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Mark Masselli: This is Conversations on Health Care I'm Mark Masselli.

Margaret Flinter: And I'm Margaret Flinter.

Mark Masselli: Well Margaret there is much change focused in on health care or health reform and health policy.

Margaret Flinter: Well indeed there is and in the aftermath of the election president elect Trump and the republican majority and congress are making much of the notion that the Affordable Care Act needs to be repealed and in short order. But most experts say it's not going to be easy to pull the plug on the full legislation without a sound replacement strategy which under any circumstances it's kind of hard to undo legislation Mark isn't it?

Mark Masselli: No it isn't and many of the nation's health care CEOs are uncertain how a change in federal policy will affect their bottom lines until they know what Medicare and Medicaid reimbursements will look like in the years ahead, a majority are certainly urging the Trump Administration to proceed cautiously before greatly disrupting the policies that had been in place for several years now.

Margaret Flinter: And there's also concern about how that Trump Administration will mean for things like scientific and biomedical research and programs like the Cancer MoonShot the precision medicine initiative and these are the things our guest today is very involved with.

Mark Masselli: Dr. Keith Yamamoto is the Vice-Chancellor for Science Policy and Strategy at the University of San Francisco School of Medicine, he has some unique insights in what may lie ahead for biomedical research.

Margaret Flinter: Of course Lori Robertson will be checking in with us the Managing Editor of FactCheck.org on the hunt for misstatement spoken about health policy in the public domain.

Mark Masselli: But no matter what the topic you can hear all of our shows by going to chcradio.com and as always if you have comments please email us at chcradio@chc1.com or find us on Facebook or Twitter we love hearing from you.

Margaret Flinter: We'll get to our interview with Keith Yamamoto in just a moment.

Mark Masselli: But first here our producer Marianne O'Hare with this week's headline news.

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Marianne O'Hare: I'm Marianne O'Hare with these Health Care Headlines. There's growing unease within the health care community as well as the health industry regarding the future of health care in America and exactly what policies are going to drive it forward. The nation's 3.5 trillion dollar health care industry has recalibrated these past six years since the passage of the Affordable Care Act and most industry insiders were not anticipating a Trump win in the presidential election. The president elect has vowed to repeal and replace the law while keeping in place some of the more popular aspects such as young adults staying on their parent's plans to age 26 and exemptions for preexisting conditions. The hospital industry is particularly concerned over the potential of millions of Americans losing health coverage the law greatly reduced hospital reliance on charity funds to cover the uninsured and need of hospital care.

Women's health services coverage are mandatory under the ACA those services could also be at risk. Some attempt to privatize Medicaid is likely an attempts to expand private Medicare advantage programs, look to be fairly certain. 1964 seminal moment in the history of the US surgeon general's office smoking was then directly related to a number of deadly conditions including cancer, it has led over the decades to more targeted health policies that have curtailed the smoking habit significantly in this country. 2016 may prove to be a pivotal year for the nearly 21 million Americans set by addition. Surgeon General Vivek Murthy issued a report detailing addiction is a medical condition and one that's far under treated and cause the nation some 420 billion dollars a year in lost revenue, accrued health cost and incarceration expenses.

Dementia is now down among the nation's seniors according to a study conducted by the National Institutes of Health. Dementia has seen a 24% decline in Americans over age 65, the study suggest perhaps advances at heart health through better hypertension management and diabetes management may play a role. Still the numbers are staggering currently 5 million Americans suffer from dementia that number expected to triple by 2050. And study on screen time in a developing brain was a topic for discussion at the annual gathering of the nation's neuroscientist the study found mice brains exposed to six hours of lights and noises similar to video games had much more need for excitable stimulation than their counterparts or more likely to exhibit high risk behavior and had symptoms of ADD. But they were also less likely to become distressed in noisy over stimulating environments that would have set those mice who weren't exposed. The report the report comes on the hills of the American Academy of Pediatrics relaxing its earlier stands on babies and screen time, their previous recommendation was none before the age of 2, either way the study showed significant rewiring of brain circuitry in the over exposed mice. I'm Marianne O'Hare with these Health Care Headlines.

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Mark Masselli: We're speaking today with Keith Yamamoto PhD Vice-Chancellor for Science Policy and Strategy and Director and Precision Medicine at University of California, San Francisco School of Medicine. Dr. Yamamoto is also a leader in science policy serving as chairman of the board on life sciences at the National Academy of Science, numerous government and public advisory boards including the NIH Center for Scientific Review Advisory Council. Dr. Yamamoto is an elected member of the National Academy of Medicine and is a fellow of the American Association for the Advancement of Science. He earned his doctorate in biochemical science at Princeton University, Dr. Yamamoto welcome to Conversations on Health Care.

Dr. Keith Yamamoto: Welcome, pleasure to join you.

Mark Masselli: You know, you've had just an incredible career in biomedical research as well as a solid role as a thought leader in the world of national health and research policy and you recently participate in a panel at Faster Cures Conference where you weigh in on the opportunities and challenges for the president elected, and I'm wondering if you could just share your views on the expectations that you might have coming out of a Trump Administration around biomedical research.

Dr. Keith Yamamoto: Well I think there's a lot of uncertainty, there are concerns of things that Trump said and did that might be cause for worry amongst scientist which -- with respect to his using evidence as a basis for decisions and so forth. But I think that -- that what you heard was a level of cautious optimism that it's important for us to sort of backup take a deep breath sit down and talk with the new administration. You know, I think there are many things that they need to know about scientific research biomedicine health, health care that we don't know how familiar they are with it, you know, among them prompt deployment of NIHM and national cancers directors really being able to draw for them the direct connection between biomedical research and health and health care and health care costs including drug cost. The comparatives that the federal government have to do basic research really opening the door for the private sector to be able to apply that new knowledge, there's opportunity that the administration has to support grant challenges to announce big goals that scientific community might take on with federal support that would have impacts on really urgent societal issues. And just the importance of maintaining US leadership in biomedical research enterprise as a whole, maybe just pointing out the importance and role of biomedical research in medicine as an economic driver in our present economy. And it's really crucial that we sort of start with a blank slate sit down and try to talk about those needs.

Margaret Flintner: Well Dr. Yamamoto I'm sure there's always a interesting array of thought leaders gathered at the Faster Cures Conference I know Dr. Francis Collins head of the National Institutes of Health who oversaw the human genome project was

there certainly he's been a very vocal advocate for more federal money earmarked for biomedical research so the 21st Century Cures Act we know is a bipartisan build that's a good thing right there, launched in congress but what is the importance of that legislation?

Dr. Keith Yamamoto: Yeah 21st Century Cures has been long in the making congressman Fred Upton who's the chairman of the Energy and Commerce Committee in the house has been assembling and promoting this legislation for a couple of years, version of that actually pass the house last year but didn't proceed through the senate and it's been rewritten as we speak. And 21st Century Cures carries a -- a broad spectrum of matters of support and regulation of research drug discovery drug testing and drug approval FDA research the NIH that I think capitalize well on the opportunities that have opened up with the big research advances that have been made over the past decade or two. That kind of research you would move the NIH budget which as you know has been in spaces for over a decade we finally being able to allow scientist to try to capitalize upon some of the advances they've made. So a big bill covering fundamental science and then moving drug development device development and approval more briskly through the FDA.

Mark Masselli: Margaret just mentioned Dr. Collins heading up NIH and he is also taken on the president's latest research initiative the precision medicine initiative and you are as well a leader in this area at the University of California, San Francisco am I wrong to say that you all have your own initiative open to all of the 20,000 plus employees that the institute maybe you can share with us what you are doing then the university around precision medicine.

Dr. Keith Yamamoto: You know, it's -- actually worth backing up a step and talking about the overall scope of precision medicine. I was the chair of the Board on Life Sciences of the National Academy of Sciences that sanction this report and that was beautifully shared by the new UCS Chancellor Su Desmond-Hellmann and Charles Sawyers. It was a great report made a series of recommendations that they really -- maybe three things that -- to try to build a continuum of research so that all of biological information from fruit flies through populations of people could actually be used in decision making about advance in further research in one hand and about diagnosis and treatment and prevention and cure of diseases in people. Secondly to define disease mechanisms so that we could actually classify diseases according to mechanisms instead of symptoms and organs and things of that sort. We're seeing examples already being able to come across diseases that [inaudible 11:16] there's no present therapy and then find that oh the mechanism is the same as this disease over here that looked unrelated but now there's already a therapy already there. And then finally to be able to discern all the factors that contribute to disease so that prevention diagnosis treatment cure can be focused all the way down to the level of the individual,

those are grand goals and that's what precision medicine really does it's a -- it's in revolutionary approach to research, health, health care that seeks to integrate vast amounts of data in order to achieve those ends.

Margaret Flinter: Well Dr. Yamamoto you have made the point so often that we're at a crossroads and that the academic world of biomedical research is also an important pivot point. You supported the notion that the world of academia has to be redesigned in some ways to reflect the 21st century arrow of scientific advancement. You wrote a very compelling piece about the university of the future and why that is to be given serious consideration and what you think it would look like.

Dr. Keith Yamamoto: You know, what's happened with these remarkable advances and research is that the sort of the lights have come on between fields that were thought not to be related between ideas that weren't connected. And when those lights come on the possibility of doing something really bold of asking a big question that we hadn't been able to see before becomes evident. And so this university further idea speaks to the fact that the traditions and policies for funding research and on the other hand amongst us academia are conservative force that there's actually inhibiting the capacity or at least not encouraging the capacity for scientist to ask these bold questions because they don't get rewards for them. So that's what university of future says is what if we put together a system the self-assembly of teams of scientist who choose to go after a head problem from multiple disciplines, teams to come together that say hey, you know, we work together, we have an opportunity to nail this problem and we all know that there's no way we could do it individually. So the system of focusing on individual achievements in academia is holding back that possibility of groups of people getting together choosing the problem by themselves and going after it as teams. And the precision medicine approach as you know proposes building a huge computational so called knowledge network that links together all kinds of information about biological processes about disease, about people and that will allow sort of visualization of these possibilities that -- that, you know, a single human brain can't really put all the stuff together but a computer can. And so the idea is that in the university of future increasingly we'll be able to sort of sit down at our terminals over lunch hour and find investigators who could working together go after a problem and solve it a really bold idea. So we need to build a system that recognizes the value of that kind of team effort and rewards it.

Mark Masselli: We're speaking today with Keith Yamamoto PhD Vice-Chancellor for Science Policy and Strategy, executive vice dean for research at the school of medicine at the University of California, San Francisco School of Medicine. You really had a revolutionary approach to this whole concept of how we should start conceptually thinking about where our research dollars go and so much of the resource the funding

really aligned with something that is really a siloed approach. But how do you sort of square that up with sort of the political funding aspects of the research community?

Dr. Keith Yamamoto: Mm-hmm, you know, when resources are limited and they are then intrinsic weakness our system for funding research emerges that the peer review system which is the -- the best way in the world to allocate research funds becomes conservative. The research has been reviewed by peers and their first line of defense is to defend the prevailing paradigm in a given area. And so research grant application that comes in and with a wild crazy idea that's going to show that, that paradigm is wrong is not going to be welcomed with open arms right away and of course bold ideas have a risk for failure. The university of future idea says that this idea of research teams would be stamped out multiple times per faculty member. Let's say that established lab of faculty member might be involved in 10 teams would be fantastic, you know, wake up every morning thinking about 10 problems that I know that I couldn't work on by myself but because of these teams that I'm in we're doing things that are really fantastic. Well let's imagine team 4 fails because the technology we needed to developed that we thought we could develop we couldn't. Team 10 fails because in fact the idea is fantastic as it was, was wrong. So now 2 out of 10 have gone down in flames. But, you know, you know, three other of the teams are really going great guns, they're going to really do something fantastic and maybe two others look pretty good and so failure becomes an option. And we're not so afraid to ask bold and crazy things because there are -- some of those things going to hit. If we can destigmatize failure in academic research then the opportunity to ask and answer the really big questions opens up much more.

Margaret Flinter: Well Dr. Yamamoto I think there's probably some parallels there from the way we approach educating the research professionals to thinking about the world of health care professional workforce training. What are your thoughts about the principles for transforming academia from the perspective of how we train the health care workforce of the future, how is that training evolving at your institution?

Dr. Keith Yamamoto: Actually there is new medical curriculums called Bridges UCSF Bridges that has many elements of integration that I've been talking about built in where the students began to define and then act upon their refine interest in the medical profession. And so the opportunity for medical students at UCSF to be able to integrate with that world is greatly increased. But, you know, we're a long way from being there on the PhD training side there are still many programs around the country that kind of continue to use the conventional standup and lecture and then examine the students to see how much they remember approach. You know, we're sort of past that now we have in our pockets little devices that can remember everything. So being able to build concepts and use them effectively is really critical and increasing number of programs including ours are beginning to build programs that's focused on that sort of hands-on

learning biological sciences has become a quantitative endeavor of changing over from a long successful period as a descriptive endeavor so understanding the quantitation, statistics, computation, is really important. Developing a broad literacy across the spectrum of scientific approaches is really important and we're -- we have a very rich research environment here that does that. But integration as I've been saying is really key and so now we're trying to develop ways to get first trainees together so they can see each other, talk to each other, see how their different approaches and aspirations can meld to be able to -- to inform each other and to do really bold things and I think that's the next frontier.

Mark Masselli: We've been speaking today with Keith Yamamoto PhD, Vice-Chancellor for Science Policy and Strategy, executive vice dean for research at the School of Medicine and director of the Precision Medicine at the University of California, San Francisco School of Medicine. You can learn more about his work by going to Yamamoto Lab.UCSF.EDU, Dr. Yamamoto thank you so much for joining us today on Conversations on Health Care.

Dr. Keith Yamamoto: Thank you, pleasure.

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

Lori Robertson: House speaker Paul Ryan falsely claim that quote, because of Obama Care Medicare is going broke. What actually improved Medicare's financing and the program isn't going broke. Ryan made the remark in an interview on Fox news a few days after the presidential election and Ryan's remark took us back to the 2012 election which was filled with scary Medicare claims. As we said back that both the Romney and Obama campaigns have proposed ways to shore up Medicare's shaky financing but they disagreed on how best to that.

Let's start with the idea that Medicare is going broke, it isn't. One part of Medicare though is expected to face financial shortfalls in the future without changes to either revenues or spending or both, that's part A which covers payments to hospitals and it's funded by a payroll tax that goes into a trust funds. It's that part A trust fund that's expected to run out of money. The current exhaustion date is 2028 according to the latest report from the Medicare trustee, but part A would still have revenue through payroll tax receipts. Those revenues would cover 87% of expenditures in 2028 as for Ryan's claim that Obama Care has worsened Medicare's financing that's not the case

either, in the fact the law both expended Medicare funding and cut the growth of future spending. The trustees 2010 report estimated that the ACA had added 12 years to the life of the part A trust fund postponing the exhaustion date from 2017 to 2029 or 2028 under an alternative scenario in which not all of the ACA change are enacting. Cutting future growth and spending improve Medicare's financing that's the opposite of what Ryan claims, and that's my fact check for this week I'm Lori Robertson Managing Editor of FactCheck.org.

Margaret Flinter: FactCheck.org is committed to factual accuracy from the country's major political players, and is a project of the Annenberg Public Policy Center at the University of Pennsylvania. If you have a fact that you 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 Health Care.

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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. As the saying goes music soothes the savage beast, and according to a recent study conducted by Queen's University in Belfast, Ireland, there is some empirical data to back that up. Children suffering from a variety of behavioral and emotional conditions who were exposed to music therapy in addition to traditional therapies had far better outcomes than those children in a control group that offered traditional therapy without music therapy.

Dr. Sam Porter: It's not a matter of them being given music or choosing music; they actually make music along with music therapist assisting them. So the idea is for them to express themselves through music.

Margaret Flinter: Lead researcher Dr. Sam Porter said there has been anecdotal evidence that music improves mood in children and adolescents as well as adults, but his study revealed just how effective the music therapy was.

Dr. Sam Porter: Our primary items was an improvement in communication. Now there were two very interesting secondary outcomes, levels of depressions and levels of self-esteem, and in the secondary outcomes we found a statistically significant difference between the control group and the intervention group.

Margaret Flinter: It showed overtime more interaction with their surroundings, and a better response to the traditional therapies as well.

Dr. Sam Porter: I mean that's one of the marvelous things about music therapy. There are no side effects than it is a productive way of getting kids to improve their health so it's really satisfying to know that it also an effective way of doing it.

Margaret Flinter: The study was conducted in conjunction with the Northern Ireland Music Therapy Trust which sees the promising findings as an incentive to incorporate this relatively low cost therapy to enhance outcomes for the youth population a simple targeted music therapy approach, age appropriate and showing great efficacy in improving outcomes for young patients with minimal side effects and lasting benefits, now that's a bright idea.

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Margaret Flinter: This is Conversations on Health Care, I'm Margaret Flinter.

Mark Masselli: And I'm Mark Masselli, peace and health.

Conversations on Health Care, broadcast from the campus of WESU at Wesleyan University, streaming live at www.wesufm.org and brought to you by the Community Health Center.