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

Margaret Flinter: And I am Margaret Flinter.

Mark Masselli: Margaret, we are still on the airwaves, so the radio station fundraising campaign must have been successful.

Margaret Flinter: It was but you know community radio is always on life support, so please don't wait for the next fundraising campaign, get in the spirit of the season and send the contribution. You can do it online at Wesufm.org.

Mark Masselli: Speaking of life support, the Health Reform Bill is in need of some resuscitation and President Obama called all 60 members of the Democratic Caucus to the White House yesterday for a pep talk as the tentative outline of the Health Reform package started to break down over this last weekend.

Margaret Flinter: It became clear that there were troubles when Connecticut's Junior Senator Joe Lieberman backed away from his earlier willingness to support the Medicare Expansion Proposal that just last week seemed to seal the deal. I think the progressors must feel like they have been mugged as the bill that's shaping up on midst two key provisions, a government-run public option insurance plan and the expansion of Medicare.

Mark Masselli: That Medicare expansion would have covered several million uninsured people ages 55 to 64. These quick turns of events refrain a lot of nerves.

Margaret Flinter: I think President Obama realizes this and he is pushing very hard because while it's true that the Senators are getting a little frazzled, I think the general public's mood is shifting too. He really needs to address the country's concern about jobs and that's going to take the oxygen out of the health care debate. Timing is just so critical right now.

Mark Masselli: They need some oxygen in the Senate as they have been on a marathon. Meeting in session for 14 consecutive days, I am not sure they have the energy to wrap this up by Christmas. The President is going to put cold in their stocking if they don't get a version out and over to the House where they still have to reconcile the two different bills.

Margaret Flinter: Well, nobody wants to get cold on their stocking this time of year, especially with this administration focused on controlling global warming. Conversations will keep you informed on all the latest climate changes in every way as they occur.

Mark Masselli: This week's Conversation on Health Care interview is with Dr. Peter Pronovost, Medical Director of Johns Hopkins' Center for Innovation in Quality Patient Care. Dr. Pronovost is internationally recognized for his work on how to improve patient safety and quality.

Margaret Flinter: Dr. Pronovost's work was the focus of an article in The New Yorker by Atul Gawande. He said "Pronovost's work has already saved more lives than that of any laboratory scientist in the past decade."

Mark Masselli: No matter what the story, you can hear all of our shows on our website Chcradio.com. You can now subscribe to iTunes to get our show regularly downloaded. Or if you'd like to hang on to our every word and read a transcript of one of our shows, come visit us at Chcradio.com.

Margaret Flinter: And as always, if you have feedback, email us at conversations@chc1.com. We love to hear from you.

Margaret Flinter: Today, Conversations looks at perhaps the most important innovation of all, the ones that save lives and reduce suffering and yes, they even save money in the process. They are not necessarily the most expensive. They aren't blockbuster drugs or biomedical devices. These innovations may be the most challenging though because they call upon all of us in health care, doctors, nurses and administrators to change our own behavior and our culture and pursue a safety and quality. Our guest today is Dr. Peter Pronovost, Medical Director of the Johns Hopkins' Center for Innovation in Quality Patient Care, a Practicing Anesthesiologist and Critical Care Physician. He holds appointments in both the Johns Hopkins University School of Medicine and at Bloomberg School of Public Health. Dr. Pronovost's research, which was focused on how to improve patient's safety and quality in the ICU setting, is characterized by a blend of methodological sophistication and practical attention to the details of making change happen and making its stick. One example of his work is his famous Checklist which has been written about in The New Yorker and even put him on Times' List of Most Influential People in America. Borrowing from the aviation industry, he pioneered the use of a checklist in ICU that converted hundreds of pages

of evidence-based guidelines to a simple five-point checklist for used by doctors and nurses at the bedside. It has been shown to reduce infection and save lives. His research at the bedside and on the units acknowledges that while Health Reform Legislation may start at the top, transforming care always starts with the care of the patients and the people who provide it. He speaks to the importance of creating a culture of safety, one of which, the newest nurse can stop the most senior surgeon from proceeding if that surgeon hasn't washed his/her hands. Dr. Pronovost, just far from alone in this work across the country in the past 10 years, has seen an unprecedented focus on patient safety. The Institute of Healthcare Improvement founded by Dr. Donald Berwick in 1991 is devoted to transforming health care and in particular to improving quality and reducing medical error. Their 100,000 lives' campaign just a few years ago brought the country's attention to the fact that medical errors killed and they aren't rare. Dr. Berwick says the names of the patients whose lives we save will never be known. Our contribution will be what did not happen to them. And though they are unknown, we will know that mothers and fathers are at graduations and weddings, they would have missed. Their grandchildren will know grandparents they might never have known. Holidays will be taken work completed, books read, symphonies heard and gardens tended that without our work would never have been. Both Dr. Berwick and Dr. Pronovost are clear, we need to very specific in collecting and reporting data on health care quality and safety and on setting goals to improve care. Dr. Berwick, in setting his goal of preventing 100,000 deaths from medical error, spoke to the urgency of the matter saying soon is not a date and some is not a number. Dr. Pronovost advises hospitals and medical centers that the most important step is not to implement his checklist, it's to know their data, know their infection rate so they can do something about it. As Conversations looks to innovation and health care, we are reminded of the Institute of the Medicine statement in 2001 that between the health care we have and the care we could have lies not just a gap but a chasm. We still do not reliably transfer science and best known practice into action and our processes do frequently fail despite our best intentions.

Mark Masselli: Dr. Pronovost, welcome to Conversations on Health Care. Thank you for speaking with us. We understand that you aren't in Baltimore at Johns Hopkins but rather in England. Can we start by asking you what brings you there today?

Dr. Peter Pronovost: Yeah, actually I combined two meetings. One, this morning was with WHO to talk about putting this in globally and I oversee

the evaluation for their safety effort so how do they know if they are working. And then in about half hour, all of the hospitals in the U.K. are coming together because we are putting our program in England and it started, it was classic. We came over here with their house authority who said put it in and all the doctors said we are using your Checklist and I said okay great, what are your infection rates. And they said well, we don't know, we don't measure them. And I said well I don't think that the interest is going to cut it for the public, as you know, these are big issues with the public, they are quite fearful infections. Why don't we agree to go measure and see if you have a problem or not. The public doesn't care if you are using my Checklist, they want to know are you going to infect them. And sure enough, they came back and said okay our infection rates are quite high, indeed they are about what you were at Michigan before you did your project and I said okay, that's great, let's put our program in. So we are here now to do the official launch tonight.

Margaret Flinter: You are a physician who specializes in intensive care at one of the country's most well-known hospitals, Johns Hopkins in Baltimore. When people think about ICU, they think technology, machines, monitors, life-saving devices, but you have become famous for something decidedly low-tech, a paper-and-pencil checklist. So, tell us if you will about the checklist that's proven to save thousands of lives and hundreds and millions of dollars. What is it? What inspired it?

Dr. Peter Pronovost: Sure. Well, we realized that certainly in the Intensive Care Unit, we need those technologies, but when I looked at where patients were being harmed, it was from our failure to do the basic things, that is often I get about half of the patients who will have these catheters that go in the large veins in their neck that allow us to give medicines to patient, sort of monitor their heart. And most of the time, indeed only 30% of the time, we never use the evidence that we know we could do to prevent these infections. And nationally, up to 60,000 people die from infections from these catheters each year. And the guidelines that exist to guide our clinicians to use them are elegant and scholarly, but they are nearly 200 pages long and nobody uses them. So, one of the ahas we had and then I came from aviation to say well why don't I go simplify that guideline, that 200 pages, and cull out into a checklist what things are most important. And we ended up with a five-item checklist that was simple, that was robust and it got dramatic result.

Mark Masselli: Doctor, you talked about building a culture of safety training, monitoring and measuring and reporting, how do you create a culture of safety, how do you get people to change? In addition, perhaps

more importantly, how do you get people to admit their mistakes so they can be studied and learned from?

Dr. Peter Pronovost: Those are amazing questions and what we see is that in order to make progress on any problems, whether it's a personal problem, perhaps a substance abuse or an organizational problem, you have to be humble enough to admit you're fallible. And physicians in particular, but often nurses too, get a culture to believe they are perfect that eye doctors don't make mistakes that I am held up to this high level and until you free up the ability to say I am going to forget some time, I am going to do something wrong and therefore I need some aids to help me, you will never get off the dime. But it was so telling about our work with checklist is I will speak to hospitals and they will say oh, yes, yes Peter, I am using your checklist. And I would say okay great, but a couple of quick things, one, what are your infection rates. The public doesn't care about if you are using a checklist, they want to know if you are going to be infected, and their rates are high. Or two, I would say okay, now, if the newest nurse were to ask the senior most physician to go back and wash their hands or to comply with some item on the checklist, would that senior physician obey. And as you could imagine and virtually every hospital, the answer is are you nuts, of course not. And I would say that you don't have the kind of culture that we need in health care, the one that's not hierarchical, a culture that's collaborative, a culture that's based on teamwork. And so, a big part of our program, indeed probably the biggest legacy is to create that culture where that nurse is comfortable speaking up and that doctor will listen. And what we have seen is that when you create that culture around one particular behavior, as we create a safe space for nurses to speak up or for doctors and nurses to work as a team, it then allows people to spill over that behavior in a variety of other areas and really change their culture in kind of a snowball way.

Margaret Flinter: So Dr. Pronovost, let's go back to that example that you used of the central venous catheters and 60,000 lives lost from infections. Your checklist was shown just looking at that one issue, blood stream infections in ICU in Michigan, I believe it was, over an 18-month period to save 1,500 lives and I think close to $200 million, we would consider that certainly breakthrough information. I guess the question we're left is why isn't that mandatory then everywhere that a checklist be used in the ICU? Why hasn't it just become an absolute part of the standard of care or has it?

Dr. Peter Pronovost: No, we are working on it now, but that frustration has been haunting me because if there was age drug or a device that eliminated an infection that killed 60,000 people a year and it saves $200 million or in one state, you can be rest assured that it would be produced and it would be in every place in the country. The problem is that it wasn't a device that we did, it was a safety program and there was no expensive technology, it was a checklist and a culture change program. And most importantly, because most of these deaths are invisible, but if you look at the hospital, I doubt that you know what its infection rates are and many of the clinicians just choke up those infections as the cost of doing business or they say they are inevitable. Patients get sick because they are old or they are very young or they had a big operation and we know now that that's not. So, what I think what we ought to be doing is mandating that hospital's monitor and report these infection rates and then let science and innovators come and say how to get them as well as they can go. I don't know that regulation would be helpful to require the use of this specific checklist because medicine changes quickly and regulation is often too slow and too blunt of an instrument to really allow modification. But in this case, we could require that you know your infection rates, so hospitals monitor and report them and then they have some incentives to drive down those rates.

Mark Masselli: I was reading in The New York Times an article about your work and it said that everybody who was going to be hospitalized or had a relative to be hospitalized should know about your five-point checklist. How do we get that word out? And I am wondering if it's not like episodes of ER and I noticed on one episode when one of the physicians was in the OR at the beginning of the case, he pulled out a paper from his scrubs and said wait, we are going to have to go through this checklist first. Are you seeing that type of popular media adaptation as the way to go versus regulation?

Dr. Peter Pronovost: Yeah, I think you are absolutely right. Well, one of the things you make as I speak about it all the time is that health care has what I would call a very inefficient knowledge market. There is the debate about whether the stock market is efficient or inefficient. In other words, it's all the information known. And health care is grossly inefficient. We know a whole bunch of things that can keep people happy, that can save life, that we just don't do very often. And what we need is mechanisms to make this knowledge market more efficient. And I believe deeply that these checklists do what I call democratized knowledge. Far too often, physicians hide behind fancy words and these long terms that limit the consumer's or the patient's ability to ensure that

they are getting what the evidence is. But in this case, we took fancy words and made five simple things, wash your hands, clean your skin with this soap called chlorhexidine, avoid the femoral site, useful barrier precautions and ask every day if I need a catheter. And by putting in plain on ambiguous language, we now have a way that consumers could share this and I hope walking to hospitals and say hey, are you using these and if you are not, why not, and by the way what are your infection rates. So that we could create this knowledge market where consumers have a huge role in helping make sure that they get the right care that they deserve.

Margaret Flinter: Dr. Pronovost is an intensivist and an anesthesiologist as well, right. You work in hospitals with the sickest of people. Where somewhere on the other end of the spectrum in the primary care community health center world, we see people hopefully earlier in the course of their health problems, we work on preventions always but also really improving the control and outcome of the chronic diseases, diabetes, asthma and heart diseases. We are curious whether you have any thoughts on how your work applies in the primary care setting? Have you thought about that at all?

Dr. Peter Pronovost: Sure, absolutely and we are working with our primary care colleagues to do that. There is pretty good evidence that on average for almost any condition you could think of, the likelihood that you or your loved one gets what the evidence says you should get is a coin toss, it's 50%. That includes some of America's best hospitals and includes some of America's worst hospitals. The numbers are even lower. And part of the reason is there is ambiguity about what to do, we are drowning in the sea of guidelines and conflicting studies, and we haven't taken a step back to simplify okay, what are the key elements, I can't do 80 things on a 100-page guideline or I can't do 150 things, but I could maybe do seven, that's why my telephone number is seven digits. And so we are working with our colleagues and primary care to cull out, when you show up with diabetes, what's most critical that the care you get and how do we then feed that back to clinicians so they can get it. We also in our model, and it's really key, approach this with the mental model that doctors and nurses want to give the right care. And if they don't, there is a barrier. So often we go into this judging where if only the doctors would do this or if only the nurses would do this or if only administrators would do this and it's not harmful, every doctor and nurse I have seen uniformly wants to give the right care. And when they can't, there is typically some barrier, there may be a knowledge deficit, they may not agree with the evidence so we may need a discussion, there may

not be the surprise available. So, part of what we do is once we clarify what the behavioral expectations are, what the checklist should be, we then literally go through with them and say okay, now, what's keeping you from doing it. I trust you want to do the right thing, why is it hard, let me understand your world and then we could remove some of those barriers, or you can move the barriers yourself so that you make sure every patient all the time gets the evidence disposed too.

Mark Masselli: Conversations focuses on the Health Reform innovation and transformation. Cost is a big factor in the health care debate. The CBO, the Congressional Budget Office, can't score a factor in the potential savings to the system. If we implemented some of the safety and qualify forums that you advocate, how much of a fiscal impact you think we could make through reducing medical errors and complications like the ones you have just described?

Dr. Peter Pronovost: Yeah, I mean it's probably in the $60 to $80 billion range, it's enormous. And I'll give you just one example that the catheter infections that we virtually eliminated in Michigan cost the country about $2 to $3 billion. There is great data that says complications double or in many cases triple your average cost of care. So you take your average hospital stay and if I have any of these complications, I often stay twice or three times as long and it costs me two or three times more money. And we over test, that is because of financial incentives and some uncertainty, we over test that patients don't need. And so you put that together and you'd have an enormous ability that there is essentially money being thrown away that not only will save money but it's better quality care, and if we need to tap into that, because as we need to expand insurance to those 47 million people who lack and I believe strongly that it is deplorable that a country as wealthy as ours doesn't provide insurance to its citizens, we also have to be fiscally responsible and say how we are going to pay for that. Well, we have to start getting rid of this waste that we spend every day by hurting people and doing things that they don't really benefit from.

Margaret Flinter: Dr. Pronovost, you are a tremendous innovator and we know that you have got your eye on the country and the world, what do you see in health innovations that excites you and who should we be looking at?

Dr. Peter Pronovost: Yeah, I think there is a whole bunch of innovations that are going on. In the field of biomedical research, you are going to see a lot more tests for diagnostic thing, so based on blood tests or what

are called biomarkers, looking at either people who are at risk for cancers or infections. And so I think you are going to see a lot of innovation there.

Margaret Flinter: Dr. Pronovost, we want to thank you so much for joining us on Conversations on Health Care. Thanks for the terrific work and we look forward to speaking to you again in the future.

Mark Masselli: Thank you so much.

Dr. Peter Pronovost: Yes, thank you for having me.

Mark Masselli: Each week, Conversations highlights a bright idea about how to make wellness a part of our communities into everyday lives. This week's bright idea focuses on Community Bike Sharing Programs which both improve physical fitness and reduce harmful air pollution. One such program began at the University of California at Berkeley in August of 2008. A product of the bright ideas at Berkeley contest, the Green Bike Share project aims to reduce student car use and improve student wellness by providing a healthy transportation alternative. Students pay a per-semester free of just $15 and can check out a bike for up to 24 hours allowing them ample time to travel through campus and around city without having to drive. The program staff handles all maintenance and repairs and bike stations are strategically located in high-traffic areas to increase student access. The Green Bike Share project health environment and benefits are bound by increased transportation-based activity or incidental exercise. The program helps students easily integrate regular exercise into their daily lives. And by reducing local greenhouse gas emissions, it also cuts down an air pollution and the resulting public health problems like asthma and cardiovascular disease. The program is also uniting the UC Berkeley Community in a broader effort to become more environmentally sustainable. Justin Wiley, the UC Berkeley student who created the program, describes his hope for the Green Bike Share saying "This is the beginning of something great. We are seeing Bike Share programs slowly starting to pop up around America and we truly believe, it's one answer to reducing our carbon footprint and getting our country into shape." As Wiley points out, other bike sharing programs have been implemented with similar success across the country and around the world in places like Amsterdam, Brussels Copenhagen, Seattle, Portland and New York. In fact, Paris's Bike Share program has already made over 10,000 bikes available at 750 stations in the metropolitan area. Bike Sharing programs like these are becoming increasingly popular and important as global consciousness about the

dangers of greenhouse gas emissions grows and people begin looking for solutions to combat this problem in everyday lives. Riding a bike to work or school instead of driving a car is a great way for ordinary individuals to do their part while also bettering their health. Improving your physical fitness and reducing your carbon footprint, now that's a bright idea.

Margaret Flinter: This is Conversations on Health Care. I am Margaret Flinter.

Mark Masselli: And I am Mark Masselli, peace and health.

Conversations on Health Care, broadcasted from the Campus of Wesleyan University at WESU, streaming live at Wesufm.org and brought to by the Community Health Centre.