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

Margaret Flinter: And I am Margaret Flinter.

Mark Masselli: Well Margaret, we are celebrating National Nurses Week this week, very exciting for all of us who honor, respect and are cared for by nurses.

Margaret Flinter: Yes, we are Mark. And you know, there is so much progress to note in terms of the continual evolution of nursing practice in this country. It's projected by The Bureau of Labor Statistics that growth in nursing world will outpace all other professions and job growth through 2020.

Mark Masselli: In spite of the growth, Margaret, there is still an expected shortage of nurses moving forward. The Institute of Medicines Report, The Future of Nursing projected a million nurse shortages by 2020. That's a staggering number.

Margaret Flinter: Well it is and you know, it's very cyclical this whole issue of nursing shortages and nursing demand. But one thing is true that we continue to need, and the Institute of Medicine recent report is calling for this as well, an increase in the number of nurses with advanced degrees, certainly nurse practitioners but all categories of advanced practice nurses which also includes midwifery and anesthetists and others. And one program that's seeking to help with that shortage is the National Health Service Corps which as you know provides scholarships and loan repayment for nurse practitioners and other APRNs who agree to work in underserved areas after they complete their education.

Mark Masselli: Well, it's a great program. And the Affordable Care Act has allocated \$1.5 billion for the program over five years. That should provide some assistance and incentives for those seeking access to nursing training.

Margaret Flinter: Well, it's especially important Mark because of the critical role that registered nurses and advanced practice nurses play in the vital delivery of primary care. And as you know, one of the reasons that we launched our first in the country Post Graduate Residency Program for nurse practitioners at our health center is because we recognize the value they bring to the role of primary care provider, particularly, in the nation's community health centers.

Mark Masselli: And you were the founder of that program, and we are excited at the health center that it's going well. On another note, Margaret, interesting report out from the World Health Organization, Born Too Soon which ranks countries in terms of preterm births and infant mortality. Sadly, the United States

ranks far below all other western counterparts. The report cites lack of consistent access to primary care as one of the deciding factors.

Margaret Flinter: Well that's true. And we know that just like the nursing shortage it's not a simple issue. Access to primary care is one critical issue but that's one we should be able to solve and do something about. Yet, there is still a lot, clinically and scientifically, we just don't know about all the causes for preterm birth and that's why we still have such a need for research and innovation.

Mark Masselli: 50 organizations participated in the report which sought to identify the scope of the problem globally and recommended solutions as part of the Millennium Development Goal to reduce preterm births and infant mortality by 2015.

Margaret Flinter: And that is something that our guest today knows a lot about. Dr. Sonia Ehrlich Sachs is the Director of Health with the Millennium Villages Project, an offshoot of the UN's Millennium Project which seeks to end extreme poverty by 2015. Dr. Sachs' team has been developing models in more than a dozen regions in Sub-Saharan Africa that have shown dramatically improved infant and maternal health outcomes in those regions.

Mark Masselli: She will be talking about the systems they have developed to bring about real change in those communities and how they are about to scale it up to a much larger sector of the global population. And FactCheck.org's Lori Robertson looks at claims related to the Affordable Care Act and Medicare cost.

Margaret Flinter: And remember, no matter what the topic, you can find all of our shows by Googling www.chcradio.com.

Mark Masselli: And if you have any comments, feel free to email us at www.chcradio.com, we would love to hear from you. Dr. Sachs will be with us in just a moment, but first, here is our producer, Marianne O'Hare, with this week's Headline News.

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Marianne O'Hare: I am Marianne O'Hare with this Headline News. GOP Lawmakers and the House of Representatives went to work this week promoting provisions in the budget laid out by House Budget Director Paul Ryan that would save funding for the military at current levels or slightly above while making significant cuts across the board to social programs like Medicaid funding, the food stamp program, and the child tax credit. Democrats say the bill is an example of the GOP catering to special interests at the expense of social programs aimed to alleviate the burden on the poor.

The automatic budget cuts going into effect January 2013 as part of the budget compromise to allow the debt-ceiling to be raised earlier this year.

The numbers of Americans with diabetes is on the rise. The more startling number, that of obese and overweight children coming down with what has typically been an adult onset condition. An New England Journal of Medicine article reports studies show it's far more difficult to control blood sugars in children with Type-2 Diabetes requiring a multi-drug approach including insulin shots to bring the condition under control. And one of the cost of diabetes, at this Weight of the Nation Conference, experts in the field say, reducing the national obesity problem by 1% per year over the next 20 years could save \$85 billion per year and related health costs and close to \$600 billion in health care costs during that timeframe.

And Connecticut has become 16th State in the nation to approve the use of Medical Marijuana. After a lengthy debate in the State General Assembly, the measure passed to be signed in the law by Connecticut Governor Dannel Malloy. The prescribing will be strictly controlled to avoid controversies being experienced in other states like California where state dispensaries are running a foul of federal drug laws. I am Marianne O'Hare with this Headline News.

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Mark Masselli: Today, Margaret and I are speaking with Dr. Sonia Ehrlich Sachs, Director of Health for the Millennium Village Project, an extension of former UN Secretary-General Kofi Annan's Millennium Project, launched in the early 2000s to eliminate extreme poverty for more than one billion people across the globe. The Millennium Village Project is based at the Center for Global Health and Economic Development at the Earth Institute at Columbia University. Dr. Sachs, welcome to Conversations on Health Care.

Dr. Sonia Ehrlich Sachs: Thank you very much.

Mark Masselli: You were recently a keynote speaker at the Global Health Summit at Yale University speaking about your work in the Millennium Village Projects currently under-weighting over a dozen regions spanning Sub-Saharan Africa and now expanding beyond the African continent. Let's talk for a moment about the ambitious goals of the Millennium Project. Can you give us some background on the project, if you would?

Dr. Sonia Ehrlich Sachs: So, thank you for allowing me to have this opportunity to speak with you and your listeners. With the countries in Sub-Saharan Africa especially where people are really basically in such extreme poverty that their whole day is spent thinking about the one meal that they are going to have to survive to the next day, it's the kind of extreme poverty that really is what we call poverty that kills. So the UN Millennium Project really is a follow through on the

Millennium Development Goals. And the Millennium Development Goals was really a wonderful set of consented upon goals that the whole world has agreed on, which is that there would be a focus on extreme poverty as well as specific goals of child mortality, maternal mortality, access to water, sanitation, dealing with scourges like HIV, TB, malaria and other infectious diseases.

So the Millennium Development Goals really were set in year 2000 by Kofi Annan and consented upon by all the countries as a way of really striking forward a strategy, a holistic strategy with specific quantitative time-bound goals. The UN Millennium Project was to take these Millennium Development Goals and very concretely chart out what are the practical investments that can be made in order to achieve those goals. And then the Millennium Villages was an offshoot of that which was basically the bottom-line which was working with communities and working with 14 different agro-ecological zones meaning 14 different topographies and different farming systems in Africa to actually implement what the UN Millennium Project recommended. So the bottom-line is that the Millennium Villages Project is a ground truthing and a demonstration or proof of concept that the Millennium Development Goals can be reached following the UN Millennium Project sort of cookbook approach which written by hundreds of specialists in all the different fields.

Margaret Flinter: Well Dr. Sachs, I understand that you have an article coming out soon in the medical journal Lancet in which you are going to announce some pretty remarkable outcomes in just a couple of years of significant results in addressing some of these issues with as you say sort of concrete and quantitative results to show for it. Can you give us a little bit of an advanced look at some of these outcomes?

Dr. Sonia Ehrlich Sachs: Yes. So the Lancet article coming up summarizes our findings in all of these 14 different sites through East, West and Southern Africa and the bottom-line being child mortality. This article shows that actually this holistic approach of addressing not just health or just agriculture or just education but addressing health and education and agriculture and infrastructure development really is critical and impactful. So this article is our look back at the data over the first three years of the project and seeing that in fact child mortality was significantly reduced given the short amount of time and a very small financial investment. The child mortality dropped way over 20% in three years stunting which is the arrested growth of children under the age of 5 due to not having the necessary micronutrients in their diet and the mother not having them during pregnancy has decreased by 40%. And such an incredible stunting impact, decrease in the stunting has not been seen before. Usually the work that looks at how to impact stunting usually looks for one key intervention; what would happen to children if you made Vitamin A widely available? And those results usually are very modest.

In fact, what we have shown is that what unfortunately is needed is a holistic approach. So if you looked at the impact pathway of what it takes to have a child well-nourished, it turns out there are about 80 steps that have to go right in order for a child to be well-nourished. That of course you have to have food for the child but it's not just the caloric amounts, you also have to have the correct micronutrient balance, which is very problematic in children in Sub-Saharan Africa because often they live in areas where they eat only maize or only bananas. So they have enough calories but they don't have all the other micronutrients that you need, you need to do things to prevent diarrhea which is a way to lose micronutrients. So there are so many things that contribute to stunting that unless you address all of them, unfortunately you don't get the results that are needed.

Mark Masselli: And you have made it clear that free access to primary care has to be at the center of achieving the Millennium Development Goals and that community health workers are pivotal to that success. So, talk to us a little bit about the challenges in front of you. You plan to mobilize a million community health workers in the coming year and I assume that there must be at the heart of some of the outcomes that you are looking for because they are going to be focused in on a wide range of activities community outreach, information technology community and supply chain management and financing. How do you envision scaling up to train that many workers and talk to us a little more about their role?

Dr. Sonia Ehrlich Sachs: So, if I could, yes, first tell you about their role, which I think is very significant to understand because it's something that I think we can profit from here in the United States. And actually we are working on sort of a similar approach here in New York City. The Community Health Worker approach is a well-recognized intervention that really has just not been worked out in detail and that's what we are focusing on. What would it take to have a professional accountable community health worker that really connects the household to the clinic? It turns out that it's not enough to make sure that the clinics are functioning it because in all communities including ours in the United States, there still are households who will not get health care unless you actually go to the house. So, in the Millennium Villages, which encompasses 500,000 people, we are demonstrating the role of these health agents. So, in the Millennium Villages, we have devised a system that's working with many partners where each community health worker is a full time person accountable to a supervisor and responsible for about 130 households. So, the community health workers are taught how to do some very simple measurements. So the idea of the community health worker is to be the link, the last mile between the clinics and the clinicians and the households.

Margaret Flintner: Well Dr. Sachs, you have made a powerful point that about 80 different things have to go right for a child to not be malnourished or stunted in the Sub-Saharan Africa. And I know that you are now getting attention from other

countries, Nigeria and India being two of them, who are looking at expanding your models nationally. What's the infrastructure for exporting these ideas and how are you in the Millennium Project working with countries and with governments in areas like India?

Dr. Sonia Ehrlich Sachs: So, by having these demonstration sites, these pilot sites, so we are working from the beginning very closely in conjunction with the government and other partners. So the scale-up has been sort of a natural consequence of that but for the moment we are only working on a national scale-up with Nigeria because they are able to afford it on their own funding. But Nigeria is actually able to fund the scale-up from its own budget so we are working with them on first a scale-up to 20 million people. India has decided, and we are working very closely with the Ministry of Health on scaling up their public health system. So we have a working group with the ministers of health from India, China, Ethiopia, Nigeria and also Kenya, learning that by meeting together with these five ministers with different portfolios but very similar challenges, there is a lot of cross-country learning about what it's like to setup very basic health system and finding very high impact, low cost intervention and systems that are actually quite transferable from one country to another.

Mark Masselli: We are speaking today with Dr. Sonia Ehrlich Sachs, Director of Health for the Millennium Village Project. Now, Dr. Sachs, unlike the rest of us who are in public health, few of us face the issues and the challenges that you do that the Government of Malawi was on board to initiate your project countrywide until the President was overthrown in a (14:51 inaudible). How have you managed to overcome some of these challenges and what can other organizations learn from your experience?

Dr. Sonia Ehrlich Sachs: We are learning from a lot of the organizations that have been involved in fighting poverty for decades and we are of course working very closely with the United Nations' agencies trying to show that actually malnutrition can be really overcome in a relatively short period time. So, we are working with the World Food Programme to help African villagers grow more food. And it's quite successful and an indicative of the potential that's there. So it's not flying solo by any means because actually all the pieces are already there. The funding actually is there, it's just unfortunately not being used to this end. So we are working with all of the agencies to show we are actually not innovating, what we are doing is we are trying to focus the international community on the fact that these goals are reachable as long as the lessons learned from all the various organization and initiatives are put to bear to address the five main areas. When everything is so broken down, you really need to address all of the different sectors simultaneously and that you derive synergies from addressing all of the sectors together.

Margaret Flinter: Dr. Sachs, I want to ask just one more question. I know that your center has a strong focus on developing mobile health and electronic health

applications. I think you have setup the first mobile network mapping all the health clinics throughout Nigeria. What other kinds of applications are you using and developing that might enhance your goals?

Dr. Sonia Ehrlich Sachs: So we are one of many working together with many on developing protocols that will allow community health worker to be able to service the households in a much more supported way. So the one thing that we are working on is called Child Count, which is basically a text-based method by which a community health worker can very easily plug in a few numbers into the text of a regular cell phone and be able to report on the vital statistics, in other words if there is a death or a birth in the household, be able to, and the results of a rapid diagnostic test whether or not the child has or doesn't have malaria and then text all this information in and immediately my experts system get back an algorithm driven support such as that child with the positive rapid diagnostic test should be given X amount of malaria, etc. So that has now of course completely changed and empowered what the community health worker can do at the household. And we and many others are working how to connect that to the information available and collected at the clinic themselves so that there could be a connection between what happens in the clinic to the same patient that the community health worker then sees at the household.

What you are referring to in Nigeria has been quite remarkable, very quick mapping of all the health posts and clinics and hospitals and all of the schools and all of the water access in Nigeria for 20 million people using not the simple cell phone but the smartphone. And using that technology which has of course gone down in price and therefore is really available and affordable, we have trained federal, state and also local governing area enumerators to fan out across the areas of the 20 million people and in a very short amount of time total with training it took 3 months. Now Nigeria has in its possession a web-based mapping of all of these facilities with pertinent information that will make it able for the government, they can access this information and have a very quick visual summary of what the status quo is, where are the clinics, are they functioning, can they deliver a child, do they have an anesthesiologist. So with a very quick Android smartphone based survey, within a few months, the Minister of Health now has evidence based on which they can make their gap analysis and their proposals and start implementing some of the changes that they need to undertake in order to improve the health system and monitoring of the progress.

Mark Masselli: Dr. Sachs, we like to ask all of our guests this final question. When you look around the country and the world, what you see in terms of innovation that our listeners at Conversations should be keeping an eye on?

Dr. Sonia Ehrlich Sachs: Well I think the telephony and all of the sort of the technology that has brought connectivity down to the individual is really just the cutting edge technology that has made everything possible. And I hope that we

too will employ it here in the United States where I think a lot of our patients feel very disconnected and disempowered from the information about our health care and from our health care service providers. So I think even just a clever use of telephony will go a long way. But then of course the remote sensors that many organizations and many universities are working on are going to be transformational. I know that for instance at Harvard, at Mass General Hospital, they are working on very simple belt that a pregnant woman can wear, which will monitor the certain indicators of her pregnancy remotely while she is at home or in her field or tending to her other children where the clinician can actually monitor some of the danger signs and therefore alert her and/or send somebody to reach the woman. So the remote sensing and the ability for communicating in real time with real time data I think is going to be transformational and I just hope that we will be willing to make some of the changes in our health system that will allow us to really get better care.

Margaret Flinter: We have been speaking today with Dr. Sonia Enrich Sachs, Pediatrician, Public Health Expert and the Director of Health for the Millennium Villages Project at the Center for Global Health and Economic Development at Columbia University. You can learn more about their work by going to www.earth.columbia.edu. Dr. Sachs, thank you so much for joining us today on Conversations.

Dr. Sonia Enrich Sachs: Thank you.

Margaret Flinter: 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, Mark and Margaret, this week we will look at another viral claim. Readers have been asking us for well over a year now about a chain email that says the federal health care law is going to increase Medicare premiums. This email claims they are going to jump up to \$247 a month in 2014. That's just simply not true, and as far as we can tell, it's a product of the anonymous email author's imagination. Medicare premiums are set each year to pay for 25% of the cost of coverage and the law doesn't change that. Right now, the basic premium is \$99.90 per month. Medicare's Chief Actuary gives the official outlook for premiums, and the latest report says that the premium would be \$112.10 in 2014. That's less than half the figure used in the chain email. In addition, the law also adds new benefits like free preventive care and increased prescription drug coverage for Medicare beneficiary. And that's it for this week. I am Lori Robertson, Managing Editor of FactCheck.org.

Margaret Flinter: FactCheck.org is committed to factual accuracy from the country's major political players and is a project of the Annenberg Public Policy Center at the University of Pennsylvania. If you have a fact that you would like checked, email us at www.chcradio.com. We will have FactCheck.org's Lori Robertson check it out for you here on Conversations on Health Care.

Margaret Flinter: Each week, Conversations highlights a bright idea about how to make wellness a part of our communities and everyday lives. More than a billion people live in the world without electricity and another billion or so have it only sporadically. That leaves most people to find an alternative means of lighting at night and that often entails burning kerosene. For people living in poverty, that means spending a portion of their meager resources on buying fuel but it also leads to health problems from the particular matter in fumes that pose additional health risks. Inventor Steve Katsaros had a bright idea. The engineer turned inventor, created a solar light bulb that could recharge daily, lasts for years and illuminate a living area for hours at night with up to 30 lumens, just about the same as a low watt light bulb. Not dissimilar to the solar lights you find in gardening stores but these lights are designed for maximum portability and durability as well as illumination. He formed a company to make and distribute the bulbs to the darkest corners of the world calling the company, Nokero for no kerosene. Since founding the company in 2010, Katsaros has deployed over a million solar light bulbs across the globe, helping not only in places like Sub-Saharan Africa but in disaster areas like Haiti and Turkey after their earthquakes. Katsaros is expanding his solar lighting options to include clip-on reading lights, mobile phone chargers and hopefully lights strong enough to illuminate operating rooms in third world communities and disaster relief zones. Nokero's motto: Innovate, collaborate, illuminate. They are partnering with relief organizations around the world to bring the solar light bulbs to neediest communities. Creating a simple device that can allow potentially billions living in the dark to see the light, now that's a bright idea.

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

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

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