John Marchica:

Welcome to season four of Health Care Rounds. Here we explore the vast and rapidly evolving healthcare ecosystem with leaders across the spectrum of healthcare delivery. Our goal is to promote ideas that advance the quadruple aim, including improving the patient experience, improving the health of populations, lowering the cost of care and attaining joy in work. I'm John Marchica, host of Health Care Rounds. I'm also the CEO of Darwin Research Group and faculty associate at the Arizona State University College of Health Solutions. Please don't forget to rate and review us wherever you get your podcasts and send your questions, comments, or ideas for Health Care Rounds to podcast@darwinresearch.com. Let's get started.

Kim Asciutto:

Today John speaks with Dr. William B. Weeks. Dr. Weeks is a Principal Researcher at Microsoft Healthcare NExT. He has a published book and over 200 peer review manuscripts examining economic and business aspects of healthcare services, utilization and delivery, physician's return on educational investment, healthcare delivery science and healthcare value. Dr. Weeks has been honored with the 2009 National Rural Health Association Outstanding Researcher Award, 2016 Jerome F. McAndrews award for excellence in research from the National Chiropractic Medical Insurance Corporation Group and the 2016 Fulbright-Toqueville Distinguished Chair at Aix-Marseille University.

John Marchica:

All right, so let's get started. Just a full disclosure for listeners out there. Bill Weeks, I was actually, I was a TA for him in my time at Dartmouth, as well as for the little time that I had a PhD committee, he was helping me with that as well. So, we go way back. I always say this in the podcast, but by the magic of podcast recording, I will have already read in Dr Weeks' background.

So, we don't need to go into too much other than you did spend most of your career at Dartmouth, but I'm curious about the transition to Microsoft. It must have been a major change in culture. Can you talk about that a little bit?

Dr. William B. Weeks:

Yeah. John, thanks for having me. Sure, it was a major change in culture from academia where things are done kind of with a 10 year or maybe even three decade or career long kind of a timeline compared to something where people are asking you, what can you do for me next week? Right?

John Marchica:

Right.

Dr. William B. Weeks:

So it was really a kind of a delightful change for me. I have a business degree and I've always been kind of product-oriented and wanting to have a kind of an accelerated pace. So for me, it was really nice fit because people are kind of more in the trenches trying to do things, trying to see what works and what doesn't, and then evaluate those to kind of improve patient care and healthcare quality. So, it's fun.

John Marchica:

Yeah, it'd be nice to bring some of that kind of spirit back into academia. I remember my first month at Dartmouth, so this goes way back. This is 2005 and I had just exited, well I sat on the board, but I had

exited my company. And one of the things that I noticed was there wasn't any kind of group tool for the PhD students and I put together a blog and with like all kinds of links and stuff on Typepad. And I swear, I thought that Ann Flood would have lost her mind that I created a non-Dartmouth authorized website. And I was like, "Hey, I guess I'm in a different world now of approvals and all that." So, we've got Google, we've got Apple and IBM and was it Haven and now Microsoft. So from your perspective, Bill, what's the end game? Obviously in healthcare specifically, what is Microsoft trying to accomplish?

Dr. William B. Weeks:

So, our mission is to empower every person and every organization in the world to do more. That's Microsoft's mission overall and I think the healthcare mission is really consistent with that. The way I kind of view my job is, help the world and people and organizations in the world do more by improving healthcare value. Because I think you can do more if you're healthy and satisfied and not spending unnecessary time and money on healthcare. And if you're being directed toward people who are going to provide you a better outcome at a lower cost than the kind of the random way that people choose healthcare providers now.

So I think the end game for me and for Microsoft, is to help accomplish that and our team, which we're now thinking of as precision population health, wants to bring in a variety of social determinants kinds of datas and genomics datas and data on health services utilization. But also kind of ongoing health data from peripherals, for instance, to try to identify what are the better pathways for patients to take that will optimize their outcomes without wasting a lot of money. As you know, Dartmouth has always been one to focus on healthcare waste I think, and overuse of care, but there's also obviously the underuse of care and misuse of care.

And I think the AI algorithms and the enormity of the data and the compute power that can come to bear to kind of help identify for an individual, what is their best pathway? So that's I think the end game, I think it's kind of facilitated through, like I said, this cloud and compute power and massive multiple sources of massive amounts of data and kind of the AI algorithms in learning we're capable of now. And I think it's the beauty of kind of cloud, which all of those companies that you mentioned also are using, is what's applicable here in the US can be translated pretty immediately to EU or Sub-Saharan Africa or wherever it is that you've got access to internet stuff. And I think even the COVID crisis has accelerated the import of that and accelerated kind of alternative methods and healthcare delivery, like virtual stuff that can be really helpful in particularly lower and middle income countries.

So again, back to the kind of end game for me, for Microsoft and health is to improve health outcomes at a population level by leveraging the data and the compute power that we have.

John Marchica:

So is this going to be useful for, I was going to say me, but I'm kind of in the healthcare space, as well but your average consumer? Or, is the target CMS or is the target Geisinger? Like where would we find the best use of this kind of AI?

Dr. William B. Weeks:

So I think the end user, I think, could be any of those. We think of a six P's that could use our, operate within our ecosystem and now I might miss one, but they're payers, providers, patients, pharma, kind of producers or retailers, and there's got to be another one... Oh, platforms, different platforms. So you could imagine any of those could benefit from this kind of shared healthcare space with the ideal being of course the patient is optimal [inaudible 00:08:14] and the patient's care is better and they have a better experience and there's lower costs so we get the Berwick Triple Win. And providers might have a

better experience as well so they can actually interact with patients and operate the top of their license and not be harassed by doing inane repetitive actions that they need not do. It could be kind of computerized or bypassed.

So there, so we get the quadruple win there. And then the kind of, through the rest of it, the payers, the pharma, the kind of producers with retail and so forth, we might be able to learn, someone's coming into Walmart and Walmart's on the platform and they're starting to buy more Depends, right? Might that kind of trigger some kind of a opportunity for a provider to reach out to the patient and see if there's an alternative method of improving urinary leakage for instance, right? So I think everyone could potentially benefit hypothetically, but for us the center is really the patient.

John Marchica:

Right. Right. So, frequent listeners to the pod know that I return to this theme often but since you've written so much about it, I wanted to get your take on what value really means in healthcare.

Dr. William B. Weeks:

So for me, what value in healthcare means is kind of a combination of quality and outcomes in the numerator divided by costs and then you could add in over time. So it depends on if I'm getting a knee replacement, that's going to have a relatively short time period. So it may be just a month or something like that, where I'd be looking at quality aspects did the providers follow the recommended treatment pathways, outcomes? Functionally, is my knee better? Is my pain gone away? Did I not have complications? Did I have a good experience?

I would include quality within quality or outcomes kind of satisfaction things. Was it a decent experience? And then cost, was it able to do this with a minimum of cost? Something like diabetes management might have a longer term, right? Where I'm worried now more about thinking about outcomes as avoiding the need for dialysis or transplant, renal transplant or something like that, or amputations long into the future. And I'm achieving that through kind of incremental monitoring of intermediary outcomes, like A1Cs, blood pressures and stuff like that. But again, all of that, if the minimal effective cost. You obviously can't get to zero cost. One of the challenges is, dead patients don't generate charges, right? So that's not a good outcome because the outcome is an important numerator there that we need to include.

John Marchica:

But one of the things that struck me about the last time we talked, and I'm paraphrasing here, but we were talking about outcomes and quality and that was your sense that, that the payers didn't care. And you said something like to all this investment in quality and outcomes, I think you were talking about a health system. And that they had much better outcomes when they compared themselves to others, but no one was willing to pay for it. The insurance companies weren't willing to pay for that quality. Can you expand on that notion? Like, if we're all after, in theory, we're all after this triple aim or quadruple aim, but the incentives may not necessarily be aligned for that to happen the way that we pay for healthcare today.

Dr. William B. Weeks:

Yeah. I think it's not aligned because in part, as you know, like ACA has set profit limits, right? Medical loss ratio limits for insurers, right?

John Marchica:

Right.

Dr. William B. Weeks:

So, if I now have a limit on my profitability, kind of the only way I can grow my profit amount is by growing my revenues. And the only way I can kind of justify that is by not worrying too much about utilization, right? I just have utilization. I get the loss ratio that I want one year and then justify higher co-payments and higher premiums the next year, that grows my top line. That then again, I get the same 20%, but the total profits has then increased, right?

So I think there's not that incentive to actually think about, if I can get rid of unnecessary stuff when I grow my profit margin would be the other way that the profit could increase and indeed hypothetically profit could increase even as your premiums went down if you were very good at that. But it's the law, you can't do that and I think we found is that 100% of wage changes over the last 20 years have been consumed by healthcare premiums, right? In co-payments.

So, I think, why if I'm an insurer, why would I pay more for stuff? Why would I worry too much about this? I just want to kind of continue to grow my profit margin. As long as I continue to pass it off to the patients, the end consumers, then I don't see what my incentive is to really change things. And I did, I just had a conversation about two weeks ago with someone at an organization I won't mention, but they kind of threw in the bag. They said, "We work so hard on improving quality outcomes and just as you said, we were measuring against everyone else, we had clearly higher performance and no one would pay for the difference." You know in my mind, if you have alignment and maybe you get alignment when you have like a Kaiser or a Geisinger, sharing risks, right?

John Marchica:

Right.

Dr. William B. Weeks:

Maybe there's some kind of alignment there in saying because we've proven, Justin Dimmick and I wrote a paper a while ago, when there's a bad healthcare outcome, it's the insurer that pays the brunt of that additional bill. The hospital in which it occurred, actually their costs go up, their reimbursement goes up, but their profit margin actually kind of goes down. But the insurer kind of eats the whole thing. So, if we truly had incentives that included not just kind of a limit on profitability, but some kind of a change in the premium amounts that could be passed on, including the co-payments and all the kind of tricks that are involved in that. If we could focus on something like that to drive down premiums and truly drive down costs and incentivize that to happen, I would think that the insurers would help direct care and indeed structure their benefits so as to incentivize people like you.

So, "Hey John, you need knee surgery. You can go to anyone you want. If you go to one of these five people who have stellar outcomes, your copayment is zero. It's a $1,000 bucks if you go to any, and frankly, I bet you could save, and it's $50 buck if you go to any of the other people and you'll go to the one who has the better outcomes." But I think the real challenge in doing that is knowing what the outcomes are, knowing even what the volumes are. We just did a study where we looked at volumes of spine surgery by neurosurgeons and orthopedic surgeons and then so-called orthopedic surgeons of the spine, it's a designation of orthopods. And it really varies the number of spine surgeries that an individual provider does, varies considerably.

And if a portion of their practice that is dedicated to spine really varies. And you find, there are places like Leapfrog Group that say, "This doctor should do X number of hips." They just added hips and knees, a bit of cholecystectomies and pancreatectomies and things like that, right? CABGs, there's certain kind

of minimum volume standards, but it's tough to find a provider who meets those standards for your typical consumer. It's not like they advertise that. So again, if the interest could just use that as an incentive for patients to steer them and let them steer themselves through the higher quality providers and to put a Dartmouth hat on, to worry about not just doing more, but doing appropriately the right amount, high number of surgeries, right? Because it's easy to do a lot of surgeries that are unnecessary and you'll have great outcomes because they weren't sick in the first place, right?

So to instead kind of incentivize that, have appropriateness scales, have volume scales and actually encourage providers to super specialize. To say to a neurosurgeon, "Yeah, I appreciate that you like you doing aneurysms and doing de-bulking of brain tumors and doing C-spine and L-spine and carpal tunnel, but you're really, really good at C-spine and we really like you to do a lot of that. Because you're maybe not so good at de-bulking tumors, right?" Let's let the tumor people first do that and have people kind of super specialize so that care quality outcomes will get better and actually costs tend to go down when people are kind of focused on the things that they do well. Certainly complication costs are huge, but even the cost of getting the surgery gun, I think identifying the stents that you want to use or the prostheses you want to use and actually using the OR more efficiently is another kind of side effect of kind of focusing on fewer things and doing them well.

John Marchica:

Who's the ref? Who's the referee in all of this? In other words, is this something that CMS can tackle? And just like they have, they publish physician data on how much drug expenses they have associated with them. I mean, is it the insurer? Is it the employer that could put more or apply more leverage to their payer to require this kind of information? I mean, it sounds awesome in theory, but how to execute that, how to get that done?

Dr. William B. Weeks:

The potential is the employer. Like I said, I'm a little disillusioned. The insurers could do this yesterday and they bought.

John Marchica:

Right.

Dr. William B. Weeks:

Employers, at Microsoft we've actually partnering right now with a company called Embold that is providing to patients as they decide what provider to choose, information on their quality and appropriateness so that they can say, "Oh, I need to choose a primary care doctor or I need to go to orthopod for a hip replacement," or something like that and they can actually compare them these providers in real time. I think that one of the challenges is making sure that the data are accurate and making sure that the docs kind of agree with the data and making it go.

You got to have the data available in real time and I probably gave this example to you when you were at school. But one of my favorite stories is when Bill Clinton, after he was president needed a CABG done, he lived in New York, where since 1987 they've been publishing hospital and physician level risk adjusted mortality outcomes for CABG. It's available on the Department of Health's website. You can go to it now and download it and Bill Clinton chose the hospital that was a bad outlier, higher risk mortality, risk-adjusted mortality rates than any other hospital in New York.

So if the guy who's president isn't influenced by that, now maybe he's a political guy and it was in Harlem, and maybe that was kind of what he wanted to do. But if people aren't consuming this and

using it, and part of it is it's not readily available. The alternative that I always joke about is maybe Hillary picked it for him. But I think a more realistic reality is that it wasn't really available and he might not have been aware of it. But if that was incorporated into the shared-decision making process, which I think should be a question of whether I should get a surgery, right? Let me understand the risk and benefits of getting a knee surgery or getting a CABG. And then go to the second question of where should I get that once I decided to get it. And let then data on outcomes and costs, drive that decision. Again, letting people have choice if they want to choose a place because it's politically advantageous, they can certainly do that, but they won't. But, I incentivize so that they share the benefits of choosing higher quality care.

John Marchica:

Yeah. So I'll share an example, a personal example. I mentioned before I hit record on this, that I'm going in for the PRP and STEM cell for my joints, basically my knees and my wrists and my elbow. And my process, first of all, when I learned about this, I thought, "Okay, this is kind of pseudoscience, right?" I didn't necessarily believe when I heard like Kobe Bryant getting this treatment. And I did my research on it and it looked to me like a 50/50, some people get better, some people don't. A little better outcomes with this STEM cell stuff, but very little data. So I'm taking a chance, it's early. The two places, so I did local research to find an orthopedic surgeon who had an extensive track record for the last 10 years in regenerative medicine.

And then the other intersection was my primary care doc. I talked to him about it just to kind of get a sense of his, I trust him and his recommendations and what he knew about it. And he's like, "Oh, well, we're doing that here now." There's podiatrists in the office, in this primary care office. And I'm thinking to myself, "Do I really want to a podiatrist doing this kind of procedure on me? Or, do I want the orthopedic guy that has 10 years of experience?" But the reality is, so I made my best educated decision, but I'm also kind of a healthcare researcher guy. Like I know where to look, I know what I know what to look for. The average person doesn't have that information and it's word of mouth. Or it's what a family member tells you or what your friend tells you. There really aren't, at least to my knowledge, a good way of evaluating, like if I found out that I had something more serious tomorrow, I'm not sure what process that I would go through.

Dr. William B. Weeks:

No, I think you're right. And mostly what people might do is actually take the advice of primary care guy because it's just down the hall. So, it's local and it's in network or whatever, right?

John Marchica:

Right.

Dr. William B. Weeks:

And that's going to drive, but the primary care guy didn't do due diligence for you, right? He's saying, "Oh sure. We can do this because we just added this thing." I mean, I did the same thing when I was, I got LASIK like 30 years ago, it was brand new at Dartmouth. They had done eight cases and I went to Montreal instead where the guy had done 20,000 and I asked the guys at Dartmouth, they said, "Hey wait, do you have any comparison of your outcomes to them?" And they said, "Yeah, no."

So I just went with... Volume is a decent proxy for most things and experience, right? Again, this weird caveat that one has to work around, which is appropriateness. But for the most part, volume is a decent proxy.

John Marchica:

So, a couple more questions. I know we're bumping up against time, but I wanted to talk to you about drug pricing. And I was reading this and another caveat so substantial portion of my company's revenue comes from BioPharma and medical device companies. So there's that full disclosure there. I was reading in, I think it was FiercePharma today said in 2020 Myalept remains the most expensive pharmacy drug in the US at a whopping $71,306 per month. Amryt, the company, so complications caused by leptin deficiency in people who have lipodystrophy, pronouncing that right. Amryt, they raised its price by 9.9% in January and that does not include like Novartis's $2.125 million Zolgensma, which is the treatment for spinal muscular atrophy.

I think if you look at the drug company's perspective, what they would say is they're pricing their drugs based on value. And you have referees like ICER that will look at say, is this a cost-effective treatment? At the same time, just looking at the sheer numbers... $71,000 a month just seems insane. And I don't even know if I have like a specific question or just to have you comment on this, but one of the trends in pharmaceuticals, because I've been adjacent to this industry for almost 30 years, is that 20 years ago, 30 years ago, it was like, "Okay, what's our next calcium channel blocker? Or, what's our next treatment for diabetes?" And drug companies look for high prevalence, large populations, antibiotics. And then the fight back then was, "Well, do we really need to have another ACE inhibitor? You know, we got like eight of them, do we really need to have another one?"

And so the industry I think has shifted and said, "Okay, we've got that pretty well taken care of. What about all these rare diseases where we worked for a client last year there was a disease that had something like 700 patients in the US?" And so they're going for more of these. But then the value equation says, "Well, if very few people have this and in the spinal muscular atrophy scenario, you could vastly change a little kid or baby, change their trajectory of their life by giving them this treatment which I guess is why they're justifying $2 million dollars. So, the one hand I understand it and I see how they're pricing based on value. On the other hand, it just seems outrageous and how can you justify charging that much? I don't know, a little bit of a rant, but I wanted to get your perspective on that as well.

Dr. William B. Weeks:

I think you're right. I think that's kind of what insurance is for though, right? Distributing the risk of a bad, a bet, right? And so the disturbing thing would be more for me if how much does the patient bear there? How much of that cost does the patient bear? As the insurer, I think, is it fair? That would be their true role. I mean, I think if we take the pure insurance part of health insurance, which is risk mitigation and health insurance, I think it's turned into, it's a delivery method with some risk mitigation. But people have argued in the past who are smarter than me, that just as you buy a car and you buy insurance for it, the insurance doesn't pay for oil changes and new tires and new brakes and maintenance stuff, right?

You're supposed to do that because you're mitigating the risk of something really bad happening and destroying the car, not of the ongoing maintenance of the car. And something like the things you just gave, those are really bad things that people just are unfortunately have really bad things happen to them. They get hit by trains or something like that. That's kind of the purpose of insurance. I think the challenge is then we also kind of have encapsulated everything into insurance. And so I think frankly, that as long as a patient isn't having to bear that, and there's enough people in the insurance population to spread that risk across the whole population then I can see it from the pharma industry's perspective that it costs a lot to make these drugs. And if they have, it's one thing if you can produce Prozac and you got to gargantuan population that's going to use it and another to do one of these where you get 700 people.

I mean, they got to recover and I'm sure their argument is, "Look, if I can't make back what I put into it, then I'm not going to make these." And they're going to have a lot of people who might've benefited, right?

John Marchica:

Right.

Dr. William B. Weeks:

I mean, I do think pharma plays some kind of fast and loose with their R&D expenditures and how they can allocate those. And they'll be allocating those for it... They do all the failed drugs too, right? That kind of gets poured into the overall expenses which drives up the cost. But I think that's the purpose of insurance and that's why, I mean, I tend to be more of a Medicare for all kind of guy where ultimately that's kind of FEMA-like stuff. For some people whatever happens and their trailer gets hit by a tornado or the levy breaks in New Orleans and certainly they took risks and New Orleans was under that. But New Orleans has been there for 200 years. What are you going to do? Life is complex. Risks are taken and sometimes you're just kind of really unfortunate. And so you have a government that kind of, that to me is one of the better purposes of government, right?

John Marchica:

Right. Right. Well, I guess what really, like maybe these examples aren't the best ones, but the ones that stand out for me are when the Martin Shkreli was at the [crosstalk 00:31:02]...

Dr. William B. Weeks:

Yeah.

John Marchica:

You buy something and it's $30 bucks a month, one day and then all of a sudden it's four grand a month. That's like...

Dr. William B. Weeks:

He's in jail though. He should be in jail.

John Marchica:

Yes.

Dr. William B. Weeks:

I guess I see it from some of the pharma's perspectives. It's striking to me because I'm an addiction's psychiatrist and I treat, I don't do it anymore, but I used to treat patients with opiate dependence, right? Opiate use disorder and quite a number of patients had hepatitis B, right? And the nice thing about hepatitis B is now, Vermeer, depending on the drug between $40 and $60,000 bucks, you can actually cure it and avoid some potential, not 100% potential risk of long term hepatocellular cancer. And that's an interesting question, is that worth it? Particularly because you can cure it and then you can get reinfected later. It's not like a lifelong thing if you're re-exposed, it's a thing. So, I mean, it's tough, it gets down to this whole, how do you value a life? And that's a real tough thing to get at, I think.

John Marchica:

Yeah. Well, Bill, this has been great. I appreciate your spending the time. It's good to get to catch up and talk a little policy.

Dr. William B. Weeks:

Yeah. Yeah. It was fun, John, thanks so much for having me.

John Marchica:

And let's keep in touch. Hopefully one of these days, our research or our work will intersect, which would be awesome.

Dr. William B. Weeks:

That would be super cool.

John Marchica:

All right. Thanks again.

Dr. William B. Weeks:

See you later.

Kim Asciutto

From all of us at Darwin Research Group, thanks for listening. Health Care Rounds is produced by me, Kim Asciutto, and is engineered by Andrew Rojek. Theme music by John Marchica. Darwin Research Group provides advanced market intelligence and in-depth customer insights to healthcare executives. Our strategic focus is on healthcare delivery systems and the global shift toward value-based care. Find us at darwinresearch.com. See you next round!

WAYS TO **LISTEN**