Dr. Harpreet Sood, Senior Fellow to the CEO of the National Health Service of England

Mark Masselli: This is Conversations on Healthcare, I am Mark Masselli.

Margaret Flinter: And I am Margaret Flinter.

Mark Masselli: Well Margaret, pretty scary developments in recent weeks the CDC has announced that the first completely antibiotic resistant bacteria strain has reached our shores, this is not good news.

Margaret Flinter: Well it's downright frightening news Mark, and I am reminded of our interview last year with the CDC's Dr. Tom Frieden he was focused at the time on the Ebola epidemic but he told us then that the thing that keeps him up at night isn't outbreaks like Ebola but antibiotic resistant bacteria because we just don't have any viable alternatives yet for fighting infection in a post-antibiotic world.

Mark Masselli: And this particular case involves a 49-year-old woman with a strain of E. coli that was resistant at last resort antibiotics, the first reported human case in this country.

Margaret Flinter: And that is a dire reminder that frontline clinicians have to be extremely judicious with the prescribing of antibiotics, but also play a role in this Mark, they have to stop demanding antibiotics for every malady.

Mark Masselli: What most people don't know is medicine resistant infections killed 700,000 people worldwide last year and malaria, tuberculosis and E. coli are the most potent players in this deadly scenario.

Margaret Flinter: And because of that it's now estimated that antibiotic resistant bacteria will be the leading cause of death in 2050 so very serious threats and that requires a global response. And speaking of global health, we would like to take a look at how health systems function differently around the world from time to time and comparisons perhaps are most often made between the American health system and the National Health Service of England.

Mark Masselli: And we are revisiting our conversation with Harpreet Sood, Senior Fellow to the Director of the National Health Service. He spent time working in health systems on both sides of the pond so he has a unique perspective.

Margaret Flinter: Indeed. And Lori Robertson will be stopping by, the Managing Editor of Factcheck.org she is always on the hunt for misstatements spoken about Health Policy in the Public Domain. And as always if you have comments, please email us at

chcradio@chc1.com or find us on Facebook or Twitter because we love to hear from you. We will get to our interview with Dr. Harpreet Sood 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 am Marianne O'Hare with these healthcare headlines. Changes on the exchanges as states prepare for this year's round of open enrollment under the Affordable Care Act there will be changes UnitedHealthcare is opting out of the California exchange, the nation's largest insurer announcing in April that it was dropping out of all but a handful of 34 health insurance markets it participated in. Only a handful of customers about 1200 actually purchased their exchange products in California this past year.

And the Virginia exchange will be dropping the bronze plans next year the bottom tier insurance plans that offer the least number of covered services, during 2016 open enrollment period 23% of market insurers signed up for bronze plans which are cheaper compared to 68% who chose silver and 6% who chose gold and only 2% platinum, the highest level.

The World Health Organization has issued new guidelines for those returning from zika infected parts of the world largely South and Central America and the Caribbean, the greatest risk for zika leading to microcephaly in women seems to be during that first trimester of pregnancy if they become infected. Scientists found the virus lingers longer than previously thought in blood or other body fluids, if the male partner in a couple planning pregnancy has symptoms of the zika virus, the period of safe abstinence would be six months according to a WHO spokesman.

As the opioid addiction and overdose trend continues seemingly unabated there is more awareness about the overdose antidote naloxone which is becoming more widely available and more costly. Analysis of the market shows price has doubled in recent months as more public health departments make the antidote available for those struggling with addiction and awareness of naloxone’s powers of overriding an overdose become better well-known.

A parents’ worst scenario, babies under the age of one coming down with the stomach flu they caught a daycare. It's no secret that daycare centers are germy little places and kids catch bugs like wildfire often, but a study shows that early exposure to some of

those pathogens lead to a healthier immune system for years later on. In a study published last month in the Journal of Pediatrics researchers in the Netherlands followed a large group of children over the first six years of their life looking at how often doctors diagnosed acute gastroenteritis. Being in daycare as an infant increases the child's risk of having acute gastroenteritis in the first year of life, but also had a protective effect after that lasting up until age 6. I am Marianne O'Hare with these healthcare headlines.

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Mark Masselli: We are speaking today with Dr. Harpreet Sood, Senior Fellow to the CEO of the National Health Service of England, where he is involved with transformation of care models. Dr. Sood is an advisor to Partner's Health Innovation at Boston and has served as a Deland Fellow at Brigham and Women's Hospital in Boston. He earned his medical degree at King's College, London and his Masters of Public Health at Harvard School of Public Health. Dr. Sood, welcome to Conversations on Health Care.

Dr. Harpreet Sood: Oh fantastic [PH].

Mark Masselli: You have a special approach having worked on both sides of the pond, and I think it's fair to say that in the healthcare system of our two countries there are some similarities in scope and purpose but also some real significant differences. I wonder if you can describe for our listeners some of the hallmarks of each system as well as some of the strengths and weaknesses.

Dr. Sood: Right, absolutely. Starting with the UK, I think it's important to highlight that the key strength of the National System here, we have a robust primary care system which has been around for decades, and you recently saw with Commonwealth Fund report that came out that UK Health System still ranks as one of the leading health systems in the world and I think these are kind of important hallmarks for the strengths of the UK System.

Looking at the US, in its own way it has its own strengths, you know the fact that it has world class research facilities and innovation going on, the pockets of care that are provided have been excellent, level is great college [PH] perspective, the academic medical centers you have here: the Kaiser's, the Mayo's, the Cleveland Clinics, the Massachusetts, UCSF and CareMore, what you touched about, there is also the Fee for Service aspect that's quite important because, I think we are now on that stage where you know both sides of pond, we are looking at sustainability, both sides of pond we

have invested lot of money over a number of years on acute care, but now the question arises is that sustainable?

And I won't call that weakness per se, but it is something that's changing. Now we are looking at the facts how do we actually make it more sustainable so that from our prospective, UK's prospective when that value to tax payers comes and the value to the public is we are accountable for, what are we doing to develop sustainable strategy and we are seeing now where, where we are looking to invest more in the community, more in prevention and take that care out of acute hospitals into the community. And we are also starting to see that in the US now where the whole population health approach that we are seeing with bundled payments and these large health systems and others who are now also trying to invest in communities and primary care because that's how we see sustainability happening and care being placed into people's homes or in their homes, so we must leverage on those strengths to address some of the weaknesses.

Margaret Flinter: Well Harpreet, until the passage of the Affordable Care Act certainly tens and tens of millions of Americans were just functionally left out of this system and reform certainly is changing that reality in the US, but we look at the UK where access to care is given considering the universal coverage there, and the fact that consumers pay no fees at the point of care, but the UK system actually goes a step further than all of this and ensures that access to care is a guaranteed right. I would love for you to comment on the NHS constitution, what healthcare rights exactly does it aim to protect or guarantee, and how does that expand upon the mission of the NHS?

Dr. Harpreet Sood: We spend 10 pens in every 1 pound in the UK on Healthcare, and ultimately the NHS belongs to the people, so the constitution you talk about you know we have the principles and values and just touching upon some of the principles that guide the NHS for example: Number one, the fact that NHS provides a comprehensive service available to everyone irrespective of gender, age, race, disability, sexual orientation or religion, it is based on clinical need and not on the individual's ability to pay. The fact that NHS aspires to be of the high standards of excellence [PH], the constitution that was built up is something that was going to be reviewed every 10 years is an important aspect about how we are able to protect them. And again, the NHS Five Year Forward View for example is based upon all those principles and values we talk about.

Mark Masselli: You know Dr. Sood, right now both countries are struggling with the health reform that's going on and in England talk a little bit about what's happening in the marketplace there, and also the external challenges that are upon you?

Dr. Harpreet Sood: Yeah. More than two-thirds of our UK public believe that the NHS works well, cancer survival rate is as high as ever here, operation waiting lists are down, early deaths from heart disease are down over 40%, we have got 160,000 more nurses, doctors, and other clinicians, 22,000 people more outpatient appointments however, demand for care is also rapidly growing. We are also faced with a burden of avoidable influences in England from unhealthy lifestyles, 1 in 5 adults still smoke, one-third of people still drink too much alcohol, there are more people overweight and obese and 70% of the NHS budget is now spent on long-term conditions. But this presents us with new opportunities, we have got new technologies and treatments improving our ability to predict, diagnose and treat disease and we have got new ways of delivering care. So we want to dissolve traditional boundaries between how care is delivered, we want to improve the coordination of the care around patients, also we want to improve outcomes and the quality.

The NHS published the Five Year Forward View which was the first time ever the NHS as a system has come together and published this document which looks at where is healthcare going in the next five years in England. And it identified three key gaps to this: first, was the health and wellbeing gap, and what this is saying is that, if we don't get radical upgrading prevention, we are not going to be achieving what we want to achieve, so we are backing National Programs on Prevention with the NHS Diabetes Prevention Program. The second gap is the care and quality gap and this will be filled in with the whole new models of care that we talked about, so what we want to have is 3, 4, or 5 may be care models that work and we can replicate and scale across the country. One firstly is the Primary and Acute Care Systems and this is the whole, you know how a large health system virtually integrating in having potentially Primary Care Practices but also Community Hospitals in a one kind of system approach. Second is how do we scale primary care, so you know form these kind of multi-specialty community providers, looking at how are we at scale providing primary care with specialty care in the communities. And thirdly the key one is, how are we providing enhanced care in care homes, so looking after our elderly care population but then we now have added looking at acute care and how we formed urgent care centers around that and developing what we call [Inaudible 00:12:02] we have 50 of those in the country all pushing these care models at scale so that we achieve good replication all across the country. So you can see where we are headed in the urgency and the need of this transformation that we have to make in order to make the healthcare system in this country more sustainable.

Margaret Flinter: Well Harpreet, we hear so much in the United States about part of the negative impact on primary care being the incredible debt load that our young healthcare professionals come out of their training with and that this influences the

choice of careers needing to really select a more lucrative career, tell us about how this workforce issue is addressed within the UK in terms about the cost of education or salary differentials, just shed a little light on that.

Dr. Harpreet Sood: So, I mean compared to US for example medical school here is much cheaper so you can pay up to maximum £9,000 a year now at medical school, at my time I paid £1,000 compared to US where you can pay up to the end and have up to $200,000-$300,000 debt, so I think that is an important aspect of the workforce here. From a central perspective, we do have a kind of scale of pay for trainees as we move along, and then when you get to consultant level you have your basic pay rate that can be supplemented with bonuses or little bit of private practice, so the primary care from a national perspective is well remunerated

But I think the attractiveness is what gets people excited in order to work for NHS for example, the NHS Graduate Managers Training Schemes which is one of the most sought after schemes in this country and probably one of the most competitive thing to get into is a 2-year scheme that we have here to train the next generation of managers that come through. And you see the national leadership at the moment including our current Chief Executive Officer, Simon Stevens who have come from that scheme and gone on to achieve stable careers. But we do face a challenge like all health systems; training, we are giving them opportunities providing with the latest innovation, thinking, and also it is in an important way of keeping your staff excited and we have just launched the first time a national program on Workplace Wellbeing which is same we will go out there and produce workplace wellness initiatives and programs for our staff in the NHS to not only live healthier lives but give them that mental health wellbeing and space to them, really thrive on what they are doing and doing it well.

Mark Masselli: We are speaking today with Dr. Harpreet Sood, Senior Fellow to the CEO of the National Health Service of England. Harpreet, you had real great opportunities, you had lot of great opportunities at Harvard you were really able to dabble in the startup culture and you and your colleagues were examining how technology, specifically gaming could improve the landscape for patient management. Tell our listeners about the Mighty Lungs Project?

Dr. Harpreet Sood: This was a project that was funded by the Harvard Medical School where we got the C-Grant [PH] to go and kick start a project with the local community health center and really trying to solve that problem of pediatric asthma, medication adherence and how do we actually incentivize kids to take their inhalers. And this was a big problem where 40%-50% of the children would end up in the emergency room because they weren't taking their medication. And one of the things that I encourage a

lot of entrepreneurs is that how do you go about solving real problems to our providers, so this was a real problem that we were trying to solve for them. So our plan was really to firstly develop a video game that would incentivize children to take their inhalers and then we would encourage to sort of developing of sense. So every time they took their inhaler we could monitor that and send them reminders and messages, we want to make it more of a fun process for them so that they take it.

But ultimately, I think the timing wasn't quite right and it failed, but a great opportunity to learn about the whole startup experience, the culture working with a great team and you know moving on now I think it's important that what this experience really showed and this is great thing about the American system: (a), the culture which you talked about, but secondly, the ability to take risks, and if projects don't work, let us close them early which is what we did. But I think going back now if we were to do something again like this, we wouldn't set ourselves for such a tall order and maybe bit by bit and doing incremental innovation which will ultimately lead to I think bigger gains.

The experience in Boston with the UK system great people, at Brigham and Women's for example, I was quite involved with helping set up the innovation hub there called the iHub which does exactly that, it kind of hand-holds, guides frontline clinicians and managers to go and innovate, and it takes their ideas from ideas and to achieve fully fledged startup projects. And yes, we are starting to see that in UK now in the NHS for example, you know great experience to learn with Mighty Lungs and I am helping now to kind of diffuse that learning in the NHS in England.

Margaret Flinter: We have in common Tsunami in the increase in patients with Type II Diabetes and particularly what we see coming in through our adolescents, and diabetes is both about the basics, diet, exercise, medication. But it also requires that we think about innovation and we think about taking some risk, can you tell us a little bit about the Diabetes Prevention Program that's being implemented which you are overseeing?

Dr. Harpreet Sood: You know Type II Diabetes constitutes for over 90% of all those with diabetes in England, the human cost, the annual NHS cost of treating diabetes is estimated to be around £10 billion which is you know roughly 10% of our NHS budget. So you could see the scale and the gravity of the situation, yet the Diabetes Prevention Program, this was a kind of randomized control trial. They have documented 30%-60% reductions in Type II Diabetes in youngsters and adults who have impaired fasting glucose through intensive lifestyle interventions that you talk about. The biggest out of these was the US based Diabetes Prevention Program and that showed that people with impaired glucose tolerance, who lost 5%-7% of their body weight and achieve 150 minutes of moderate physical activity per week reduced their chance of getting Type II

Diabetes by 58% over an average 2 to 3 years, those numbers speak for themselves, I mean if this was a drug of some sort we would already been using this. So we are really going for a national kind of program here where we want coverage throughout the whole country and be the first country in the world that has a National NHS Diabetes Prevention Program.

We plan to have this program rolled out in the next five years. And this again rolls back to the Five Year Forward View plan that we have and I just talked about where prevention is like I said a key aspect of our strategy to encourage individuals and communities to really think about their health. And I think we can demonstrate this and pave the way with this program that will really pave the way for prevention to be taken more seriously. It would also demonstrate from a financial perspective that it makes sense from a social perspective using our existing infrastructure around primary care we need a corrected primary care system to achieve this.

Mark Masselli: We have been speaking with Dr. Harpreet Sood, Senior Fellow to the CEO of the National Health Service of England. You can learn more about his work by going to the web england.nhs.uk or follow him on Twitter @hssood. Harpreet, thank you so much for joining us on Conversations on Healthcare today.

Dr. Harpreet Sood: Thank you for the invitation and it's great talking to you both.

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Mark Masselli: At Conversations on Healthcare we want our audience to be truly in the know when it comes to the facts about healthcare reform and policy. Lori Robertson is an award winning journalist and managing editor of FactCheck.org a nonpartisan, non-profit 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: At a congressional hearing, on the impact of environmental regulations on farming, Rep. Steve King of Iowa underestimated what scientists know about the relationship between farming practices and water quality. King said, scientists don't know about the quality of water in the US when the Buffalo roamed because there were no water quality tests then. Pre-1900 water quality data is relatively scarce, but experts can use sediment cores from water bodies to evaluate past water quality.

King also implied that this lack of baseline data prevents scientists from knowing whether applications of crop fertilizer are too much. But experts say they don't need 19th century data to know fertilizers have negatively impacted water quality. There was

water quality monitoring 1800s, for instance chemists developed methods for evaluating water pollution from sewage and response to outbreaks of cholera and typhoid fever. And in the late 1800s Massachusetts carried out what's been called the Great Sanitation Survey with more than 40,000 water samples collected, but by that point humans already had drastically reduced bison numbers. However, scientists can use sediment cores from water bodies, to evaluate the water quality of the past.

In modern times, water quality monitoring increased substantially in the 20th century, especially after the Clean Water Act passed in 1972 and many reports and papers have concluded that 20th century crop fertilizer use, combined with soil erosion from farming and other factors has negatively impacted water quality in the US. And that's my fact check 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 chcradio.com. We will have FactCheck.org's Lori Robertson check it out for you here on Conversations on Healthcare.

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Mark Masselli: Each week Conversations highlights a bright idea about how to make wellness a part of our communities and everyday lives. Charles Slaughter learned the value of entrepreneurship from an early age as a paperboy growing up in Connecticut. Later he took the passion globally as a field organizer for micro-finance company, then came his first successful venture TravelSmith, a $100 million online clothing supply company for serious global travelers. But his travels also showed him another stark reality, the number of children dying in Third World countries from treatable diseases due to lack of access to basic medicine.

Charles Slaughter: On average in the country is somewhere between 50-100 out a 1,000 have failed to reach their fifth birthday but the barrier is effectively delivering what we know works.

Mark Masselli: He wondered how we could put the power of healing in hands of villagers themselves and he realized the successful model already existed.

Charles Slaughter: I am thinking about and I go, wait a minute hold phone isn't there a business model that excels at that and you start to think about Amway and Avon.

Mark Masselli: After training as an Avon lady himself he founded Living Goods, sales associates go from home to home in their villages teaching the families and the entire community how to use these life-saving essentials.

Charles Slaughter: We recruit, train and support networks of community health promoters who go door to door every day teaching families how to improve their health and wealth and then making a living by selling high impact health products like simple treatments for malaria and diarrhea healthy fortified foods, high-efficiency cookstove, solar lights and water filters.

Mark Masselli: There are now Living Goods sale associates serving the needs of some 5 million residents through sub-Saharan Africa and in some cases infant and child mortality is down 25% in the communities being served.

Charles Slaughter: And now, they get a Smartphone that can help them with a guided diagnosis of childhood diseases and within 10 years time it's possible that every community who needs a community health worker can have one to make sure that that kid doesn't die of malaria or something else ridiculously simple that they needed.

Mark Masselli: Living Goods, a simple grassroots business model, generating income while saving lives and improving the health of the community as well. Now that it's a bright idea.

(Music)

Margaret Flinter: This is Conversations on Healthcare, I am Margaret Flinter.

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

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