(Music)

Mark Masselli: This is Conversations on Health Care. I am Mark Masselli.

Margaret Flinter: And I'm Margaret Flinter.

Mark Masselli: Well Margaret it hasn't been the best week for the White House in the wake of the role out on the online insurance marketplaces.

Margaret Flinter: Even with consultant working around the clock to fix the problems who have plagued the Federal Health Insurance Exchange more problem still being uncovered. Last week the system went down again, this time not the site itself but the part of the system being handled by the phone company Verizon. The problem was swiftly identified but it's fueling the redirect from opponents of the Health Care Law.

Mark Masselli: Health and Human Services Secretary Kathleen Sebelius was in the hot seat last week coming before the House Committee, overseeing the Affordable Care Act she is increasingly coming under fire from the GOP.

Margaret Flinter: And a growing of course from both sides of the isle considering the frustrations with the online marketplace to extend that deadline for signing up beyond March 31st the point at which people would have to pay the penalty and that's being called for really considering the problems with the frontend of the rollout.

Mark Masselli: There are also some voices reason within all off the noise, Margaret Democratic Senator from West Virginia Joe Manchin said that a delay in the individual mandate would allow for the problems to be worked out.

Margaret Flinter: Meanwhile but we know there are tens of thousands of Americans have signed up for insurance or found they're qualify for coverage under the Medicaid expansion. So, important to remind folks it is a massive undertaking this is just the beginning and it looks likes it just going to take some time to work out all the bugs in the system.

Mark Masselli: Our guest today is an expert in Lean systems in Health Care based on Toyota's efficient manufacturing platform. Steven Spear is a Professor at MIT and author of the High Velocity Edge, he's been examining how Lean Principles could work to improve efficiencies and Health Care as well as contain cost.

Margaret Flinter: Lorry Robertson from FactCheck.org drops in with another misrepresented fact about health policy but no matter what the topic, you can hear all of our shows by Googling CHC Radio.

Mark Masselli: And as always if you have comments please email us at chcradio.com or find us on Facebook or Twitter because we'd love to hear from you.

Margaret Flinter: Now we'll get to our interview with Steve Spear in just a moment.

Mark Masselli: But first here is 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. The fallout continues over the role out of the online insurance market places last week another glitch was added to the problem plagued role out, Verizon the phone company responsible for the link from the sates as well as the Federal Exchanges for the ever important data hub that went down shutting down the Federal Exchange for a while and hampering state exchanges relying on the link. While the Administration still insist problem should be worked out by November Health and Human Services Secretary Kathleen Sebelius was being barrage with criticism mostly from GOP circles. She appear before the House Committee overseeing the Health Care Law and insisted everything was being done to correct the problems be setting the online insurance marketplaces.

Meanwhile President Obama took the Health Care Laws message to Boston last week in the state that past the first mandate to carry insurance in the nation. The President's speaking to positive impacts when an entire population carries health insurance coverage as they are Massachusetts better over all public house.

Meanwhile Vermont's Insurance Exchanges are up and running but that state has loftier goals a state is on track to have a fully operational state health plan by 2017 as the first in the nation state funded Medicare for all approach Vermont has traditionally been at the forefront to providing coverage for all of its residents especially those most vulnerable. I'm Marianne O'Hare, with these Health Care Headlines.

(Music)

Mark Masselli: We are speaking today with Steven J. Spear a PhD Senior lecture at the Sloan School of Management at MIT, and senior fellow at the Institute for Health Care Improvement. Dr. Spear has written numerous critically acclaimed books and articles on the application of Lean Systems to Improve Market Success, including in Health Care. Among them decoding the DNA of the Toyota production system and the high velocity edge as well as the award-winning Harvard Business review article Fixing Health Care From The Inside. Dr. Spear earned his master's in engineering at MIT and his PhD in Business from Harvard. Dr. Spear, welcome to Conversations on Health Care.

Dr. Spear: Oh thanks for having me.

Mark Masselli: Steven, you are known as an expert in the Lean Systems created by Toyota back in the 1950s to capture the Automobile market from the industry leaders

like Ford and GM and originally it was called “Just In Time Production” but Lean is -- a lot of the young Japanese company to surpass the big three auto makers in creating cars that were more affordable but much higher in a quality and reliability as well. It’s a model that’s been replicated in varying digress of success in other industries, it’s come late to health care. Can you tell us a little bit about the essential elements of Lean and how you see it rolling out in the health care industry?

Dr. Spear: So, when we go back, look at Toyota’s expands in the late 1950s when they actually first tried the US market. They showed up with an embezzling car and they were hardly inefficient in making it. But, what happens is that from the late 1950s till the early 1960s Toyota went from being one eighth as productive as its competitors to equally productive by the late 1960s there were twice as productive and when they came to the US market in the 1970s they were not only twice as productive but twice as productive making better product. And then it just snowballed in terms of speed of improvements at speed so Toyota started a dramatically compressed the time it took to refresh models in a major way compressed dramatically with the time it took to introduce new models introduce new brands like Lexus and Scion and then introduce new technology like that in the hybrid drive. You know first in the Prius but now across 21 different platforms.

Margaret Flinter: Steven, you recently participated in a study conducted by the Instituted for Health Technology Transformation that was entitled the Lean IT Making Health Care More Efficient to exploring the potential for Lean principles to transform Health Care to be more cost effective and more efficient. But the focus was on the need to apply a Lean approach to help information systems as an essential starting point, so why is that the essential starting point, why not at the bed side or in the lab?

Dr. Spear: So, what we see, when we look at these folks climb from not very good to very good to mind bogglingly great is we see that they -- they have this very fast highly compress relentless learning cycles, what’s essential to any learning cycle is the ability to first know what you think is going to happen, detect the abnormality against what you thought was normal what you predicted. And then quickly look back and understand the source of that that abnormality. So the great organizations not only have sound well-designed thoughtfully placed organizational structures, they have this over way of incredibly robust dynamics for the purpose of control and improvement. So as far as IT goes, what you’d find in many organization and certainly health care the workforce is mobile, the work is highly varied is that a lot of these organizations lack in a sense the nervous system to know what’s going on currently how -- what is going on differs from what’s expected and where resources need to be devoted both immediately and over the longer term to built the robust as to health in the resiliency of the system. So, why worry about the IT? Simultaneously and not also worrying about the dynamics and the dynamics are informed by information, if you’re not worrying about the dynamics you’re only get part of the way towards the right answer.

Mark Masselli: Steve and you have compared the Lean approach to the scientific methods where workers are trying to see a problem and do a root cause analysis, try a

solution and incorporate that system into the new cycle in it. You see enough to pull the cord on the assembly line to fix a problem as soon as it's discovered but it's much harder to do it with the health care workflow, I know we had Dr. Peter Pronovost a while ago and he was talking about being in London trying to teach the nurses to stop a world renown surgeon we they saw something was wrong sort of a cultural problem that one runs into. So tell us what you have learned from your earlier experiences about applying Lean health institutions and what are the essential components of Lean principles in Health?

Dr. Spear: Yes, what you described was, the behavioral shift from -- not even recognize and dealing with an abnormality. To recognize that the abnormality is something which should trigger a meaningful response in terms of containments, correction and mitigation to prevent recurrence and so this reference had made to Dr. Pronovost gets back to the core behavioral and showed having to teach people that, when they observe an abnormality it's something to be respected and respected through response. So for what it's worth and as in how clinicians are trained they are trained to treat, the biological system at the core of their work the patient. So medical scientist made huge advances in defining, what normal is, you know, well beyond the 98.6 and 120 over 70 and also the scientist and technologist have made extraordinary advances, in creating the monitoring systems and so, what we are talking about here in terms of building the resiliency the robust as to how the organizations which we're trying to build the resiliency the health of the patients at the core. To teach them also to get into this habit of defining normal for the purpose of detecting abnormal and then swarming on the abnormal both to contain it before it has an infectious spread like experience. But also to investigate the source of abnormal so you can treat it to prevent recurrence.

Margaret Flinter: Steven, in your book the high velocity edge, you talked about how certain market leaders, I think you refer to them as breathtakingly good before. So that high velocity organizations have the certain characteristics that really set them apart from the competition and that those characteristics allow for this continuous improvement of the individual parts and the process as well. Which is a complicate sentence for people to understand so, maybe you could share with our listeners again thinking about health care. What are these high velocity principles, where do you see them working successfully in health care?

Dr. Spears: So we have to keep coming back to this notion that, success is rooted in the mechanics and the behaviors of learning and discovery, with a very few and wear exceptions. The only thing we can do in terms of beating in the competition is figure out how to move faster than they do towards figuring out what the market place really wants in this case what our patients really value. And figure out how to deliver that value more effectively more efficiently than somebody else, so that's the basic concept.

Now if you think about what a clinician does day to day, they have a patient come in, doesn't shows up because I don't feel well and the clinician then says all right let's have a talk about that what is your history I'm going to do an examination and all of that is to arrived it and understanding of the patient and determined what's normal was that went

off so that the abnormality which present a symptoms can be understand down to a diagnosed cause the clinician then take the next step and saying well now that I have some sense of what is causing your symptoms the next step is to develop a treatment plan, which biological experiences and so on and so forth, is likely to offset the causes or correct the causes so these symptoms will disappear and that establishes a prediction of a target of what the result of treatment time will be. Then the physician -- the clinician comes back and recycles and says, well what was it about how I did the examination and the work of that got me to a result different than I predicted. And then so you get that cycle of discipline scientific thinking staring with symptoms and trying to get towards cure, like you discover there are this common themes and the common themes are exactly living to the behavior that well disciplined, affective efficient, skill clinician apply every day.

Mark Masselli: We are speaking today with Steven J. Spear a PhD Senior Lecture at the Sloan School of Management at MIT and senior fellow the Institute for Health Care Improvement. Dr. Spear has written numerous award-winning books and articles on the application of Lean systems to improve market successes including the Harvard business review article fixing health care from the inside. You know, Steven, I wanted to sort of probe you a little on -- we have been talking a little bit about organizations and structures but we also have a lot of primary care providers at smaller practices that are listening in -- and I wonder how Lean has scaled down to those offices you know I think about the hospital situation really bad things can happen that are pretty dramatic. But in primary care settings things happen in a slow way but they're really bad someone's not watching a hypertension what do you see out there in the market places in terms of Lean that's can be applied at a smaller organizational level.

Dr. Spears: Actually some of our most dramatic successes has been in that primary care inbuilt toward the setting. And to give you some quick ones, when we first had a -- started in primary care we've worked with one practice that took – and so they started with something simple which was the **(13:47 Inaudible)** flu shot clinic. Day one there was inoculating with say five, six patients an hour, by the second and third day they were up to 30 patients an hour and the joke was they've gotten so fast that providing this inoculation that they really should have move from their office outside they just have to drive through inoculation clinic this is in up in Rivera, towards the Boston in front of the beach and it would have been a very, very cynic place, you know, just stick your arm off the window then they itchy with the needle, you know, where are you going you're done and, you know, 15-20 seconds and what they are able to do is take a situation where for your first appointment let's say you're a new patient, you might have to wait weeks or a moths, they got that down to days, and for a patient who's showing up for a follow up is just not feeling well or want to see the doctor, it -- they took what was call and make an appointment and you're going to wait hours a days, when you walked in, you sign in and initially went to the exam room with the medical assistant as opposed to walk and wait on line, sign in and wait in the waiting area.

So they added enormously to the capacity of their practice without adding any people and it wasn't that they added capacity by working harder, they added capacity by having

a much, much better sense of their processes and how to make them more robust and resilient. And at the same time reducing the overburden on staff, and moving from primary care to specialty care just for a moment we did, work with an orthopedics practices Brigham Foster Hospital here in the Boston area, they were at this -- we're going to declare what we think is necessary to get a patient in and out of the practice for examination purposes, we're going to be very attentive to what's going right and in particular what's going wrong. And then we'll incorporate what we've learned on the next cycle. And so they got into the winter with the expect to be high point in -- they are heading the end of a session and everyone's says my goodness it's been so slow you know, we are so surprised that we are not experiencing the seasonal surgeon the man we normally do and someone discovered they had handles 50% more patients that day, then a comparable day the previous year. So to your question does this work in primary care and -- absolutely and again it gets back to the basic premise here, exceptionalism comes from exceptional patient discipline in learning cycle.

Margaret Flinter: Well Steven the other big see change that's going on obviously life is the enrollment phase of the Affordable Care Act that certainly holds the promise to address one of our health care systems most clearing problems which is the inability of tens of millions of people to afford health insurance and have coverage. I'm curious as you think about the Affordable Care Act what aspects best reflect your ideas of applying Lean principles to improving not only the cost of care about the quality of cares as well.

Dr. Spear: The Affordable Care Act at least as it a spouse is a means to provide people without resources or resources to access care. And the notion that we have a society which more people rather than fewer can access health care we have to agree is the moral ethical derived thing. What we have currently with health care are providers, where the value generated relative to the resources consumed is really poor, everyone is listening to this, I know listening you know looking in a nice radio they got listening perhaps through a computer, phone, or whatever else. And all of those devices we have the regular experience that the thing we buy today we probably pay no more today than we did for the previous version, the thing we buy today has way more functionality at a much more -- way more functionality, much greater availability those thing we bought two, three, four, five years ago and it maybe the same price or less. And that experience we have with electronics and consumer devices it's true with industrial devices it's true with transportation, true with food, it's true with lodging entertainment.

So, we have this problem in health care where unlike every other sector innovation doesn't improve quality, improve availability while still driving down you in the cost so, you know, how does this apply into the Affordable Care Act. We saw this basic problem that the folks who provide care have to do better in terms of managing the delivery of care that they have historically, in terms of engaging, this learning dynamo. So, that not only they providing more care to more people because they're getting paid more in **(18:08 Inaudible)** but they're providing more Affordable Care and more people of higher quality is that they've got this learning dynamo going which whatever they are doing today informs tomorrow how to do, what they are doing better.

Mark Masselli: You know you have talked a lot about how change happens in an organizational structure and it clearly requires the leadership of a Chief Medical Officer, Chief Executive Officer. But, you know I was also thinking you know, we have been engaged in using Dartmouth's Clinical Micro Systems and GE's changes acceleration process in, we also understand that you need the frontline people engaged if you're going to really get meaningful change. So there is a lot new ones in this talk to us about it from the organizational level both from the top right down to the frontline of what that system needs to be a vibrant learning renewing system.

Dr. Spear: Yes, there is no substitute for the senior leader setting the tones to what the behaviors and the values of the organization are. So at the end of the day the senior leader says how many patients do we treat today. The answer will be a number another hand is if the end of the day the leader says how many patients do we treat today and the course of treating them what got in your way, and the senior leader expounds upon that, that question of what got in your way and so well the things that got in your way, why do you think they got in your way and you need help investigating, examining, diagnosing as to why they got in your way, it changes the conversation even further, what got in your way? Why did it get your way? What can we do differently tomorrow and how can I be helpful to bring those changes into place that creates a much different dynamics than how many patients do we did deal with today, how many people did we treat today?

Encourages you towards driving towards more and more numbers not necessarily good or bad experiences, the second one encourages you to celebrate the successes but, be thoughtful about the obstacles and difficulties to trigger for that self reflective self corrective learning cycle it can't be senior leader alone because the question of what got in your way can only be answered by those who are doing the direct work of the organization because it's in their way, that the obstacles got the folks working on this frontline are the number standings of the organizations say oh it's hot here, oh that was short but that was painful. And it has to travel up the nervous system the senior leaders to help encourage the sensing, then it's the senior leaders who can actually authorize and enable the actuation against that sensing in that and that synthesis, in fact there's a top down and bottom up occurring simultaneously because what's occurring top down, once occurring bottom up both if necessary neither or sufficient.

Margaret Flinter: Steven, we're very passionate in our organization about training the next generations of people who will, deliver care and organize care and the accurate statement to sat that we're focused on train them to a high performance model of health care and primary care and we find ourselves really starting at ground zero in training people in the techniques and methods and schooling if you will of quality improvement of Lean and of other techniques. What are your thoughts about the best ways at which you train people in some of this area that we have been discussing today?

Dr. Spear: It strikes me that both Engineers and Clinicians had a similar starting point. Which was -- there were science and technology which was being developed within a profession. And then in order to be confident as professionally had a masters at the

science and technology within your field, but at some point there was a stiffing where even if you are exceptional within your profession that wasn't sufficient to get a good results and a simple reason way is that good results depended on the choreograph synchronize contribution as many professionals across many disciplines toward some common propose, I mean cars for example each ones were purely iron steel plate, a mechanical devices now that the iron steel mechanical is a mere fractions of a total value of the car, it was a long ago that the electronics became the majority value add on the car and now you could probably make an argument that the software controls actually super see the electronic and super see the mechanics in terms of the total value of the product. What happen in engineering is that from very really on engineers had trained very deeply within their particle discipline.

But, even at the under graduate level engineer gets projects which are across disciplinary and there's a socialization for an engineer to understand that the expression of their professional potential is in services to the largest system they are trying to design and the larger system they are trying to operate and that, the better and better they get the larger at the system in which they can make a contribution. Health Care my observation experiences and narratives like, health care professional share is that they are trained within their discipline but, they are really trained either for the socialization piece or the professional expression piece to understand that their potential is express in services to a system much larger to fend themselves. So, there's still this, what is now a widely outdated cliché of this other health care profession somehow orbiting around the physician as oppose to physician being a highly skilled profession who's working in service to a system much larger than himself or herself. When we educate or health care professional, we should really be cognizant of their success as professionals will be as part of team much, much larger than themselves, we should start training them early on, on how to be part of a system and not train them and get them to somehow expected they are still this independent self standing professionals may have been the case 30 and 40 years ago.

Mark Masselli: We have been speaking today with Steven J. Spear. PhD Senior Lecturer at the Sloan School of Management at MIT and senior fellow with Institute for Health Care Improvement, you access the recent report Lean IT Making Health Care More Efficient at iHelathTrend.com and you can find out more about Steven Spear's work by visiting his blog the high velocity edge. Steven, thank you so much for joining us at our Conversations on Health Care.

Dr. Spear: Oh you're quite welcome and thank you so much for the invitation.

(Music)

Mark Masselli: At Conversations on Health Care, we want our audience to be truly in the know when it comes to the facts about health care 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: Well several readers have asked us whether the Affordable Care Act restrict insurance coverage of mammography the answer is no in fact the law requires insurers in to cover mammograms without any cost sharing every one to two years for women starting at age 40, for women with Medicare the law increase coverage Medicare now fully paid for yearly mammograms starting at age 40. Despite what some our readers may have heard there is no cutoff or upper age limit for mammograms to be covered through Medicare we call the American Cancer Society the nonprofit Medicare right center and the American geriatric society and none had heard of any issues or complains of seniors being denied mammograms.

So, where does this false rumor come from? At least some of the claims are misinterpretations of 2009 recommendation from the US preventive services task force. The task force that they volunteer panel with primary care physicians and preventive medicine experts, they made the controversial recommendation that by any old mammography screening should begin at age 50. For women younger than 50, the panel said the decision to have a mammogram was an individual choice for women 75 and older the panel said evidence wasn't available to determine benefits versus harms, the panel did not say that women under 50 or over 50 shouldn't get mammograms at all.

The 2009 recommendations were rejected by some cancer groups and they were specifically rejected by the Affordable Care Act which again requires full coverage of mammograms as a standard prevented benefit, starting at age 40 and that's my FactCheck for this week. I am Lori Robertson Managing Editor of FactChek.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.

Margaret Flinter: Each week Conversations highlights a bright idea about how to make wellness a part of our communities and to everyday lives.

Smoking bans across the country have yield a countless health benefits emirate ways reducing smoking related illness and death. And while smoking in most buildings and public establishments has been banned across the country for years it's still a ubiquitous practice in most of the nation's casinos subjecting employees and patients of this establishments to prolong the secondhand smoke exposure. The State of Colorado recently passed a banned on smoking in the state's casinos and the results have been dramatic, once smoking was banned the number of emergency ambulance calls drop by 20%. Dr. Stanton Glantz, Director of the Center for Tobacco Control Research and Education at the University of California San Francisco says it's really a pretty simple equation, long term exposure to secondhand smoke increases the risk of the development of blood clots that can block arteries causing an attack.

Dr. Stanton Glantz: And even a few minutes or secondhand smoke exposure is enough to make your blood platelets get stickier and when that happens they stick together and they're more likely to form a blood clot and if that blood clot lodges in an artery in your heart, it causes a heart attack. And also the sticky platelets tear up the lining of the arteries so, you can have people who never smoke in their live but had a bad family history onward and increase risk of heart attack who walked into a smoky casino and the short term exposure in that casino or any other smoky environment can actually trigger out heart attack.

Margaret Flinter: Exposure to cigarette smoking also triggered other adverse events like stroke, asthma attacks and COPD flare ups. The American Heart Association has applauded the first of its kind study supporting the smoking banned in casinos and hopes that operators of casinos around the country take note.

Dr. Stanton Glantz: The clear implication of this work is continuing to permit smoking in casinos and other environment for that matter sending people to the hospital and it's not doing it next month or next years or five year from now it's doing it right now and 20% change in the number of ambulance calls you know, I mean that's very substantial.

Margaret Flinter: A smoking banned in casinos populated by thousands of people eliminating secondhand smoke exposure to those people and significantly reducing smoking w relate medical emergencies now that a bright idea.

Margaret Flinter: This is conversations on Health care I Margaret Flinter.

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

(Music)

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