Reimagining the Future of Health Care- Chief Innovation Officer of UPMC, Dr. Rasu Shrestha on Design Thinking and Innovation

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Female: Welcome to Conversations on Healthcare with Mark Masselli and Margaret Flinter. A weekly show where we speak to the top thought leaders in health innovation, health policy, and the great minds who are shaping the healthcare of the future. This week, Mark and Margaret speak with Dr. Rasu Shrestha, Chief Innovation Officer at the University of Pittsburgh Medical Center and VP of UPMC Enterprises, the innovation branch of the organization. He is also a courtier of Health Datapalooza, a government and private industry consortium dedicated to advancing health technologies that will improve healthcare. Lori Robertson also checks in, the Managing Editor of FactCheck.org looks at misstatements spoken about health policy in a public domain separating the fake from the facts. We end with a bright idea what's improving health and well-being in everyday lives. If you have comments, please email us at chcradio@chc1.com or find us on Facebook or Twitter, we love hearing from you. Also find us on iTunes or Stitcher and please feel free to leave us a review. Now stay tuned for our interview with Dr. Rasu Shrestha on Conversations on Healthcare.

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Mark Masselli: We're speaking today with Dr. Rasu Shrestha, Chief Innovation Officer of the University of Pittsburgh Medical Center, UPMC and Executive Vice President of UPMC Enterprises. Dr. Shrestha is Chairman of the HIMSS Innovation Committee and is co-chair of the AcademyHealth's Health Datapalooza, a consortium of government and private sector health industry leaders committed to leveraging technology to advance healthcare. He was named the Executive of the Year by Healthcare Dive and was named top healthcare innovator by InformationWeek. Dr. Shrestha received his medical degree from CCS University in India, his Fellowship in Informatics at the University of London and his MBA from the University of Southern California. Dr. Shrestha, welcome to Conversations on Healthcare.

Dr. Shrestha: Thank you, it's a pleasure to be here.

Mark Masselli: UPMC is a $16 billion a year integrated payer provider health system and it delivers care to three and a half million people in over 30 hospitals and employees 80,000 people, wow, that's a pretty big footprint. You've stated that your mission is to reinvent the future of healthcare, I'm wondering if you could share with our listeners more about the culture of innovation at UPMC.

Dr. Shrestha: Yeah, I truly believe that **[inaudible 00:02:31]** culture eats strategy for breakfast. What's interesting when you're part of a team that really drives innovation forward and has the capability of leveraging an asset as

powerful as UPMC, you get to be able to really cultivate that culture of innovation at the very grass-root levels. Also since both bottom-up as well as a top-down approach, what we're trying to do at UPMC and at UPMC Enterprises is to really capitalize on this large organization, we're the largest employer in the state of Pennsylvania with 80,000 employees. We're also a large payer organization with over 3.4 million lives that are being covered, and we're trying to capitalize on that. It's really important for us to not just throw darts behind these buzzwords but really to figure out what are some of the core unmet needs that we have in an organization as large as UPMC that in many ways is also representative of the rest of the health system and healthcare as we know it more broadly of the challenges around integrating data and liberating data and some of the challenges that we know around accessing data and leveraging data that really get into insights that will make a difference in the lives of these patients. The root of all of that really is to get that culture right, to make sure that we're able to truly understand not just specifics of the what, but also the why, and I think that's what we're really trying to do here at UPMC.

Margaret Flinter: Well, Dr. Shrestha, you and your teams have figured out this issue around culture acknowledging. There can be something of a culture clash between medical professionals who are so well-trained and adhering to evidence-based practices and the health industry entrepreneurs that maybe are seeing a vision of what might work. You've been engaging frontline clinicians in your designed work which is so critical, can you talk a little bit about the design thinking approach that you use at UPMC, what I know you've called the living lab for innovation. If you have a example or two of innovations that have come through this process, I think our listeners would really enjoy hearing about them.

Dr. Shrestha: Yeah, I really believe that in healthcare, it's important for us to take a step back from just this business that we're in. We're so busy trying to "fix healthcare" and I think it's important for us to just acknowledge the fact that hey, look there's this culture clash that's happening really across the board in healthcare and it's something that I think we really need to acknowledge first and to actually address that challenge. On one end of that culture clash are traditionalists and clinicians and researchers and scientists. I'm a clinician by background and we're trained to go with the tried and tested and evidence-based guidelines and best practices in clinical protocols and that it's actually a really good thing because that's how medicine has grown to be what it is today based on strong, scientific and academic rigor.

The other end of that clash; however are entrepreneurs and innovators and technologists who then were coming in and saying hey, here's this brand new way of doing things, trust us it will work and bam, the clash really happens at that point. What we've been doing in healthcare is we go out and have a request for proposal, we purchase a software solution. We have a go-live event and that's maybe perhaps the first time that physician gets to interact with that piece of software and that's just wrong on so many different levels. What we're trying to

do is really to turn that around on its head and saying, yep, there's this culture clash that's happening. The way to really navigate that is to make sure that the clinicians, the end-users, the patients are at the very beginning, not at the very end, but really at the very beginning of that process and enhance the embraces this methodology around design thinking where we start first with empathy. We're able to really have these design thinking exercises and talk about what they want built, but really about what their pain points really are. That's when you start really getting into the very crux of those challenges that we're facing on a day in, day out basis.

When you then sit down and go through this iterative process of designing and building solutions and coming up with prototypes in rapid cycles, this method of fail-fast that we talk so fondly about them becomes real and you're able to scale those successes and learn from those failures and really get to a point where you can truly capitalize on those assets that you have those clinicians, those patients and really come together as a team around this process. So that's just how we're really pushing for some of our innovations forward, so whether it's in areas of mental health or whether it's in areas of cancer care, many-many specific examples of how we're really trying to capitalize on that design thinking process, leveraging those clinicians and those patients as partners, not just building these solutions but helping grow these solutions into really successful products and companies even.

Mark Masselli: Dr. Shrestha as you were talking about that paradigm, we just had Dr. Eric Topol on our show, a cardiologist, geneticist but also someone who really gets it about being engaged with these transformations with the population obviously and engaged in the All of Us initiative, but he is talking to us about this pivotal moment we are, the opportunity to reboot healthcare towards a more true personalized medicine looking in the AI area, machine learning genomics and others. You also stated that we're at an important inflection point that this is a new way of innovations, not necessarily by creating new gadgets or things, but it's often more about rethinking the existing health paradigm and you really just talked about that very nicely, I think. How ready do you think the country is for this new level of engagement?

Dr. Shrestha: Well, you mentioned Eric Topol and he is such a brilliant individual and is a visionary on many fronts. We had an exercise that we did that culminated in TweetChat as well as really interesting webinar and number of other pieces that are coming out, what we're calling the rise of genomics, #RiseofGenomics. Really we talked about a lot of things that are coming together to basically facilitate innovation such as the rise of genomics where you see consumers really leaning in and embracing the likes of genomic testing type capability that are now directly accessible to patients and consumers, that physicians are now really using to help them in making really life changing decisions, but also to help them have meaningful conversations with their patients and others. That's just one example and you talked about

the inflection point and we really are at an inflection point in the industry and I think it is ours to lose whether you're small entrepreneurial startup or you're larger health system like us at UPMC, or you're an outsider like Amazon and others that are sort of looking to come into healthcare and "disrupt healthcare." We've got three massive dynamics and **[inaudible 00:10:02]** almost hitting us. One sort of this way of digitization we're more digital today than we've ever been in the past, more so even in the last decade with meaningful use and another sort of initiatives that have really pushed us forward in the embrace of digital and that's a good thing. The second is this move from volume to value and there is this movement from talk to action, and the third really is technology whose time has come and capability such as genomics and machine learning and AI that have really come to a level of maturity and the right price point today that really allows for us to embrace these capabilities and these three dynamics and take it to the next level. I do think the time is right, it's more right today than it's even been in the past, we're in 2018 today and I remember you know, decade or more ago used to talk about 2020 that's the future. Well, the future is here, and it's time for us to really capitalize on all of this.

Margaret Flinter: Well, that's great Dr. Shrestha. One thing I really appreciate about some of your writing and comments is that that you cautioned against overusing buzzwords and catchphrases which is kind of endemic in healthcare a lot of the time. You've used patient-centered care as an example of a phrase of course, we all believe that that's what we're doing it certainly sounds wonderful. Then we went and created technology around the patient provider and to change it, maybe actually really interfered with care that patients would experience as truly centered with them at the center of it. I know that you're very committed to this principle that the patient has to be at the center of any design enterprise. Tell us about that process at UPMC Enterprises and again if you have some examples of how patients have really informed the projects that you're undertaking there with your innovation team.

Dr. Shrestha: I think it's really important for us as an industry really to just stop it, stop with paying lip service to, hey let's have a patient-centered approach to care. I do think clinicians believe this in their core that what they're doing is practicing patient-centered care and they are. The problem is that the solutions that we've created for them, the system that we've built really doesn't catered to a true patient-centered approach. It's very systemic in the way that we've created these solutions focused on billing and documentation, getting a lot of these transactional components done, getting this volume throughput through your organization. We have an opportunity today to really reinvent how we're looking at the patient-centered care.

One approach that we're taking at UPMC is to really engage these end use, I mentioned the process of design thinking earlier but engage them in the very design of the solutions but re-architect the specifics of even the workflow and the

incentives around these patients that really need to be part of the journey. It is for them and with them that we're building these solutions, not just at them. One example of this is in the lots of challenges in mental health, there are two big challenges that we see – one is stigma and the other is access to expert mental health resources and we have an opportunity to redesign of these solutions. The way that we did this was to really co-create a set of solutions with a company called Lantern Health that we invested into and we're building these set of solutions that really puts all of these capabilities directly in the hands of consumers through mobile devices and coaching capabilities again directly accessible to them. It's amazing how innovations like those are really transforming the way the patients are now being empowered to really lean in and be part of a broader care team that includes themselves and that's just one example of how we need to really rethink this paradigm and truly engage patients in the redesign of the solutions that we're building.

Mark Masselli: We're speaking today with Dr. Rasu Shrestha, Chief Innovation Officer of the University of Pittsburgh Medical Center and Executive Vice President of UPMC Enterprises, the entrepreneurial division of UPMC. Dr. Shrestha is co-chair of the AcademyHealth's Health Datapalooza. Rasu, we've had many of the Datapalooza influencers on the show, Lisa Simpson from the AcademyHealth, Aneesh Chopra and others. Tell us what's up with the Datapalooza gathering this last year. What was all the buzz about?

Dr. Shrestha: As co-chair of Datapalooza, I was able to really have an opportunity to be in the driver's seat with other leaders and as we enter into 2020. It's different today than when Health Datapalooza first came into existence now nine years ago. Our country is at a different trajectory altogether, a lot of the data has been liberated but at the same time a lot more yet needs to be done with the data. It's not just about having access to the data but actually making sure that we're able to see multiple different sectors and segments come together to really build the solutions that we need. Health Datapalooza was that platform where you saw public sector come together with private sector come together with experts around policy with investors, with folks from the patient community and provider community really come together and say, alright how do we really make it work? Tremendous conversations and there's a lot more yet that we're planning for going into 2019 to capitalize on this big wave that we're seeing around all these different entities coming together.

Margaret Flinter: Well, we'll do an advance shout-out happy 10th anniversary?

Dr. Shrestha: Thank you.

Margaret Flinter: Hard to believe. So you know, you've referenced this new trend of non-traditional healthcare industry entities coming into this space. Google has its **[inaudible 00:16:13]** Sidewalk Labs researching ways to improve population health. We see companies like Aetna and CVS forming mergers to

actually meet patients where they live. We have the new ABC venture with Amazon, Berkshire Hathaway, Morgan Chase promising to disrupt healthcare and bring cost down. In this climate of accelerated innovation but also promised disruption from multiple sectors, what has you most concerned or perhaps most excited about where this is going to take the healthcare industry in the United States?

Dr. Shrestha: Yeah, I'm actually really excited about where things are right now and these "outsiders" like Google and Amazon and others really trying to get into healthcare and solve for some of the biggest challenges health. You also got more of the insiders or perhaps non-traditional insiders like CVS and Aetna and others saying all right, there is a way that we can actually solve for some of the biggest challenges. In many ways that's what we've been trying to do at UPMC and we've been trying to take a very non-traditional Silicon Valley-ish approach, call it that, in the very heart of a very traditional healthcare organization where one of the largest academic medical training programs in the country with a lot of science and academia and rigor behind a lot of the entrepreneurial business bets that we make and these term sheets that we pull together and these companies that we create. That's what we're trying to do is to say, hey look, how do we take a very non-traditional approach to this? We do this a lot of times with the right partners as well. It's really encouraging to see across the industry including from outside of healthcare that are coming in because look I do think it's about time that we do this. We're $3.5 trillion industry. Costs continue to accelerate and access to care is not where it needs to be. We in many ways are ourselves challenging the status quo and ourselves taking very non-traditional approaches, so I'm excited.

The only concern that I would throw out at this stage really is that it needs to be done with a level of purpose and not just with a frenzy to make a splash in the media or make a change happen. It needs to be sought through that really is backed by strong academic and scientific rigor, but is also backed with a mission in mind to really make massive changes in the way that our healthcare industry's trajectory is actually moving. How do we think about sort of newer business models that need to exist? How do we think about how we incentivize, not just the physician communities but also the patient and the consumers out there to really turn the notion of healthcare on its head and move it from where it's been today which is really about sick care to where it needs to be which is really about wellness and thriving and staying out of hospitals and sort of disrupting the current paradigm. Excited, but at the same time concerned that we don't do this in a friendly manner with a level of urgency that it calls for but also with strong backing up scientific rigor.

Mark Masselli: We've been speaking today with Dr. Rasu Shrestha, Chief Innovation Officer of the University of Pittsburgh's Medical Center and the Executive Vice President of UPMC Enterprises. You can learn more about their work by going to enterprises.upmc.com or you can follow him on Twitter

@RasuShrestha, also at #upminnovates. Rasu thank you so much for the exciting work that you're doing. You're such a bright light in the healthcare environment and we appreciate you joining us on Conversations on Healthcare.

Dr. Shrestha: Absolutely, thank you very much for having me here.

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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 nonpartisan, 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 implied that his administration's funding to fight the opioid epidemic had caused the numbers to come way down. The most recent data we have on opioid-related deaths which was still rising and prescriptions for opioids, which have been declining in recent years predate the funding the President touted. During a campaign rally in Nashville, the President said "We got $6 billion for opioid" adding "and the numbers are way down." The $6 billion was for fiscal 2018 and 2019. At the end of March, congress appropriated $3.6 billion of that for fiscal 2018, which ends September 30th. When we asked the White House about Trump's claim, it referred us to figures primarily on opioid prescriptions. The latest figures; however, only encompass 2017, Trump's first year in office and before the funding the President cited was even appropriated.

Overall, dispensed prescriptions for opioids have been declining in recent years. Total deaths from opioid overdoses, which numbered more than 42,000 people in 2016, have continued to increase. Latest figures from the Centers for Disease Control and Prevention showed that the number of dispensed prescriptions peaked in 2012 and then began to decline. The rate of 18.3 prescriptions per 100 people in 2012 was down to 66.5 per 100 people in 2016. Figures including 2017 come from a report by IQVIA Institute for Human Data Science. That report found that the volume of opioid prescriptions has been declining since 2011. One fact that report cited was more states adopting laws on restricting prescriptions such as the volume or number of days opioids can be prescribed to new patients and that's my fact check for this week. I am Lori Robertson, Managing Editor of FactCheck.org.

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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, e-mail us at chcradio.com, we'll have FactCheck.org's Lori Robertson check it out for you here on Conversations on Healthcare.

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Margaret Flinter: Each week, Conversations highlights a bright idea about how to make wellness a part of our communities and everyday lives. When it comes to walking the walk, Chester County, Pennsylvania is on it. To celebrate National Public Health Week, county Health officials decided to issue a challenge to members of their community to log a collective billion steps last year.

Jeanne Casner: Started with a National Association of Counties Officials Conference in which they were announcing a national competition to improve health outcomes in cities and counties. We applied for that while we were also trying to introduce more physical activity into our health department initiatives.

Margaret Flinter: Jeanne Casner, Director of the Chester County Health Department says they launched the program WalkWorks ChesCo! creating a website for county residents to log their daily steps to join walking groups, issue challenges and get entire families and neighborhoods involved with this simple goal, walk for better population health.

Jeanne Casner: A model for getting individuals up and walking that takes multiple approaches and hopefully starts to inspire that next generation to be walking was something simple.

Margaret Flinter: Communities, schools, companies all engaged in walking challenges and it led to far more people participating throughout the county.

Jeanne Casner: We actually have a website where people can go and check how many steps and how many walkers and look at competition. That's really what starts to spur it. Then having a couple of trusted organizations participate in a walk and putting a little visibility, getting the newspaper out there to write a little piece on it. It doesn't have to be county-wide and that's the beauty of walking.

Margaret Flinter: In just six months, some 3000 participants were able to log over a billion steps having reached their goal far more easily than they originally thought. Casner says since it's a two-year program, they actually had to increase their goals to keep people walking.

Jeanne Casner: Last year we accumulated about 1.7 billion. Our goal was 1 billion, so we exceeded that and we reached about 2800 walkers. This year's goal is to walk accumulative of 5 billion steps. We took a look at the data and said we've a lot of steps, we don't have enough people, so in a county of 515,000 plus residents so we pushed it up to 5000.

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Margaret Flinter: Their program earned early praise from the Aetna Foundation and they're now in the running for clinching the national competition. A community-wide effort leveraging the power of public and government entities to engage the community in a collective health and wellness program. Creating a user-friendly website for participants to engage with one another, making it fun, yielding an increase in healthy exercise across the population; now that's a bright idea.

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Mark Masselli: You've been listening Conversations on Healthcare, I'm Mark Masselli.

Margaret Flinter: I'm Margaret Flinter.

Mark Masselli: Peace and health.

Female: Conversations on Healthcare is recorded at WESU at Wesleyan University streaming live at chcradio.com, iTunes or ever you listen to podcasts. If you have comments, please e-mail us at 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.