoo. He is also a columnist for Scientific American and host of Science Shows on PBS NOVA as well as a long-time correspondent for CBS's Sunday Morning. Previously he was the personal tech writer for the New York Times for 13 years and started writing for Macworld back in 1988. He has won four Emmy Awards, two Webby Awards, a Loeb Award for Journalism and an Honorary Doctorate in Music. David graduated summa cum laude from Yale. David, welcome to Conversations on Healthcare.

David Pogue: Well, thank you so much.

Mark Masselli: 30 years ago, you started writing for Macworld and the distinction as one of the most prolific writers and observers of technology, you are great piano player and you have had this impressive run with the New York Times, writing the paper's most popular columns Pogue's Post and State of the Art and then he launched the tech platform at Yahoo. Tell our listeners about the major trends you are watching and we are particularly interested in the transformations that are going around in healthcare as well.

David Pogue: I think the one thing that affects both standard gadgetry that I look at and healthcare is the rise of the cheap little sensor. So everybody says that the innovation of the iPhone in 2007 was you know, it doesn't have keys, it's on the internet all of the time. And inside that tiny little phone, you have tilt sensor, proximity sensor, light sensor, barometer, there is an altimeter, gyroscope, compass, there is like 35 tiny little sensors and these data that it collects can be intertwined and associated in all kinds of fascinating ways in the world of consumer health electronics. Now that I am reviewing a Garmin Fitness Band right now that's no wider than a rubber band. It not only tracks

David Pogue

your heart rate and your sleeps but also your stress levels, your blood oxygen. That leads to the second huge trend which is big health data, the ability to collect gigantic amounts of data from millions of people very quickly, in ways that have never been done before couple of years ago. All of these leads to a movement I have heard it called the Quantified Self. You guys, have you ever had Eric Topol on your show.

Margaret Flinter: Oh yes, a good friend.

David Pogue: His book is so brilliant, it's called *The Patient Will See You Now* and it's about how the power of the doctor/patient relationship is shifting. The doctor is now not the Ivory Tower of knowledge, it's an amazing transformation that we now have insight into our own health, in a way that we never had before.

Margaret Flinter: David, on that note you covered Apple's recent annual product launch event and healthcare definitely seemed to be, I would say the most prominently featured in the year's announcements. We have had Apple COO, Jeff Williams, former guest on the show and he unveiled an Apple watch that not only offers EKG components but a fall detector and other health related features. Maybe it tell us whether you think they might be game changers and I am going to tell you I am sure they are going to be game changers, but I would love to have your opinion.

David Pogue: I mean say for example Atrial Fibrillation, AFib is the world's most common heart rhythm problems, it leads to a lot of strokes and heart attacks and kidney disease and I am reading even dementia. The problem with Atrial Fibrillation is the way you test for it, is at a doctor's appointments, but AFib is intermittent so you might go have the test and the doctor won't see it. The fact that now there is a device that's on your wrist, all of the time and can detect Atrial Fibrillation when it happens, I mean it could save thousands and thousands of lives. There are sensors on the back of a watch now they have hooked that up electronically to the crown, the little knob on the side that you turn. So when you put your finger on the crown and open this EKG app, it will actually generate you know a classic EKG graph that you can submit to your doctor, that's amazing.

The one that I guarantee will save lives, is the fall detection. When you fall it's a very particular motion that your arms do, the watch has an accelerometer in it which is a 3-axis motion sensor so of course it can tell what kind of motion your body is doing. Now if you fall it says, wow it looks like you have had a sudden fall, are you okay. If you say, yes I am okay, then life goes on, but if you don't respond within a minute it starts sending out text to people you have designated as your loved ones. If there is still no response after couple of more minutes, it calls 911 for you and sends your location automatically. We know that for older people who fall when they break something, they are, a lot of times it's the end. This is the ultimate I have fallen, and I can't get up device and it's on your wrist all the time.

Mark Masselli: I think that's a really good point. Actually Margaret we had a great, bright

David Pogue

idea a while ago, that somebody had developed an inflatable belt that also picked up the sensors, when you fell it would inflate the belts around your waist. We obviously admire Apple, Jeff Williams was there suggesting the watch would be the intelligent Guardian of the Galaxy or I guess something rest, but what do you think consumers uptake will be, just the regular folks out across the country?

David Pogue: Here is the problem in particular with the Apple Watch. First of all it's not a huge seller in the first place, I mean, yes you see it on the east coast and the west coast, but it's nowhere near the popularity of let's say an iPhone or a MacBook Air. The second problem is that the people who need this health monitoring most are precisely the older people who don't want to deal with a tiny electronic gadget that's very complicated on your wrist that's hard to see without glasses. You have to take this thing off to charge it nightly, there are grandmother, grandfather in the world who is going to take off her watch every night to charge it and let alone the fact that when its charging, all night it's not guarding your health. There is a big disconnect I think between the complexity and size.

My dad is 90 and we did get him going with a Fitbit and he, wow, does he love that thing. Some of the Fitbits, they also have some of these more sophisticated sensors, they haven't turned on the feature yet, the stuff like the Atrial Fibrillation detection that's coming. This Garmin that I am looking at right now, it has a feature where if it sees your heart rate spiking for more than 10 minutes when you are not exercising, it alerts you and that's super smart because if you are just sitting still and your heart starts going that's probably something. These are much simpler devices with much longer battery life so even if Apple Watch is leading the way, I have no doubt it will trickle down into simpler gadgets.

Margaret Flinter: David, I read a note someone recently, we may have now a 150 billion hours of data from all of these tens of millions of wrist mounted devices that have been collecting heart data among other things for years now. And that there are researchers who are beginning to do a deep-dive into that data, maybe talk with our listeners a little bit about what they are finding.

David Pogue: This is a while, the Fitbit has indeed now collected a 150 billion hours' worth of human heart data and because Fitbit knows your age, your weight and where you live, your activity level, how much sleep you get, it knows all this about you. The press release said, "We have now collected the 150 billion hours of heart data." I contacted the PR people and I said, "So wow, I bet you guys could come up with some amazing insights on the relationship between heart rate and our health." And they are like, "Oh yeah, I guess we could." So it's hasn't even occurred to them. They offered to give me an exclusive deep-dive into this stuff and it was just an amazing ride, they put their top two data scientist on this and came up with these really cool correlations, some of which are brand news, news no one had ever heard before. This is data collected from people who own Fitbit, these are people who have the money

to own a Fitbit and who care about their health enough to buy a Fitbit. This is all resting heart rate data, they explained to me that your resting heart rate is sort of like a thermometer of your overall fitness because it incorporate so many things like your body mass index and how much exercise, your age and your gender and all of that. This is really cool observations that came out of this, one of them is that, women have higher resting heart rates than men across every demographic. And their data scientist says, they don't know exactly why but they think it's because women tend to be smaller and therefore they have a smaller hearts and therefore it needs to work harder, to make the blood circulating, we don't know, this is all new news, so no one has looked into why yet.

Another thing they found and I thought that was really cool, is that your resting heart rate steadily goes up as you approach middle-age and then after about 50 it steadily goes down the rest of your life. That's something we really didn't know about, we are not sure exactly why, but one theory is, you know you have kids, you get busy, worse food, you are stressed out all the time. But then the question is, why does our heart rate drop after middle-age and they had a great theory for this, 30% of us in United States are on Beta Blockers, we are all in blood pressure and heart attack midst, it's an artificial effect.

Mark Masselli: We are speaking today with what David Pogue, the founder of Yahoo Tech Technology News website run by Yahoo. He is also host of Science Shows on PBS NOVA as well as a long-time correspondent for CBS Sunday Morning, you know another thing I am just really excited about is, the whole issue about voice-activated devices you have got the Amazon Alexa, you have got Microsoft Google in it. I am wondering what your thought is, as you connect those sensors you were talking about the Big Data, can we start thinking about the home as a place where healthcare can be delivered. It seems like Alexa or voice-activated assistance might be the vehicle to do that. We hear that the Amazon folks have a whole team dedicated to finding ways to use this in healthcare, but what your sense about this, is it overblown or is it still too early to see the promise land?

David Pogue: No I would say it's underblown there is this entire industry that the tech industry has been following, the Internet of Things, I can't stand that term, it's like I would put on my jeans of blue, like nobody talks like that. It just means putting internet connections into everyday appliances so that you can control them with your phones right, turn on the lights, open the garage door with your phones and they just kept coming out with more and more stuff in this category, but nobody was buying it. The problem was that you had to open up an app on your phone every time you wanted to turn off the gosh darn lights. It was just not effective, it wasn't efficient, it was slow and clunky and complicate. That's the real shock of this Alexa business, is that it has saved the entire remote control gadget industry from itself, because now you just say, turn on the lights in the living room and that's it, play Beethoven in the bedroom, well I guess Barry White. It is revolutionary and think of people

David Pogue

who have trouble with motor control, who have trouble with mobility in the house, I mean there are thousand ways that being able to voice control your environment saved everything.

In fact the news I heard about Amazon, just this week, is that they have 8 new appliances coming out, there is a microwave, dishwasher, they are actually building Alexa into the devices themselves. And already they have got something like 15,000 companies building Alexa into their devices at their Consumer Electronic Show, they were demonstrating an Alexa-enabled house where you could say is the dryer done yet? So it is getting better really fast and it is spreading really fast, to every other kind of machine there is.

Margaret Flinter: Every time we have one of these conversations, I think of all the parents who named their child Alexa, in the last decades you are really seriously thinking about changing that name. Let me ask you, sort of think about the science side of things and not what we wear but who we are and the whole advance in genomics and people in addition to knowing their fitness and who they are, genetically and in combination with their habits and ancestry and so forth. I wonder what your thoughts are there in terms of the degree to which that is also going to inspire people to change their health habits.

David Pogue: I feel like we have very much been in the era of data collection, like all these devices are just scarfing down terabytes of data a day. We are not really figuring out exactly what to do with all of the data and how it is supposed to work. They are out of business now, but there is another fitness band, the Upband and they had this really great idea, they were going to integrate all of this data that the band knows about you, your activity, your sleep, your age and weight and gender and all that stuff and it was going to start offering observations that you would have no other way to know like we notice that when you work out in the morning, you tend to have more deep sleep that night. The Fitbit does a little bit of that, it will say, today you got the most exercise you have all week, but no one is really doing the correlating and the parsing of this stuff, really hasn't begun yet. Yes, we are all talking about the future of super personalized medicine. I feel like we are just at the dawn of this stuff, but because the data is the first step, the parsing can now begin.

Mark Masselli: Speaking of the future, we are seeing a lot of new disruptors coming into the market place, Amazon, Berkshire Hathaway, JPMorgan Chase have pulled together a partnership, you have got Google's parent company Alphabet launching projects, promoting tech-enabled interventions, you have got this whole group of folks coming really from the Silicon Valley side into trying to disrupt healthcare. But healthcare, you are better off yelling down the street to the hospital about your health record than having it sent. Do you think really the healthcare industry is ready for all this great talent? What do you see on the horizon about healthcare innovation and integration of this technology in these new future applications?

David Pogue: We haven't really talked yet about data and privacy and these guys are the

David Pogue

villains right now, the Google's and Apple's and Microsoft, collecting data willy nilly and so we should be wearing. I personally, I am like take my data, tell me cool stuff, I have a feeling that the younger generation tends to be, "Hh you are going to give me free stuff, in exchange of my data, great."

Mark Masselli: I will put it on Facebook for you.

David Pogue: Exactly, that warning said, I do think they stand a great chance of improving healthcare systems, these big Silicon Valley companies, for couple of reasons. One is because they are commercial for-profit entities and they have this gigantic incentive to come up with useful things that touch a lot of people because they are money making outfits. I mean the government don't quite have the brainpower that is attracted to for-profit startups and they don't have the same motivation to do it.

I mean I am doing a story right now for Yahoo Finance about SpaceX, this private version of NASA, it's a commercial company and they are not able to get rockets and satellites into space at one-third the cost of the government. Right now, SpaceX is the largest launcher of rockets in the world and they got their so fast because they are private enterprise, they have the money to attract the talents, and they don't have the red tape, they have a fire lit under them. In that regard I do believe that having so many smart minds on the problems with such a great incentive to get it right, is very promising for the future.

Margaret Flinter: We have been speaking today with David Pogue, the founder of Yahoo Tech and the host of Science Shows on PBS's NOVA as well as a long term correspondent for CBS's Sunday Morning. You can learn more about his work by going to his website www.davidpogue.com or follow him on Twitter @Pogue and that's spelled P-O-G-U-E. David thank you so much for joining us on Conversations on Healthcare Today; and your very optimistic look at our future.

David Pogue: My pleasure, thank you so much for the chat.

[Music]

Mark Masselli: At Conversations on Healthcare, 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 non-partisan, nonprofit consumer advocate for voters that aim to reduce the level of deception in U.S. politics. Lori, what have you got for us this week?

Lori Robertson: President Donald Trump on several occasions has taken credit for making Medicare "stronger." In fact Medicare's finances have worsened since he took office. The latest Medicare trustees reports says the Medicare Part A Trust Funds which covers payments to hospitals will run out of money by 2026, 3 years earlier than projected just last year. That's partly because the tax cut laws that Trump signed last year will reduce Medicare revenues

and increase expensive. Medicare remains on an unsustainable path, the annual cost for all four parts of Medicare including physician payments and prescription drugs, is expected to more than double from \$710 billion in 2017 to \$1.44 trillion in 2027 and general revenues from the federal government will increase as a share of Medicare financing from 41% in 2017 to 49% in 2032.

Trump said that Medicare would be \$700 billion stronger over the next 10 years because of growth, but the Congressional Budget Office in April estimated that economic growth could increase all payroll tax revenues including social security by \$92 billion over the next 10 years. That's far short of Trump's \$700 billion figure, which he said was just for Medicare. The Medicare Part A Trust Funds spent more on hospital payments than it received in income from 2008 through 2015, the trustees said, "Deficit spending will return this year and accelerate in the coming decade" why the trustees say, "Part of the reason is the tax cut law. It repealed the individual mandate in the Affordable Care Act which required people to have insurance or pay a penalty, the repeal is expected to increase the number of uninsured Americans and that in turn will increase Medicare disproportionate share payments made to hospitals that serve large populations of low income people without insurance."

Also the tax law reduced federal income tax rates and some trust fund revenues come from income taxes on social security benefit. With lower tax rates there is less income from the taxes for Medicare. The Bipartisan Budget Act of 2018 also eliminated the Independent Payment Advisory Board created by the Affordable Care Act to reduce Medicare cost. The board had not yet been formed but was supposed to reduce the growth of spending in the future. And that's my factcheck for this week, I am 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 would like checked, email us at www.chcradio.com, we will have FactCheck.org's Lori Robertson, check it out for you, here on Conversations on Healthcare.

Mark Masselli: Each week Conversations highlights a bright idea about how to make wellness a part of our communities and everyday lives. Fitness trackers have become all the rage especially among upwardly mobile fitness conscious people seeking to monitor their own health, but another trend has emerged in the age of wearable devices. After a few months about a third of users simply stop using them, the reality captures the imagination of Tufts University School of Medicine, Dr. Lisa Gualtieri.

Lisa Gualtieri: And I saw what if you could take all of these abandoned trackers and give them to the people who could benefit most from them.

Mark Masselli: She thought what if we could get disinterested owners to donate their used

David Pogue

fitness trackers to be repurposed and donated to underserved populations. So in 2015 she launched Recycle Health an online social media campaign to raise awareness for her program which seeks, donated wearable devices to provide these expensive devices for free to those in need.

Lisa Gualtieri: A lot of the work that we have been doing has been with older adults, racial and ethnic minorities and for a lot of people the cost is precipitate so I think that's a barrier --.

Mark Masselli: She partnered with the organizations working with low-income adults, seniors and Fall Prevention Programs and veterans as well.

Lisa Gualtieri: What we do is talk to people about how access, how sedentary they are and coming up with a reasonable goals they might start off with 3000 steps as their goals, but they know how to make that higher when they are ready to.

Mark Masselli: Recycle Health, a simple repurposing of personalized wearables, providing these tools for free to vulnerable populations empowering them to improve their own health, now that's a bright idea.

[Music]

Mark Masselli: You have been listening to Conversations on Healthcare.

Margaret Flinter: And I am Margaret Flinter.

Mark Masselli: Peace and health.

Moderator: Conversations on Healthcare is recorded at WESU at Wesleyan University, streaming live at www.chcradio.com, iTunes or whatever you listen to podcast. If you have comments please email us at www.chcradio@chc1.com or find us on Facebook or Twitter. We love hearing from you. The show is brought to you by the Community Health Center.