

Innovation and the Future of Healthcare,**with Jeff DeGraff PhD, Founder: Innovatrium Institute**

Peter: This is Peter J. Polack, MD, with another Medical Practice Trends Podcast. Our guest today is Jeff DeGraff, Clinical Professor of Management and Organization for the University of Michigan Stephen M. Ross Business School. He's the creator of its Innovatrium Institute, a laboratory for experimenting with new ideas and creating tangible prototypes to prove the concepts. He's advised such clients as Microsoft, General Electric, American Airlines, and Coca Cola, to name but a few. In addition to writing for several publications, including *Wall Street Journal*, *Fortune*, and *Business Week*. He's written several books on innovation, including *Creativity at Work*, *Leading Innovation*, *The Enlivened Self*, and *Innovation You: Four Steps to Becoming New and Improved*.

Welcome, Jeff.

Jeff: Thank you.

Peter: I hope got I got everything right there?

Jeff: That's beautiful. Thanks, Peter.

Peter: How does one become a Clinical Professor of Business?

Jeff: Well, when I was very young, I got a PhD in artificial intelligence, and I did what everybody does with an artificial intelligence PhD; I decided to not work in the field. Met a guy, very coincidentally... Make a long story short, I was one of the senior executives who built the fastest growing company in America in the 1980s, Domino's Pizza.

When I got done, I was recruited to be CEO at some very large companies, and one of the things that happened was Michigan had asked me to come and teach MBAs, how to think creatively. Now, you got to go back; this was a long time ago when nobody taught any of this stuff like this and people treated me like I was crazy.

They made a special position for me. I'm a full professor. I've been here for 30 years. A senior professor but my job is developing new theories, new practices, things that people can actually do. Think of it like the equivalent in medical school of the professor of the practice – surgeon who also is a researcher with a PhD.

Peter: It sounds really cool. Let's go back to Domino's, because that's very interesting. Where you are now and where you started there, I'm not sure how I can make the connection, so can you talk a little bit about how you started there?

Jeff: I had met a guy... It's a long story. I was actually brought to Michigan, to Ann Arbor, on a large National Institute of Health grant to develop a supercomputer way of helping M1s, first year medical students, who diagnose diseases. I got here, and I was very, very young; I really didn't like the structure or the bureaucracy of medicine. You could appreciate that.

What happened was I met this guy, and he said, "Look, I'm trying to build this company, and we're going to use technology, we're going to do all this kind of stuff. Would you like to be involved?" It was amazing because everything was unorthodox. Remember, we're competing against these very large companies where everybody has a MBA and you can hear them think.

It was a time of trying a lot of new stuff. I got to be on the AIS, Applied Integrated Systems Advisory Group at Apple when Steve Jobs was there. I'm an advisor to Steve Jobs. I got to build a network called PASS, which became one of the struts of something you know as ESPN. I worked on one of the original distributed data processing systems called the Team Member Workbench – looks a lot like Facebook, but I built it in 1984.

Your listeners have to imagine that it was a very different world. If they want to have a good giggle, I advise them to go to the Web and look at something called Apple Knowledge Navigator. People don't get it, because it's about ten years before the Internet happens. It's before tablets – about 25 years before tablets – and you'll see that we're using this in this video. It's all about a junior professor trying to avoid his mother, trying to crib notes from an older colleague who's at Harvard or someplace like that.

I think I probably get an e-mail once a month from a doctoral student somewhere saying how did I know what the Web was going to be – and everything and the answer is we didn't. We were all just kids and we were trying to figure out what this would look like. It was a lot more in my field than most people think it would be.

When I left, two very visionary people, a guy named Robert Quinn and another guy named C. K. Prahalad, who was probably the most famous innovation strategist of the twentieth century, asked me if I wanted to go back to being a professor after my fun time building, and I did.

Peter: Wow, 1984. That was my first year of medical school, and I remember one of my friends blowing his student loan on a brand new Macintosh, maybe a shady.... Is the Statute of Limitations gone on that? He may still be in trouble.

Jeff: Yeah, I think we all did.

Peter: All huddled around that, like "Wow, this is amazing." Really, that's pretty visionary for that company. I'm thinking here it is, a pizza company that had a clever marketing angle, right?

Jeff: No, it was built from the ground up in a very unique way. It was build up so that we didn't sell franchises. You had to be apprenticed for a year to someone else. We basically floated your money for your first store. The company grew 300% a year when I was there.

When I got to the company, it had been bankrupt two years earlier. It was about \$80 million when I got there. When I left, it was about \$5 billion. One of the last things I did was help sell the company to Bain Capital – Mitt Romney was the founder of Bain Capital, so selling the company to Mitt Romney. It's a small world.

Peter: That's amazing – wow. After that, what did you do? You moved on?

Jeff: No, I became a professor at Michigan. I've been here almost 30 years, and when I came here, the basic agreement was that I wasn't going to teach in the school because I thought it was just too restrictive, so I taught this course all around town.

This went on for a number of years, and I was treated like something had really gone wrong in my life. You have to imagine that... This is the early '90s or 1989, I think is when I started here. What becomes very interesting, Peter, is somewhere around '95 or '96, I have all these students, including the founder of Google, Larry Page, becomes one of my students.

All of sudden, the world catches up to me about a decade or 15 years later, and then it goes the other way. Then you become a guru, almost like a cult figure. From then on, it was very interesting. About 15 years ago, about halfway in, along with some other people, we bought a building across the street – it doesn't belong to the University; we built it ourselves – and we created one of the first really interesting collaborative innovation labs in the country.

Of course, now, a lot of my students over the years have built these everywhere. I just got off the phone with one who's at San Jose State, one at NYU, and so on and so forth. Now, you see these everywhere, but this was kind of a radical concept back in the day.

Peter: What is its relationship with the University?

Jeff: Well, it doesn't have any technical relationship with the University. What it does is I've allowed the University to use it on a regular basis. The object of the building was very simple. I teach at the only Carnegie One School in the world and the top 10 in all 19 areas. We're not number one at anything; we're number five at everything. We're kind of the General Electric of higher ed.

Now, if you think about that for a minute, it means all of your advantages are horizontal. It means it's not within the business school or within the law school or the med school; it means it's how they combine. I don't have to go to Hopkins for a top 10 med school, I don't have to go to Yale for a top 10 law school, I don't have to go to MIT for a top 10 engineering school; I can

do this all here in this little-bitty town of Ann Arbor. But the problem was there was no places to meet.

When we bought this bank building and tore the top off of it and put windows everywhere, I gave keys to the seven coolest professors across the various disciplines. In fact, one of them was Thomas Zurbuchen, who you might know just became the head of NASA. These are smart people. They brought a lot of their cool students, and this is where a lot of the student groups like Empowered, etc. started.

I never competed with the University. The object was doing the creative work the University can't. Then we brought these big projects in, so this is where Ecomagination started for General Electric. This is where Coke Zero sort of got worked out. This is where Hulu started.

A lot of stuff happened, but I'm not the one who made any of it happen. It's really these companies that bring the projects in. You put young junior professors in, young students on it, and it's a see one, do one, teach one kind of approach. The way you learn to be an innovator is you actually work on real projects – and that's what we did. That's what we do to this day.

Peter: Colleagues refer to you as the Dean of Innovation. How would you define innovation?

Jeff: To me, innovation is simply useful novelty. It can happen anywhere. I think people become gadget heads and I've certainly worked on enough gadgets, but you know, an innovation can be making coffee theater, like Starbucks does. It could be an imaginative way of managing supply chain, like Whole Foods, or it can be something that's really not that innovative but you put a great brand around it – think about your favorite laundry soap.

But the key to it is a form of deviance, and that's what people get wrong. Innovation is not doing things the same way; innovation is a form of deviance. And deviance is created by people who are deviant. I don't know how else to put this. Deviant doesn't mean you're weird; deviant means that you think differently than the people around you, than the institutional logic. You've got a very different way of handling things.

Of course, there's one other piece to innovation, and that is that it has to be valuable. It's not just enough to be weird; you have to do something that makes people's lives better or new. Of course, what's amazing is we're having this renaissance, this democratization of innovation that I'm glad I got to be part of that train when that was happening, and certainly there are many, many, many more people working on this these days.

Young people have a very different idea about innovation and boundaries and their ability to do this that really harkens back to 1900, when people come to America and they start trying things.

Peter: What do you think is responsible for that democratization? Is it social media, is it other communication tools, or different ways people are collaborating now?

Jeff: I actually think it has a lot to do with we've raised our kids with a sense of boundarylessness. Think about your iPhone or your smartphone. It allows you to do things that when I came up you couldn't do at all and if you were to do anything like that, you had to be part of a very large institution. We're watching our kids overcome boundaries on a regular basis. Some of them are kind of different. People in my generation are threatened by a lot of them.

For example, young people aren't marrying. I don't know if you've looked at statistics of this. Marriage is no longer normative. If you look at what kind of businesses they want to work in, they don't want to work for a big company. They all want to work... Not all, but many of them want to work for smaller or what are called post-capitalist companies. They don't really want to work in companies that make money; they're more interested in living in tiny houses and driving small cars and having friends with benefits and things like that. It's a different world view. Of course, the fastest growing religion to people under the age of 30 is atheism.

You could be mad about all this, but what's happened is your kids have opted out of institutions, so they're boundaryless. They're connected. They don't see race the way Boomers did. They don't see orientation that way. So part of that boundarylessness puts them in contact with people who don't think like they think on a regular basis, and that, of course, is a great stimulus for innovation.

It's very similar to all these different immigrants coming to America in 1900; settling in the same neighborhoods, encountering different things and the transfer – it's what's called search and reapply – of new knowledge happening, and these become these golden ages of it.

The challenge is a little different. The challenge is how do these businesses get to scale, and does this generation want these businesses to get to scale? That becomes a different challenge and everybody from the President of MIT to yours truly is concerned about that.

Peter: It sounds like maybe some of us adults could learn a few things from this generation, huh?

Jeff: Yeah, we sure could. They're a generation who's struggling right now to figure out how they fit in, the passing of the baton. There's a lot of anger in this election at them from both sides, which I think is unfair but it is what it is. I agree with you. I think we could learn a lot.

Peter: Another thing I read, you had been involved in the TEDMED Talks. How did that come about?

Jeff: It came about with great resistance. I didn't want to do it. I do a lot of work in medicine in these days. Let me just back up and give you an interesting story.

Very early, on I was part of the group that had developed a lot of these innovation tools in the late '80s, early '90s. We had worked on reengineering, which was originally designed to take complicated systems and instead of trying to improve them, to try and completely rework them. Of course, this worked and it became part of the basis of our modern digital domain.

I worked on one project I got sucked into, which was the New York University/Columbia University merger, which worked beautifully. It was very interesting because I didn't have any medical training and I had worked with some brilliant people like Atul Dhir, who went on to be the head of Drug Discovery at US Oncology, and Sanofi Aventis and some other people – just some real talented people.

Then, I tried to put together, along with a host of other people, the NYU/Mount Sinai merger, which goes down in history as one of the great catastrophes of medical center mergers, which really soured me on medical centers because the reason it fell apart had very little to do with improving or introducing innovation into medicine and had a lot to do with the politics and the rules of this.

I'd kind of stayed on the sidelines for years, but when the Affordable Care Act got rolled out, what happened was they put together I think it was the first TEDMED, and it was supposed to be at the White House but it ended up being at the Kennedy Center. It's Michael Porter at Harvard and the Surgeon General and Scott Collins, who used to live here in Ann Arbor who did The Human Genome Project.

I got a call from Larry Summers, who used to be the Secretary of the Treasury and the President of Harvard. He's not a person you can really say no to, and I did not want to do it because what he wanted me to talk about was innovation from the outside in. I'm not a medical doctor and I'm not a legislator, and while all this consternation was going on he wanted to say, "Well, how, in fact, are company's affecting this."

Here's what we ended up with. If you go online, you can watch this. I ended up saying "I won't do but what I'll do instead is I'll talk for about five minutes and I'll invite some of my clients," like the Head of Innovation at Google and Apple and AT&T and some other places. I'll interview them in a very soft way so it's not a cutting interview, softball questions; I'm being nice.

What I'm trying to let people know is while doctors and legislators are talking about the Affordable Care Act and whether it's legal and what you want to do, what I'm telling you that has very little bearing on my world. We've inventing stuff that will completely change what you do, and we're inventing it because that's what we do. We're technologist, we're innovators.

How do you use an iPhone to diagnose river blindness in three minutes? How do you do a physical in 19 minutes for less than \$20 with a Johns Hopkins professor looking on to see if we've got this right? How do we use big data?

It was interesting the response I got, Peter. I got three responses. The first was a lot of passive-aggressive response from older doctors. "Who are the hell are you? Why are you doing this? You didn't go to medical school." It's the old boy story. That's fair; I didn't. I don't do that.

I have a huge amount of followers. I'm one of the original LinkedIn Influencers. I have a huge amount of young doctor followers and what their big thing was "Where have you been all my life? I mean, I'm being held down by these older doctors who really don't understand technology and don't understand how to use technology in this new way."

The other thing, which surprised me, Peter. I have a very large amount of people who are medical students who follow me who want to be more than a doctor; they want to be the doctor innovator person. I have these labs, and what they're trying to do is not only participate in new technology but develop new technology. That's what brought me into the American College of Surgeons. That's what brought me into the work I'm doing with the American Medical Association.

It's a very interesting thing because you're in a field that invents solutions or innovation faster than any field I can think of, Peter – you guys are amazing – but your adoption rates into actual clinical practices are incredibly slow. It's this very unusual thing. The only other industry I can think of that's like this is the military where what you see is cutting-edge research and then in terms of what actually makes it into the operating room is just an absolute shadow of the amazing stuff you've got under the hood.

Peter: What do you attribute that to? Is it just risk-intolerance?

Jeff: Yes, and culture. It's an extremely hierarchical culture. This is what I learned about putting these mergers together. There's this almost medieval... Universities have it, too. Here I am talking about doctors; who am I to talk about it?

Universities, there are people like me who are senior professors and our job is junior professors, associated assistant professors, and their job is doctoral students, and their job is graduate students and undergraduate students. It's sort of the great chain of being. It's like being in the church.

Well, doctors – it's really not any different. There's certain professions that look down on other professions. I hope I don't need to spell all this out for you. The certain surgeons look down on certain types of cardiologists who look down on certain types of radiologist. And that's not helpful when you're trying to invent things. That actually keeps everybody in their place. It

keeps everybody in a pecking order. You understand why that exists when you get to the O.R., but once you move beyond places that have a lot of role efficacy, it's really not helpful.

Peter: I had to laugh to myself when you were talking about getting no respect. I did a rotation in England. The surgeons in England are referred to as Mister, because in the old days, they were lumped together with the barbers, so the medical doctors looked down upon the surgeons. Now, it's a badge of honor to be called Mister Jones instead of Doctor Jones.

Jeff: Yes. You understand. Again, that cultural issue doesn't sound like it's a big thing but it has an enormous barrier when you're trying to cobble together a solution. In order to build a solution, you have to bring very diverse groups of people with very different ideas about the world together. Doing that requires that there's a certain democracy around it.

Peter: I'm guessing probably the other issue that is probably a barrier – because I ran up against this myself when we went to electronic medical records back in 2008 – is change, change management.

Jeff: Yes. The more you become accomplished in your field, the more heavily leveraged you are. I'm a total hypocrite. It's totally true for me. It's like every second of my day is optimized. When you introduce variation into a highly efficient system that's really based on quality and efficiency, it creates enormous amounts of trouble. You're not making as much money as you could be. You're not teaching as many students as you could be. You're not creating the maximum amount of brand equity that you could be.

There's this real tension between the old and the new and you're always going to see these things together. The old is going to try and optimize. The old is going to try and create an omni-channel or a more efficient way of doing it. The young, because they don't have those kinds of resources yet, the young have to diversify instead of optimize and the young are going to be fragmented. They're going to come at you in a million different ways. It's this tension that we're trying to create sort of a perfect equilibrium.

Medicine is a field that has a lot more tradition to it and it's holding down a lot of the amazing things that the more nascent or junior people are doing. But there's good news and bad news, Peter. Here's the bad news to people who are like me. We're no longer on the sunny side of the hill. We're outnumbered. It's only a matter of time.

The good news to the nascent, to the startup, to the younger – it's their day. Their day is coming. And the more that my generation tries to hold down that generation, the more radical or revolutionary the handoff will be.

Peter: What would you say is the biggest threat to healthcare going forward?

Jeff: I think it's threefold. Number one, healthcare is not going to be solved by legislators. If doctors don't get off that whole idea of lobbying for that and if they don't stop looking at that, they're going to be left out of the entire equation. It's obvious to me.

What doctors groups do is they try and lobby for more power and better insurance rates and things that anybody's going to argue for, but you're betting on the wrong side. You're betting on the wrong horse. The horse that's going to win...

Think about every technology. Think about what's going on in Silicon Valley or what's going on in Bangalore or Shanghai or Tel Aviv or Ann Arbor. Think about what's going on in these places in terms of new technology. Now, you're going to be able to hold people out of the places that you have dominion over, but what's happening is people are going to other places you don't have dominion over.

If there's a legislative rule that you can only have three magnets in the state of Michigan and that's great if you go to a medical center, what's going to happen is somebody's going to develop something else other than a magnet that's not regulated and a way to do it. We're going to be able to invent it faster than you can regulate it. That's my gauntlet right off the bat.

You're going to have to bet on the side of innovation and technology. That's the first piece.

Second piece: instead of saying that medical practice is all about quality – which it has to be; I go in for an operation and want things to work out the right way – that paradigm has become so dominant that it's squeezed out all the diversity or innovation, all the places where you try stuff.

What we have to do is we have to get back to places where we can try stuff. What's interesting about that is those places are getting harder and harder to find. Europe has had a couple of catastrophes, so we're going tighter experimental laws in Europe, so we're not doing stuff over there like we used to be. Things are moving to Latin America, we all know that, where we're going to see the experiments.

I think it would be really interesting to find places in America where the risk of trying something new and the reward of staying where you're at, people who are in very dire straits, people where the repercussions aren't as serious. Those are places where we can actually start reinstalling or trying our innovations.

The way I like to put this is I call this the 20/80 rule. It's easier, Peter, to change 20% of an organization 80% than it is to change 80%, 20%. Peter, all you have to remember is a bell curve. People don't change in the middle. They change in a crisis or they change when they're on a roll, and they change because the risk of trying something radical and the reward of staying where they're at is reversed.

We need to find more of these outside places and allow innovation to cascade in. That's going to be the second thing, I think, that needs to happen.

The third thing is you don't need to do anything because young people will bring this with them. The issue is the more you resist, the more revolutionary that change is going to be. They're not going to roll over. The notion is the more you can be a friend to the new... If you're a senior doctor, apprentice somebody who's young. It's not just you apprenticing them; they're apprenticing you.

It's funny. I don't mean to be political but I was in Alabama last week. I travel an insane amount. This guy was talking about the election and he was talking about how these young people were mad and now the election is over, they're going to have to just deal with the way it is.

I said to the guy, "That's a very interesting point of view but the more you hold those people down, in four years, what do you think they're going to do? Do you think they're going to go in the street, or do you think they're going to use what they're good at, which is technology, to fight back?" And this guy didn't know what to say.

The point was it's inevitable that this is going to happen. You probably want to make friends or make peace with this before it becomes something that's more toxic.

Peter: Maybe what just happened with this election was one last gasp from the generation who's on the other side.

Jeff: That's exactly what it is. Look at me. I'm an old Roman Catholic, business school professor, capitalist pig, white guy. The world is not looking like me, and you have two choices. You can either become the friend of the way the world is looking and see if we can guide that part of the world and help that part of the world and be a responsible custodian of the values that our great nation has been founded on or you could fight it.

I'm saying if you fight it, it's inevitable you're on the wrong end of this battle. It's a bar fight that simply by numbers and time, you're going to lose. Innovation happens.

Peter: Now, you've also said that one of the problems with professional services is that the value is tied in people. So how do you get away from that?

Jeff: That's a real good question, particularly for what you do, Peter. The problem with professional service providers is that talent doesn't scale very well. There's only one Michael Jordan, one Mozart, one Einstein.

At the University of Michigan, we had the most famous innovation strategist of the twentieth century, C.K. Prahalad. He's one of the men who brought me here. When he passed away, one

of the questions became “Who’s the next C.K.?” It’s a joke. There isn’t another one. God made one; that’s it.

The challenge in medical practices is that doctor who becomes the great doctor, there’s only so much time you could sell. So what’s happening in professional services is they’re moving to what are called SaaS solutions, which is a fancy acronym. It means ‘software as a solution’. What happens, Peter, is you become the expert practitioner but you use technology and people around you to actually supplement that.

Let me give an example in my own life. I’m the professor of the practice here. There isn’t enough time in the day to do all the stuff I need to do so I developed a massive open online course.

In my years here at Michigan, my 30 years here at Michigan, I’ve probably trained 10,000 innovators, and the good news is they’ve gone off and done a lot of cool stuff. The minute I built a massive open online course, in the first month that it was up, I trained a hundred times more people than I did in my 30 years. It doesn’t mean that I don’t have another job, it doesn’t mean I do something different – I certainly do – but it means it’s different.

Let’s say you’re a doctor and it used to be that you looked at MRIs all day. Well, now artificial intelligence is here. They can look at MRIs more accurately than doctors. We know this through what they’re doing at Duke and Columbia. We also know that they could read 80,000 journal articles a month effectively for diagnosis.

It doesn’t mean that the doctor doesn’t do something different; it means, Peter, what you’re going to do is of higher order. We need you to do the art of being a doctor. There’s an art. We need you to make the interesting calls when the data conflicts with each other, when something happens outside of normative data. You need to be managing exceptions, and you also need to be spending a lot more time training the next generation of Peters because if you don’t do that, you’re not going to have any bench strength.

I don’t know if your field is like mine. It used be that tenure in my field was seven years. We have some brilliant junior professors here at Michigan – just rock stars – but I think it’s going to take longer because there’s a lot more to keep track of and I think it’s going to require more work on the part of people like me to do that.

Peter: That doesn’t bode well for other industries, though, if we’re talking about increased artificial intelligence, automation.

Jeff: There are three levels to this, Peter. First is transactional. I write a lot about this. Those were telephone operators, travel agents. They’re all gone. It’s all gone. Because computers can do that better. They didn’t go offshore, incidentally. Let’s just get rid of that – that whole

offshore argument is garbage. That's what we do. Technologists, we develop low-level applications, we get rid of them.

The second is translational. These are people who take pictures and architects and accountants. Think about it for a minute. There's Quicken. Do you know more people take pictures on their smartphone in a day in 2016 than all pictures taken using chemical processes, all combined in the previous century? Every day.

Peter: Wow.

Jeff: Those are translational. But the final is transformational, which is what I'm talking about with me doing a massive open online course. Think about it. What's the largest law firm in the United States? It's LegalZoom. It's turnkey boilerplate law.

What happens with the Peters of the world and the Jeffs of the world is we have to move up in the value chain. We have to do creative things. We have to go back to being innovators. We have to go back to being designers and artists, which my view of the world, I'm in favor of that. I hope doctors feel the same way.

I'm not big on filling out forms. I'm not big on trying to figure out what code to put for something. I'd much rather spend my time developing a new theory or a new way of doing something, working with a client with a problem that I don't really know how to solve right now.

Peter: You've also said that there are now diseconomies of scale and that this can benefit the – quote – “little guy.” How so? And, let's say, where does a medical practice fit into that?

Jeff: Let me give you my favorite example. About 15 years ago, I was interviewed for a big magazine. They were talking about Home Depot and Lowes and how they were going to destroy all the little hardware stores. I said, “It's not going to happen.”

They said, “Why?”

I said, “Because this thing called the internet is going to change all that.”

“Well, tell me how.”

I said, “What's going to happen is all those little stores are going to buy together.” They're going to create what's called – and this a business school term – a federated organization. It's really not an organization; it's a loose affiliation of little guys who throw in together. They're going to buy insurance together. They're going to buy snow shovels together or whatever it is in Florida. You have rakes. You get hurricanes, right?

And what's going to happen is they're going to get preferred pricing, but they're not going to carry overhead and they're going to be able to customize that local store for the people who live in your city – in Ocala, Florida. The notion is it used to be you had to be big to get that volume discount, now you don't.

Well, as you see the consolidation of medical practices, the only two reasons to ever consolidate is, one, to reduce your back office expense and, two, to create more covered lives, more subscription, a wider audience, that sort of thing.

But what you also get is you get all kinds of issues of having to hire to scale, so you get a lot more technology you have to invest in, a lot more people you have to invest in. And I want to add one more thing. You have a lot more legal exposure, too. You're a bigger person; it's easier to sue you, right? You've got a deeper pocket.

I believe what's happening in the world of professional services – and you can see this in places like consulting – is you're seeing the big consulting firms are having a lot of trouble because these small boutique firms are showing up. The small boutique firms have access to the same kind of analytical tools, the same kind of talent pool that that larger groups do, but they have more freedom, they have less overhead, and they're much more competitive. This is, of course, driving the larger consulting firms crazy.

I think the same is true for doctors. I think if doctors understood that domain expertise exists in them but also the local patient relationship exists in them – not in a corporation; they're closer to that relationship – I think they could use technology tools. And that comes back to what I said earlier about junior doctors. The junior physicians get how to use those tools; I think some of the senior ones don't.

Peter: I think you're right about that. Going to back, you were talking about growth before. The relationship between innovation and growth, is it analogous to companies having to actually invest in growth? In other words, they'll see decrease in profit if they want to see growth.

Jeff: Yeah.

Peter: What's the relationship there?

Jeff: There's no big improvement for free. Let's just get through that right away. I get people all the time that come and say, "I really want to grow but I don't want to spend any money." Well, you don't want to grow. It's like your education. "I really want to be able to have that job but I don't want to go to school." Well, you can have that job. It's that simple.

The relationship to growth innovation is very simple. There are only three ways a business grows – only three. Number one: the first way to grow is you acquire somebody who has

growth. You acquire somebody who's got a competency you don't have. You acquire somebody who's got a market you don't have. This is called inorganic growth. You have to be rich to do that, so most of the people who are going to be listening to this or watching this are probably not in that category.

The second way in which you grow is you sell to somebody new. That's it. You go a county over, or you use digital technology and give advice in Guyana or parts of the Philippines or something.

The final way, and the most obvious way, is you make something new. It doesn't mean it's a gadget. It could be a way of doing things, it could be a method, it could be the way you market something.

You either make something new or sell to someone new if you really want a professional service firm to grow. Otherwise, the rest of your life, you are in cost competition.

The number one reason people don't grow is the only thing that people are more afraid than growth is actually being around. The notion is almost every practice that your business has about portfolio management, about investability, about the metrics that you run are not about becoming new; they're about becoming normalized.

Standardization is the death of innovation because it eliminates variation. Innovation is a form of variation. It's really that simple.

One of the things I often tease people about is you could either have that new yacht or you could actually invest in something in your business so that when you retire, the business is still an annuity. That becomes the big problem with doctors because it's such a cult of the personality, when they retire, there's not business because there's nothing that's been passed on to the next generation or the next cycle of innovation that's basically sustainable.

Peter: Speaking of doctors, you've also said that it's difficult teaching smart people how to learn. Doctors are people who aren't used to failing, so they don't want to take risks a lot of times.

Jeff: I think that's the biggest issue right there. Smart people hate to fail because they've never failed. They don't have any experience with it. Part of the reason they're smart is they're terrified of failing.

I have to be honest, I hear a lot of people talk about failure, "I don't like to fail. I hate failure." But I have a different attitude, and my attitude is I think about it like first draft and second draft of a book, or a version one and version two of software.

Whenever I fail... And I fail a lot. That's really important that your listeners understand this. But when I fail I don't go, "Oh, I failed and that's okay," which is what a lot of these self-help books say. "Forgive yourself." I'm not that way, and I don't think great innovators are. I think that pulls you to the version two or to the next book. It pulls you forward.

I think doctors are wicked smart and I think because they've been acculturated in a certain way that they have a deep fear in being seen by their colleagues as a failure. I think that's a cultural issue that might even be self-subscribing, meaning the doctors may naturally have this tendency and that's what brings them to the profession of medicine.

Of course, we don't want, Peter, doctors to be capricious and careless, but what we do want is doctors who are willing to go through the failure cycle and to ask themselves a few questions. "What worked and what didn't work and why? Why did things work and not work?"

Second: what adjustments do we need to make? Do we need to do something more or different? Do we need to do something less or stop something?

Finally, what simple rules can be divined. This, again, is something I think that's very important. "What did we learn from this" so we don't repeat the mistake, so we get smarter as we go forward.

I think it's more like doctors remembering their medical training because this is how you're trained but somewhere along the way, the culture eschews it.

Peter: Jeff, this has been great. I really appreciate your time. If someone wanted to get some more information about you or how to follow you, where would they go?

Jeff: I would start with two places. I'd go to www.JeffDeGraff.com, and there's a ton of free assets here. I write a column for *Inc.* I have an NPR program called The Next Idea. There's a lot of free things for free. The other is I'm one of the original LinkedIn Influencers. If you look me up on LinkedIn and the Influencers, I write a regular column, and that's an easy way to learn a lot more about how innovation happens and how it doesn't.

Peter: Great. Thanks so much.

Jeff: Peter, thanks for having me on.