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

Margaret Flinter: And I am Margaret Flinter.

Mark Masselli: Well, Margaret, by a narrow margin, the house voted to repeal ObamaCare and replace it with their own version of health reform. The revised American Healthcare Act has drawn quite a bit of fire. It is expected to increase premium cost for most consumers, but it is far from the finished piece of legislation. The bill is now in the Senate hands for consideration and it is expected to undergo some major revisions.

Margaret Flinter: And many in the Senate leadership are publicly stating they are most likely to start from scratch and create their own bill, one that doesn't compromise coverage for so many Americans. Senator Susan Collins, Republican from Maine is publicly expressing concern over her constituents, who may lose coverage or lose protections for preexisting conditions.

Mark Masselli: Republican Louisiana Senator, Bill Cassidy appeared on late night comedian Jimmy Kimmel's show following to apply the Kimmel test to any legislation that is crafted in the Senate. Kimmel's new born son was born recently with a life threatening heart defect and required immediate surgery and other treatments. He used the experience on his show to promote healthcare that covers all children, not just those who can afford it, was very powerful video if you haven't seen it yet, pull it up.

Margaret Flinter: It was indeed an unfortunately one that is all too familiar to individual who have had a loved one with a medical problem and not had the funds or the coverage to pay for it. So far we just don't know what the GOP leadership and the Senate is planning to keep intact from the American Healthcare Act or what they'll be adding to the legislation, but one thing is for sure, we will be watching the process with great interest.

Mark Masselli: Today, we will be speaking with Dr. Daniel Carr, who is the immediate past president of the American Academy of Pain Medicine and also Lori Robertson stops by, the Managing Editor of FactCheck.org is always on the hunt for misstatements spoken about health policy in the public domain.

Margaret Flinter: You can hear all of our shows by going to www.chcradio.com and as always if you have comments, email us at www.chcradio@chc1.com or find us on Facebook or Twitter, because we love to hear from you.

Mark Masselli: We'll get to that interview in just a moment. But first, here is our producer Marianne O'Hare with this week's Headline News.

Marianne O'Hare: I am Marianne O'Hare with these Healthcare Headlines. The Senate is getting to work on their version of the replacement for ObamaCare with

most in the Senate saying the version of the American Healthcare Act sent to them by the house will not survive their review in its current form. The bill would remove Medicaid Expansion and protections for the 52 million Americans with a preexisting condition leading to what will most certainly be higher rates for older, sicker, and less wealthy people in this country. The GOP measure will allow States to opt out of the preexisting conditions aspect of the Affordable Care Act. Republicans say there are measures for so called high risk pools for those older, sicker folks, but according to analysis in the 35 States that used to have high risk pools, that is a costlier health plan for sicker individuals and it did not work well, often was under-funded, pricing those sick people out of health coverage. Since this replacement plan is not technically repealed, it is being handled through budget reconciliation measures that will require a full 60 vote approval for final passage. Access to healthcare and economic factors do play a part in overall life expectancy in this country. According to the most recent statistics, the average life expectancy in 2014 was a little over 79.1 years at more than five years since 1980, with life expectancy for women topping off at 81.5 years, but there was little if any improvement in life expectancy in some Southern Counties and States stretching all the way from Okalahoma to West Virginia. Many Counties where life expectancy dropped are mostly in Kentucky. However, a baby born in Lakota County of South Dakota has an even lower life expectancy, about 66 years at last count. I am Marianne O'Hare with these Healthcare Headlines.

Mark Masselli: We are speaking today with Dr. Daniel Carr, immediate past president of the American Academy of Pain Medicine and Professor of Public Health and Medicine at Tufts University School of Medicine. He is founding director of Tufts Program in Pain Research Education and Policy. Dr. Carr was the founding editor of Pain Clinical updates. He has held leadership roles in the American Society of Anesthesiologists, The American Pain Society, the FDA, and the National Institutes of Health. He has earned numerous awards and distinctions for his groundbreaking work. Dr. Carr earned his M.A. and M.D. from Columbia University. Dr. Carr, welcome to Conversations on Healthcare.

Daniel Carr: Thanks Mark, it is my pleasure.

Mark Masselli: There has been such a long history of healers, who have been trying to effectively mange pain management. We had this big push in the mid 1990s to make pain the fifth vital sign in an attempt to bring the discipline of pain management into the clinical settings, but I am wondering if you could set the frame of reference for our audience about the enormous difficulties that arose in the wake of that action and what do you think went wrong and why?

Daniel Carr: Well, Mark, as I went into the field of pain personally, I had the feeling that it was a field that was a prism, not only into all of medicine, but much of human activity. The mechanisms of pain are evident in lower life forms and so even if you look at single cell bacteria, they will actually wiggle around to either be in a less hot area, so the ability to respond to environmental threat is

something that is primordial and I think ever since the dawn of history, there are very good indicators that people were willing to do things to relieve pain. For example, there was cadaver recovered during a melt back of the ice pack in the Alps and that cadaver showed physical signs, tattoos in areas that were likely painful, owing to the fact that he had arthritis in his low back and neck and the tattoo distribution followed the distribution of what we could call lumbago or sciatica, so since before the dawn of history, people have been trying everything in the environment to reduce their pain. So, I think there is little doubt that right now we are in the middle of a perfect storm. The perfect storm is one in which pain should be treated. People have declared the access to pain treatment as a fundamental human right and on a world-wide basis, access to pain treatment is a much bigger problem than excessive opioid prescribing on a world-wide basis, but certainly in the U.S., it is a catastrophe. I would say that there is no family that has been spared some form of substance abuse and for sure if you include alcohol, I personally think it is not a bad thing that increased attention has been given to patient comfort. There was excellent documentation in the areas of cancer pain or postoperative pain that the majority of people before pain was something that was on the medical agenda, didn't have good pain treatment, patients voices were not heard in this respect. In fact, the mega trend driving the increasing focus on pain that I would say goes back to the 70s with the rise of the modern hospice movement and in the 80s with the World Health Organization developing a method for pain control, those mega trends were the results of a shift to patient empowerment, where there was a tremendous hierarchical organization of medicine and what the doctor said was it. Like many other consumers, patients found their voices being heard more and among the first things that people are going ask is, will it hurt and what are you going to do if it hurts. If you look back over the last 10 or 15 years of availability of opioids and the consequences of substance use disorder including death. The curves are very-very striking.

Margaret Flinter: Dr. Carr, you've said that recent advances in brain imaging and neurophysiology are giving us a much deeper and a more nuanced, a understanding of the pathology of pain, can you describe for our listeners the very types of pain we are talking about and how recent scientific advances are helping us to gain a deeper insight into the nature of pain.

Daniel Carr: For thousands of years, artists, painters, writers, and so on have chosen suffering as a topic that is expressed in their particular medium. The traditional focus by mainstream medical science was that pain represents the detection of actual or impending injury, but it is incomplete. What's been learned in the last decade or two, thanks to the ability to image people's brain while they are talking with you. This really powerful investigative insight has allowed science to integrate the older notion that pain represents the detection of tissue injury. With what artists and poets have known for millennia, which is that pain represents suffering, a feeling of isolation or abandonment, so one half focuses on mechanisms and detection of injury. The other part of pain has to do with

feeling bad, feeling isolated, and if you think about the most common way of relieving pain, in my belief, you can look at mothers comforting toddlers, who may have tripped or gotten a scratch or a boo-boo, the mother holds the child, surrounds the child with protection and also touch and that works in over 99% of the time, you can't overdose from it, so what's happened with the ways of imaging the brain is to rediscover what people knew intuitively about pain. That if they have a very low self-esteem, if they are withdrawing, they have to understand that that's part of the instinctive hardwired response to having chronic pain.

Mark Masselli: We are speaking today with Dr. Daniel Carr, immediate past president of the American Academy of Pain Medicine and Professor of Public Health and Community Medicine in Anesthesiology and Medicine at Tufts University School of Medicine. And Dr. Carr, you are a researcher who is credited a couple of decades ago with discovering the pathology of the runner's high, where natural endorphins mask pain for distance runners. You've been thinking critically about the combinations of therapies; mindfulness, physical therapy, I am wondering if you could talk about those benefits.

Daniel Carr: When we were studying runners who were placed on an exercise program, we were actually not studying runner's high, what we are actually studying was to better understand why women athletes might have a hard time conceiving a child and part of that story was that many are very skinny and they lack body fat and if there aren't enough calories stored up to sustain a healthy pregnancy, a lot of the time the body just shuts off the ability to reproduce. Even if you make sure that women eat enough to maintain their weight, they still have impaired reproduction. So how could something that is an adaptive system inhibit the ability of people to reproduce; that seems to go against Darwin. But, if you look at the system, it has huge social implications, if you give many newborns a tiny sub -analgesic dose of morphine, the cries that they will vocalize when they are removed from the mother ceased. If you create knockout mice that don't have receptors for morphine, the mothers of newborn mouse pups will not bond with their newborn and the newborns won't bond with the mother and they starve and they die. I have come to the conclusion that pain relief while it is important is not the primary thing. If we are injured, it is well described that the stress of injury gives us a transient analgesia, may be for a few hours and so what I have come to look at the opioid system is doing is aligning individual behavior with the needs of the population, so that the wisdom of the population is such that if there aren't enough calories around, if there is a famine or if there is a war, the population will shrink and even though that seems to go against Darwin, actually more adaptive for the population to sustain itself during periods of caloric deprivation. There are profound behavioral effects of the opioid system that are not directly related to pain. There is another thing that is very striking is when people are addicted to certain substances like opioids and not to other substances, the things that they will do, where an addict may rob from their parent or prostitute themselves. There are very pernicious antisocial behaviors

and I think it is because of the fundamental disruption in the body's motivational system. People will do things that they would just never dream of doing and there is another whole level of craving that shrugs aside doing very corrosive things to the social unit.

Margaret Flinter: Well, Dr. Carr everything that you are speaking to speak so powerfully to the need for us to reconsider our educational curriculum for training the next generation of healers and healthcare providers and I am really intrigued by the learning environment that you've helped develop at Tufts, where I understand pain medicine is also partnered with the public health curriculum and certainly, as the opioid crisis remains a front page concern in the United States, more of medical schools and nursing schools are taking a greater interest in pain management within their curricula, can you describe for us your vision of how we support this more comprehensive pain management training?

Daniel Carr: Well, when we first started the program, which was in the late 90s, people would come up to us and say why is this in a Public Health Department. There is no question that a bottom-up concept of pain where the focus is on nerves that detect heat and cold, but to me that's like studying pigment chemistry. If you are trying to understand impression to start, like how does loss of a job or job insecurity drive someone towards substance abuse. You can't even frame that question if your focus is on the single cell or the conduction of a pain impulse. So if you look at the World Health Organization's concept of disease, they have really excellent writings on the social determinants of disease. If there are not enough resources to achieve a clean water supply, so that you have parasites in the water endemically, you will see endemically diseases carried by parasites. If you can just invest resources to make pure water available to the population, diseases will go away. There's an awful lot written about the social determinants of addiction. I would urge your readers to Google on the words rat and park for an innovative way of looking at the features of addiction. The conclusion of that Rat Park story was that if you take mice or rats and put them in a natural environment with other mice and rats and give them things to explore and its actually harder to get them addicted to opioids than if you use the traditional testing methods of isolating them in a small cage with no distraction and no escape and there are lot of analogies with people.

Mark Masselli: You know, one of the things that we have been engaged at our Weizmann Institute is hosting pain echoes around the country, because primary care providers want to help manage people who present with pain, but it is a complicated area to do and we host for clinicians who are interested in the best techniques in terms of managing chronic and complex pain, what are some of the best practices that you have identified in terms of helping primary care practitioners manage these problems?

Daniel Carr: I understand that primary care providers are very busy, there is a lot of time pressure, but education first of all to allow them to understand the

alternatives to opioids and by the way alternatives to drugs, there are non-drug measures that are very effective for reducing pain by themselves or as a part of a multimodal program. So first is understand what are the options, second is use patient selection, predict in advance, who is at greater risk to go off the tracks as it were versus less risk and the data is starting to emerge that if you have a carefully selected population and you explore other alternatives, the need for an opioid, at least on a chronic basis, just knowing what are the available options and tools you can use and then follow the results closely with things like urine-drug tests, brings the process from a rushed interaction, where it is very easy to write a prescription, because it doesn't take much time to an interaction where you lay out the different options and want to use things with a higher benefit-to-risk ratio first and add on things with progressively lower benefit-to-risk ratios; subsequently, you are going to get better results, but it requires education as to what are the options. It also requires making the options available. If for instance, a visit with the psychologist to have some training in what's called cognitive behavioral therapy, you got to make sure that there is a person to actually see the patient without delays or insurance denials. So information about what are the options, you need information about whom to select for which treatments and you follow them carefully. Data is starting to come out now which confirms what commonsense would say, that if you screen the population, review non-drug, as well as drug options and distribute your therapies among them rather than jumping to an opioid, commonsense would tell you that the outcomes will be better. In fact, in Massachusetts, a few years ago, we were asked by Blue Cross Blue Shield to reduce what they felt were some inappropriate prescriptions of pain medicine, one tiny aspect of that whole picture had to do with postoperative pain medicine and if you look at how long do most people take pain medicine, it was clear that there were prescription given for a longer period of time than the majority of people needed. So, just to match up the amount prescribed with the condition and then allow additional prescribing if there was some complication or some exception, but simply not to automatically give what in retrospect was an excessively long duration of therapy. That reduced substantially the inappropriate prescribing of opioids.

Margaret Flinter: We've speaking today with Dr. Daniel Carr, immediate past president of the American Academy of Pain Medicine and Professor of Public Health and Community Medicine at Tufts University School of Medicine. You can learn more about his work by going to painmed.org or go to medicine.tufts.edu/Daniel Carr. Dr. Carr, thank you so much for joining us and for sharing your insights with us on Conversations on Healthcare Today.

Daniel Carr: My pleasure, Margaret.

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 non-partisan, nonprofit consumer advocate for voters that aim to reduce the level of deception in U.S. politics. Lori, what have you got for us this week?

Lori Robertson: On May 4th, House Republicans passed the American Healthcare Act to replace ObamaCare and in the run up to the vote, politicians made competing claims on whether the bill maintains protections for people with preexisting medical condition. The latest version of the bill offers lesser protection than the Affordable Care Act. The GOP bill would allow States to apply for waivers from certain Affordable Care Act requirements for plans sold in the individual market. There are three types of waivers; one allows State to increase how much insurers can charge based on age. Insurers can charge older people up to three times as much as younger people under the ACA, but the GOP bill would increase that to a 5:1 ratio. The second waiver allows a State to establish its own requirements for a central health benefit. These are benefits that ensures must cover under the law, there are ten of them under the ACA and the final waiver, which directly relates to preexisting conditions would allow insurers to price policy based on health status in some cases. Such health based pricing is not allowed under the ACA. If a State received a waiver, individual buying plans on the individual market, who don't have continuous coverage could be charged higher premiums for preexisting conditions for one year. After that the policy holder would get a new less expensive premium that was not based on health status. States in such a waiver would have to either have a high-risk pool or participate in a reinsurance program and that's my FactCheck 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 Healthcare.

Margaret Flinter: Each week conversations highlights a bright idea about how to make wellness a part of our communities into everyday lives. Well, more than 20 million Americans have gained coverage under the Affordable Care Act, some 30 million remain uninsured and many of these are either immigrants or without the resources to purchase coverage. Many more with complex conditions simply can't afford access to specialty care. Entrepreneur Jayanth Komameni decided to create a virtual way to bypass the system and founded the Human Diagnosis Project, a network of volunteer specialist around the country offering virtual consults for neediest patients.

Jayanth Komameni: It is an online system built by the world's doctors to understand the best steps to help any patient. We began talking to the world's leading medical stakeholders. We realized that there is an opportunity to

develop a system that can ultimately help solve the problem for those people, who won't have access to specialty care.

Margaret Flinter: Dr. Shantanu Nundy is director of the Human Diagnosis Project. He is a frontline primary care provider in the safety net clinic, who saw the opportunity to provide specialty care in a cost effective way, to volunteer participation from specialists.

Shantanu Nundy: The way the system works is safety net providers like myself can freely exchange electronic consultations with volunteer specialists from around the country, so that the expertise of those specialists have that our uninsured patients currently can have access to becomes available.

Margaret Flinter: It is estimated that roughly 35% of specialist visits can be done virtually. The Human Diagnosis Project offers an opportunity to create real savings in the healthcare system while effectively brining treatment to millions of the most vulnerable.

Shantanu Nundy: So, there is a very real and large portion of situations in which providing an electronic perspective will actually solve that problem for many patients.

Margaret Flinter: A free online portal linking safety net providers serving underserved populations to specialty care expertise and improving outcomes for millions of uninsured and vulnerable patients and improving care outcomes in the process, now that's a bright idea.

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 wesufm.org and brought to you by the community health center.