

Primary Care Cures

Episode #18: Ron Vianu

Ron Barshop: You know, most problems in healthcare are fixed already. Primary care has already cured on the fringes, reversing burnout, physician shortages, bad business models, forced buy outs, factory medicine, high deductible insurance that squeezes the docs and it's totally inaccessible to most of the employees. The big squeeze is always on for docs. It's the acceleration of costs and the deceleration of reimbursements. I want you to meet those on this show that are making a difference. With us, Ron Barshop, CEO of Beacon Clinics, that's me.

Ron Barshop: Yes, health care is fixed mostly. The 20,000 foot view, problem fixed. Let's talk about burnout. And salaries in direct primary care are the solution. Physician shortages, foreign MDs, should be able to skip residency for a second time for three years. Rinse and repeat doesn't make sense. Misread radiology. We're going to talk about that today. Data scoring, every radiology group's certifying winners. Medical errors as a leading cause of death. See the three above. Noncompliance of referrals, software that follows up, gamification, call reminders.

Ron Barshop: Nonadherence to scripts, saying, check out national medication management initiative, one of our future guests in one care of Marietta, Georgia, and another one of our future guests. Unusual high deductible insurance. Check out health Rosetta Dave Chase, checkout redirect health. Dave Berg. They've both been on our show. Employers' healthcare dilemmas, same thing. These are all fixes, but they're from the fringes. They're not coming from Washington, they're not coming from your state capitol. There are others require more serious federal overhauls such as over testing and over utilization in waste. We're not going to get into that today, but what we are going to get into as a solution that is working in changing some very important aspects of care that I didn't even realize what a big problem.

Ron Barshop: So let's talk about diagnostic misreads. Up to 40% of radiologist misread what's in front of them, which really shocked me because we're talking about MRIs and ultrasounds, CAT scans, and X Rays. These are read every day. 40% might be wrong. So there's trillions in care that literally pivot off these front end diagnostics. On a personal note, my grandmother passed as a direct result of a misread. Meet Ron Vianu of Covera Health. He's a big trouble maker in some ways. He's a walking migraine in some ways because you know why? He's calling out an industry that is not self policing and dealing with this problem.

Ron Barshop: Covera health is looking out for you, the patient, you the employer by holding radiologists accountable. So Ron, let's talk about this. What is the... First of all, welcome to the show.

Ron Vianu: Thank you Ron.

Ron Barshop: What is the downstream cost of all of these misreads? Are the diagnostics that are in front of us literally... they're literally at the mouth of care. What happens downstream if there's a misread?

Ron Vianu: It could be very significant and it could be trivial. And a part of what we're trying to ultimately tackle is understand when you have one potential versus the other. You could have patients where it's a life and death issue, you can have patients who are undergoing the wrong surgical procedure and obviously there's a lot of harm, or patients where they're not receiving the right surgical procedure and don't get better. So it's really fairly complex and understanding which patients will be impacted more than others. And that's a lot of the work that we're trying to understand and do.

Ron Barshop: I always had the opinion that radiologists have software checks or quality control checks or quality control committees that pulled out maybe 1% of all the reads to make sure that there's none of this going on. Is that not happening?

Ron Vianu: So there are QA methodologies. We've sent the world of radiology where what you're describing does in fact occur. The value of those systems and frameworks are not that meaningful in that they don't provide those physicians' details around the sorts of mistakes they're making. They're not blinded, and so there's a physician who is looking at the work of another physician within that group. And rarely does a physician want to put on a piece of paper that their colleague committed an error that may be life threatening to a patient.

Ron Vianu: And so there are a lot of flaws that's in that system and it's not built around helping physicians improve. It's really built around compliance. And so from our perspective and thinking about the problem, it was more about how do we create a system that would give physicians the tools and the information necessary for them to understand where the variability exists within our practices and how ultimately they can improve.

Ron Barshop: Listen, I was meeting with a radiologist a week ago when I started reading about all of these misreads and learning more about this. And when he was in medical school, he was covering the radiology lab for the older gentleman who was supposed to be doing his job. But this kid wanted the experience and he caught a giant mystery and then were going to do a surgery that was totally unnecessary. And you know what, the surgeon decided he wanted to go through with it anyway. They'd already done the prep for the surgery, they'd all gotten ready, they were ready to bill. They went ahead and did a surgery that was completely unnecessary as to not embarrass the surgeon. And he said, "Do you mind if I step out of this one? I don't want to be part of this." Do you think some of that's going on?

Ron Vianu: Certainly, there are surgeons that may want to operate more on the clinical information they're getting and rely less on radiology. Because I imagine that that surgeon may some sort of statement around clinically, "I believe that this finally exists," regardless what the radiologist is telling me. It's unlikely that a surgeon would proceed with a particular case where there is no justification whatsoever.

There's a lot of liability from his perspective and obviously a lot of patient harm can occur.

Ron Vianu: And so cases like that often occur. And one of the questions for radiologist generally given the fact that they perform their job and then these patients are encountering one or many physicians subsequent to that. And so the question for a lot of radiologists are, what impact are we having as it relates to that downstream care? We do our job and what happens next?

Ron Vianu: And so then that's the sort of thing that we're also spending a lot of time thinking about. And maybe it's useful to even state at a higher level that for most people outside of the world of radiology, radiology is very much perceived as a commodity. And so most people really think of it as a service that doesn't really vary from provider to provider. And so maybe the only considerations one should have with respect to selecting where to go is cost or convenience or wherever my doctor sending me.

Ron Vianu: And this is a very big challenge for radiologists because if you ask a radiologist, "Are there differences in quality?" Consistently they'll tell you there are. And they'll say, "Look, we're like any other provider, we make mistakes. And those mistakes can be impactful." And so patients should understand that where they go for their imaging could have a real impact on the understanding of their illness and what treatment they get. And so the challenge has been, at least for this specialty medicine, is that not only is there not a good understanding of quality available, there's a lot of people who believe that quality is not even a factor.

Ron Barshop: So what I love about your solution... Before we get into your solution, let's talk about what your evolution was to even come to the question of how to provide a solution for this big problem. What your career path? How did this enter your brain?

Ron Vianu: Yeah, so I'll say to this, to be completely transparent, I fell into the problem of quality. I didn't set out as a business to say quality, big problem in medicine, I'd like to tackle this. My background really is, I've been an entrepreneur since university, mostly in health tech. And a recent project prior to Covera was around building a platform for patients and payers where they'd be able to select providers based on value. And if you're thinking about how the market evolved, there was a junction where people thought patients would be shopping more for their services and they would obviously need more information around price and they would need information around quality.

Ron Vianu: And in doing that, I discovered that while everybody claims to have this thing called quality, if you ask physicians and patients and providers and payers, "Well, how do you define quality?" There's complete disagreement. There's no consensus around this.

Ron Vianu: So that makes it very easy for people to say, "I have it," because nobody really knows what it means. And so when we started thinking about this problem and when we started speaking to the world of radiology round, should you be perceived as a commodity? Are there these differences? And obviously as I

stated previously, they were very consistent around the fact that these differences exist until we thought this merited further research. And what we did was fairly, I would say, trivial in terms of kind of taking this one step further.

Ron Vianu: And what we did was I asked my mother, who has a bad back, and this is a little bit of a strange story, but I asked her if she would undergo three MRIs in the New York City area. And for the record, MRIs have absolutely no radiation, there's no patient safety issues here. But the idea was I wanted to really see for myself whether when my mother presented to three different centers, whether the reports and the diagnoses listed in those reports would be different to the extent that the care that you would receive would also be different. And my mother being a trooper, she agreed to do this with me, and her only condition was that I would go with her.

Ron Vianu: And off we went to three MRI centers in Manhattan. And we ultimately took those reports and we showed them to physicians and the results were really striking, more so than we expected. And I think going into this, we expected subtle differences mostly around how providers described pathology. But it turned out that the differences were really that they were describing different pathologies entirely or stated differently based on one report my mother, she had diagnosis A and in another report it was diagnosis B, and she would be sent to a vascular specialist based on one and epidurals for her low back and potentially surgery based on another.

Ron Vianu: And so, again, this is my mother, this is a not scientific per se, but this was enlightening to understand that this could really be a problem. And so this really began the journey for us. We started to think about this more rigorously. And the next thing that we did, very similar but more scientific in nature is we teamed up with two hospital systems, Special Surgery in New York City and Jefferson in Philly where we conducted that very same experiment, but this time in an environment that would be peer reviewed and statistically meaningful where one patient submitted to 12 MRIs over the course of three weeks. And the idea of what we want and understand there, is what was the variability across those studies. To the extent we would understand how that variability would potentially impact that patient care.

Ron Vianu: And that experience really was transformative for us because the results were honestly all over the map. They were ultimately peer reviewed and published. But they really brought I think to the forefront this problem that errors exist, errors are meaningful and that they are foundational in that if you don't get the patient's diagnosis correct early on, everything that happens subsequent to that is likely or can be incorrect. And so for us, this then became a mission, if you will, to say, how do we further solve this? And ultimately what would that solution look like?

Ron Barshop: It's an interesting problem you have. Essentially you would think the board of radiologists would want to fix this problem, but they also don't want to embarrassment. They don't want to... Did they circle their wagons a little bit and say this isn't a problem and we're not going to cooperate? Did you ever get any of that?

Ron Vianu: No. The physicians have been incredibly supportive. The World of radiology are the first to step to step forward generally speaking and admit that this is an issue. The problem that they have is that they're really isolated generally from downstream care and they're isolated from the payers. And so it becomes a Herculean task for anybody, and more so for them to try to solve this problem because it really requires an understanding of the patient over their entire continuum of care. Because it's not necessarily just even about identifying did an error occur, it's understanding which errors are meaningful, which errors are negligible from an impact perspective.

Ron Vianu: And that really requires a true partnership with all stakeholders, with payers, with employers. And that's something that has been very difficult for them to accomplish. But this is something that they very much want us to do. I mean, you might be surprised to hear that the world of radiology, and again, there are always exceptions, but broadly speaking, are incredibly supportive about what we're doing.

Ron Barshop: I'm glad to hear that. I talked to a couple of radiologists about some of this data and they're not at all surprised. And there was a recent video that was published that showed Chinese AI versus the top doctors from their top school doing a read. And not only was the computer 86% accurate, 83% accurate on the first time, 86% on the second time. It did hundreds of reads in a few minutes. It took the doctors 10 to 20 times as long and their accuracy was in the 60s. So 63, 66% is what comes to mind. Which means 34% to 36% of the best doctors in China were getting it wrong on the accuracy. That's kind of shocking. Do you see that eventually, your solution will sort of be almost system wide and it'll be malpractice if you're not using your system. Is that a possibility?

Ron Vianu: I think that the goal certainly is at this becomes the standard. Meaning the way we're building this system is we're not building this for payers, we're not really building this for patients, it really is meant to help providers understand the level of quality that they're achieving. And then more importantly, give them enough information so that they can improve that level of quality. All of which obviously has an enormous benefit to patients and an enormous benefit to care community. But from our perspective, it has to start with this partnership with providers. And so, fast forward three years, our hope is that our methodology is that standard by which quality in radiology is understood.

Ron Barshop: Well, so Ron, it seems like a good point for us to have a departure and get into the actual mechanics of what Covera health does in improving the quality of radiology. Tell us what your methodology is.

Ron Vianu: Sure. So for us, when we started along this journey, we had to ask ourselves the first fundamental question around. Is there a solution? Because it wasn't even clear to us that a solution could be developed, or maybe saying it differently, is radiology this subjective art where there's no method to really understand which physicians are better than others for particular patient populations. And so we spent a lot of time, and this is prior to Covera, really thinking about researching, and we partnered with various academic medical centers on this topic to ask the question of, is there a way to understand with direct measurement, which

providers have a higher accuracy rate than others for specific patients? Or maybe stated differently, if a patient requires an MRI of the brain, is there a way for us to identify which provider is going to be the most successful at identifying whatever pathology may exist in that patient's study?

Ron Vianu: And equally importantly, we also wanted to understand if that were possible to do. And if then you can use that information to help patients and payers match patients with providers. That again, would be the best suited for them based on their specific illness or injury. What would be the downstream impact of that patient's treatment course, and the patient's outcome that's measured in return to work, functional rehabilitation, surgical utilization, opioid use. In general, just return to full recovery.

Ron Vianu: And so we spent some time thinking about this, and what we ultimately built was a fairly sophisticated structure, the QA process, where we would build these large datasets around diagnostic errors across different providers, across different pathologies, across different practices in regions in the country. And then use statistical modeling, and advanced AI to ultimately derive a predictive metric around individual providers relative to specific patients. And so using this methodology we built, we'd be able to say this doctor who sits in this practice, and this practice has this sort of equipment and these sorts of protocols and the protocols are how the machines and the equipment aren't actually used, would be better suited, for these sorts of patients.

Ron Vianu: And so we spent time in building that system and scaling it. And ultimately, we were able to test that system with an employer where a very large employer in the US conducted a prospective randomized trial on that system where the goal was to see what would be the impact to patient outcomes when the only variable that would be changed would be radiology. And what they discovered over a 16 month period was that those patients were matched with radiologists who have these higher accuracy rates for their illnesses or injuries did significantly better across multiple important outcome features. And from our perspective, this was very validating and from the world of radiology that has been perceived as a commodity has been similarly validating for them. The quality maps and that patients should be more informed about which centers to go to because it could make a big difference in their care and treatment.

Ron Barshop: It makes complete sense because specialists, we have 100, 2500, 30 different types of specialists. You have it broken into such splintered dynamics that it makes sense that there are radiologists that are really strong in areas and weak in others for a hundred different reasons. It makes sense. So it's almost like we're suggesting maybe the radiologist should stay out of this sandbox and really be focusing on this sandbox. Is that kind of the direction of this?

Ron Vianu: It's two fold. Sometimes that's certainly the direction where radiologists may be much more suited for a particular area and there's a lot of variables that would go into that conclusion or maybe a radiologist just needs the right feedback data around their quality so that they can change maybe what they do in order to improve their quality. So I would say holistically, this is not about finding doctor X better than doctor Y, this is about obviously identify doctors who seem to be

doing better in different areas, but also providing the rest of the community with information that will allow them to self improve. Whether it's through pure learning, whether it's through practice modification, but it's critical to give them that information so that it's not about, "Hey, you're not good at this," but rather here's the information that you could use to improve.

Ron Barshop: Are there either medical schools or residencies that are producing better radiologist than others?

Ron Vianu: We don't have, I would say, sufficient data to draw those conclusions yet. It's possible that that's something we'll see in the future. What we really think are more of the driving features are around some specialization. And I don't mean subspecialization in terms of did you go to a residency and a fellowship in a particular area, but more around what do you do all day? Meaning you come into the office, are you spending 50% of your time, 20% of your time reading brain MRIs and how does that compare to someone reading 80% of their time reading MRIs and how many of them do you do in an hour?

Ron Vianu: I mean, there's a lot of features around that that we think is very impactful based on the data. And similarly, are you in an environment where if you do make a mistake, what's the likelihood of somebody pointing it out to you? So if you're a radiologist doing teleradiology and you're isolated from the physician who ultimately receiving your reports, which in some circumstances is the case, but not all. Errors may not be brought to your attention. And as a result, it's human behavior you may not be as cautious or as sensitive to those sorts of things. And so the feedback loop is also very critical, which is the sort of thing that we're now bringing into their universe for the first time.

Ron Barshop: I'm thinking that if it takes 10,000 hours to get mastery in the subject, and I hear what you're saying is maybe it takes 10,000 hours for the brain and another 10,000 for the lungs and another 10,000 for the digestive system. It seems like 10,000 hours in a fellowship may not be enough to learn the whole human body and how to spot anomalies throughout the whole human body with accuracy. Is that kind of what you're saying?

Ron Vianu: Yeah. That's absolutely correct. I mean, you can have somebody as a perfect example who has a fellowship in muscular skeletal imaging, which is imaging, that's the joints and spine. But then those into practice in the world community and 80% of their time is spent in other domains. And so they're doing mammography, they're doing brain MRIs and doing ultrasounds and various things, but only 20% of their time is focused on the area where they have the fellowship. Those providers, given enough time in that practice design will likely not be as accurate as somebody who is, for example, spending 80% of the time in the area that they had the fellowship. So the fellowship itself is a feature, but in and of itself doesn't mean that a provider after, let's say 20 years in practice, is going to be one that is suited to see those sorts of patients that were related to that fellowship.

Ron Barshop: So you're introducing basically artificial intelligence into this process. Do you see any pushback from radiologists that fear being replaced by a computer?

Ron Vianu: No, because our goal with respect to artificial intelligence, which is very different than what's happening throughout the market generally, is not to replace radiologists. We're not building algorithms where there's going to be FDA approval over those algorithms so that instead of having a radiologist, we'd have to do a study, the idea that these algorithms would read it instead. Fundamentally, the algorithms that we're building are to help providers identify when there's a likelihood that they made a mistake after they looked at a patient so that they can self improve real time at that point.

Ron Vianu: And so it's very much supportive of radiologists because my personal opinion, philosophically is that radiologists will never be replaced by AI, certain areas of radiology certainly may be, that are simpler [ordalities 00:23:30] and maybe X rays and maybe certain types of CT studies. But as radiology becomes much more complicated, what I imagine will happen if that radiologist will be spending their time on these much richer data sets that they're getting from these much more advanced machines, whereas the AI may be tackling the much more relatively simpler areas in support of their activities.

Ron Barshop: So you're trying to give not only the doctor a good feedback loop, but to give them super powers to be smarter, better, more accurate, more wise about his decisions.

Ron Vianu: Correct. We want to really empower them to be better. And the way to do that is help them understand where they may be making mistakes, how often they're making those mistakes, and then they can work to put together a system, whether it's again, if you're learning or some other approach, to reduce the number of errors that they're making.

Ron Barshop: Well, let's talk about your new Walmart announcement that just happened to 48 hours ago. So I hope you even remember what's going on there because it's so fresh. Tell us about what's going on with your new partnership with Walmart.

Ron Vianu: Sure. They've been incredibly innovative. Before even Covera with respect to thinking about quality and understanding that unit cost, which I think has been the focus of health care payers for the last 10, 20 years, is not really producing better outcomes for patients, and it's certainly not producing lower costs for payers. And so Walmart had been on the forefront of thinking, "How do we identify good providers that are going to drive better outcomes for our members because we know and it's been well established that doing so is less expensive than patients who don't do better."

Ron Vianu: And so when we approached Walmart, and this is now close to two years ago around what we built and how we can implement this within their ecosystem, they were very supportive because they already knew their quality maps, so we didn't have to necessarily convince them of that. And the program that we built with them was one where we want to expose their employees, their member population, to radiology centers that are best suited for their specific injury or illness. So that all the other programs that Walmart has built and that the insurance companies has built around those patients related to a downstream care

orthopedics, various other domains would be supported by having an accurate diagnosis up front.

Ron Vianu: And I think it's very intuitive to think about patients who are misdiagnosed and that everything subsequent to that is not going to go well. So the primary focus of this program is how do we make sure that these patients are diagnosed correctly so that they have the best chance of recovery downstream?

Ron Barshop: So if I'm a radiologist and I'm not on the in list, I'm on the out list for let's just say low back, but I am on the in list for call it digestive. You're not saying you're in the Frat or you're out of the Frat to radiology groups. You're just saying, "We know what you're really good at and we know what we're going to send to other radiology groups." Is that what I'm hearing you say?

Ron Vianu: Right. So within groups, we have the ability to distinguish. And so a group may have 35 doctors and we'll work within that group to understand maybe all those 35 doctors, they really excel at brain imaging. And so for that group we may say, that we're going to designate them for brain and brain alone. And so for patients who need those sorts of services, we'll direct them to those sites.

Ron Barshop: Okay. So you have 34 that are awesome at digestive and one who's great at brain. Is his group not going to get on your list if he's the one most outstanding brain radiologist on the planet earth? Is his whole group knocked out of your list or will he be accepted?

Ron Vianu: So it depends. If the group... One of the challenges for groups where they have limited bandwidth and radiologists in particular areas is their ability to match those patients with the radiologists. So the case that you just described, I have one radiologist who's great at brain. And as you can imagine that radiologist is not available every single day, 24 hours a day, takes vacation, and so on and so forth. So there are one or two patients who are going to present to that group, and certainly won't have that radiologist available to them. And from our perspective, the question is what percentage of patients will that be? And either way, it's probably not desirable. And so when we look at a group, we want to make sure there's adequate bandwidth and adequate number of specialists within a particular area so that when a patient walks in, the likelihood of them getting that sort of doctor pretty much all the time is very high.

Ron Barshop: Is there any way that I as a patient can know that I've got a... I'm not going to call it a certified doctor because that's inappropriate, but I think, you know what I mean, but Covera has blessed my doctor to be the right guy for the right procedure and achieve the right radiologist for that procedure. How will I as a consumer know I'm getting an accurate read because I don't see anything out there that tells me right now.

Ron Vianu: Right. So today's the consumers, the only available services are really second opinions. And certainly I think those are our good ideas for imaging that are critical to that patient, whether it's for cancer or it could impact a surgical decision. But at least with respect to Covera right now our program is primarily working with employers and their benefit plans to make this available. Not to say

that in the future we may not have something that specific patient facing. But that's not something that we have today for a variety of reasons.

Ron Barshop: There's a fact that I doubt most people will ever meet the radiologists. They're not going to question a radiologist's credentials because they don't even know questions to ask. And the radiologist frankly is blindly unaware that they are not good in certain areas. I think human nature's to think you're really good at a lot of different things and not to be aware of your weaknesses. So I look forward to that day.

Ron Vianu: Right. I would say at minimum, if you want to give advice to your listeners, and this doesn't necessarily solve a problem, it's not even necessarily that'd be correct all the time. But I think if a patient were to ask an imaging center, "Is the radiologist who's going to be [inaudible 00:29:43] in my study, a subspecialist within this area? That's a reasonably good start. It's certainly not the end, it's not all encompassing. And in some cases that's not greater quality than anybody else, but it's a good start. And it's a sort of question, that I think it's important to ask imaging centers, because that really brings this question to the light which is, how are they finding, how are they matched up as patients and based on what criteria?

Ron Barshop: So in your perfect world Ron, does every patient get exactly the right radiologist for exactly the right read? And there's no over testing going on. Is that sort of your panacea?

Ron Vianu: Yeah, there is that perfect world and one of the unique aspects of radiology is that radiologists will need to be on site. And the example that I give to folks in the offices that we work with special surgery with their director of spinal imaging, and he is considered by most one of the top spine radiologists in the country. And I recognize that there are patients throughout the country that would very much advantage having exposure to him for their particular cases. So there is some idea that in the future that patients really would have the ability to be matched with those doctors that are most suited for them, even if they're not available at local markets. Because [inaudible 00:31:01] diagnosis correct, has to be one of the most important things in one's healthcare journey,

Ron Barshop: What books should providers and employers read to learn more about this?

Ron Vianu: I think from an employer perspective, obviously they can go to our website and hopefully going to be publishing more information about this and he can look at the literature related to this. So I think just being educated about the fact that variability exists in radiology and that the level of misdiagnosis is much higher than previously understood. I think it's a meaningful step forward in terms of being educated that this problem exists and then thinking about how to solve it. There aren't really any books per se. It's really about understanding that here's an area of medicine, that there are mistakes like every other area of medicine and that people should start thinking about if these mistakes exist, how do we find the right doctor who's less likely to make those mistakes on individual patients?

Ron Barshop: I got to tell you, I think this is a tell all book. It's really quite shocking, this whole universe that I've stepped into because of you. Well let's talk about if you had one message that you can fly over the America at the Superbowl, what one message would you want every American to know about?

Ron Vianu: Well, that's a tough question, doesn't even has to be related to our efforts but joking aside, I think, again, understanding that this problem exists would really dramatically accelerate its solution and that would reduce an enormous amount of harm that currently face patients today within our healthcare system.

Ron Barshop: Yeah. I wish the whole world knew about this because it's... most jaws drop when I tell people your radiology read has a potentially three in 10 chance of being inaccurate, that's quite shocking to people. It's not my backyard, not never my radiology and my mother's read is ever going to be inaccurate, but poor everybody else. But it might be their mothers. Well, I think we're going to have to stay in touch because I'm going to watch the evolution of Covera as you grow your model and eventually get this word out to the consumers so they can actually find the right doctor for the right time when they need it. And it's a very exciting new area you're breaking ground on.

Ron Vianu: Thank you.

Ron Barshop: All right. Thanks again, Ron.

Speaker 3: Thank you for listening. You want to shake things up? There's two things you can do for us. One, go to primarycarecures.com for show notes and links to our guests. And number two, help us spotlight what's working in primary care by listening on iTunes or wherever you get your podcasts and subscribing and leave us a review. It helps our megaphone more than you would know. Until next episode!