Primary Care Cures

Episode #4 – Dave Smith

Ron Barshop: Most problems in Healthcare are fixed already. Primary care is already cured on the fringes. Reversing burn-out, physician shortages, bad business models, forced buy-outs. Factory medicine, high deductible insurance that doesn't pay docs and is totally inaccessible to most of the employees. The big squeeze of always accelerated costs and decelerated reimbursements.

Ron Barshop: Meet those making a difference with the host Ron Barshop, CEO of Beacon Clinics. Welcome to Primary Care Cures.

Ron Barshop: Welcome to the show. Today's show features another visionary who gets things done. He sees things on a very grand scale, as you're about to learn. Dave and I met at the University of Texas business school back in the day. He ran this giant room of computers that I'm guessing today would be probably on one server. They were mission critical to not only UT, but to the business school's mission and he was kind of that genius behind the curtain, of two more geniuses that one later became the Chancellor of the university, which was Dr. Bill Cunningham and the second is probably the greatest man I've ever met and I'm suspecting Dave would agree with that statement, Dr. George Kozmetsky.

Ron Barshop: Dave's later work took him as he advanced out of the university world into his own company to consult with the finest companies and the most respectable security clearances you could ever imagine. The bigger the problem, the more complex, the more Dave Smith is simply fired up and he sees things that we mortals don't from a 20,000 square foot view, which is perfect for this podcast today. I'm really proud to know Dave.

Ron Barshop: Our country regained the lead from Japan and Korea in the semi-conductor industry thanks to Dave Smith. He was one of the principle designers and architects that established the CIA's innovative organization called In-Q-Tel. Maybe we'll hear more about that.

Ron Barshop: This organization helped bring innovation back into the intelligence community and really lead the world. So Dave's that guy. He is in fact, better known though for his forecast and his roadmaps for virtually rethinking all of DOD and the intel community. He's led industry, regional and national efforts to establish new competitive environments in so many different fields and we don't have time for that to even go there, but Dave's

that guy. I really want to get him drunk at Franklin's Barbecue sometime soon and hear these stories, because it could be a nice long evening.

Ron Barshop: But how would Dave the visionary operator cure the woes of Primary Care and by extension, healthcare. This cluster with no healthcare. He's in it to win it and he'll talk about that today.

Ron Barshop: So meet Dave Smith, he's a futurist, he's a doer of great deeds, a thinker of great thoughts. The CEO of Strategic Pathway and a fellow at the IC Squared Institute, which Dr. George Kozmetsky founded.

Ron Barshop: Welcome Dave to the show after a three year cap and connections back in Austin. Franklin sounds pretty good to you?

Dave Smith: Oh, it does. I would say that if we have to drink with each other, we should drink tequila, since of all the spirits, it's the healthiest.

Ron Barshop: I have a collection of 20 of the finest tequilas that you can buy. I don't drink anything but that, so you are naming my drink.

Dave Smith: Oh. We're on the same page together with that. Thank you for the introduction.

Dave Smith: The other one that I think is applicable to our discussion here is I'm also a fellow of the Society of Design and Process Engineering Sciences, which is a society that Dr. Kozmetsky also helped found, but it's all about complexity, chaos theory and systems are systems theory. When you look at health tier today, it is the perfect example of a system of systems theory. That's one of the challenges as we try to look at how to improve healthcare and work through it. We're looking at it in components or a system, but we don't really understand that it's a system of systems.

Ron Barshop: We'll, let's talk about healthcare. We can have such a broad conversation here and such a long one. What are the top two or three problems that you think are solvable in healthcare today, from this 10,000 foot view that you have?

Dave Smith: One of the very big problems in healthcare is, you hear the term inner operability. Well inner operability is not really the big problem. What's the big problem is, how do we manage data and how do we get healthcare to move to a set of platforms where data standards could be applied, but even more importantly, the data is held within the right format for others to use.

Dave Smith: We're beginning to see in healthcare where internet of things type of applications where we're collecting and streaming data from all these devices, the sensors, the medical devices within a clinic or within the

hospital, but yet we're trying to force that data into field like on an Excel spreadsheet in relational database or no SQL database.

Dave Smith: We're not adapting our IT infrastructure in the way we practice medicine to the advances that we've made in so many of these areas as we've enhanced sensors, as we've moved computing out to the edge of the cloud, as we've moved it embedded into these distributed devices. Those should come together and then that will help lessen the load for the primary care physician for the lab technicians and others who are struggling under this barrier of a multitude of systems, but yet where you have to do the same test over and over because we just do not have the ability to transport data.

Ron Barshop: My understanding from a press release yesterday, and I'm not a data scientist or a health data follower frankly, is that the government is now stepping out of the way and opening basically a giant Linux system for the healthcare system. They're not saying you have to use this or that and they're trying to get out of the way and they're a little bit ahead of the industry.

Dave Smith: They are.

Ron Barshop: Is there any barriers that the government could further release that could cause a smoother transition to the world you want?

Dave Smith: There's appropriate places for the government and others. I think when you look at some of the things they did as they implemented level one, level two, level three quality standards, it was a helpful getting that transition started, but then they were too far as they did the level three quality standards.

Dave Smith: The industry government led initiative on FIRE, Fast Healthcare Inner operable ResourcEs, I think is a great example how you can use, again a Kozmetsky term here, a technopolis concept of getting academia, government and industry working together to solve tough problems. The FIRE data model which is going to help do part of this, I think is an excellent approach and example of how they've dialed back things around the quality measures, but still are trying to keep a framework in place that was jointly developed using group intelligence to get the job done.

Ron Barshop: If I'm a physician, just a typical primary care physician practicing today, how is all this going to affect my world. Right now, I'm having to deal with ESR mandates that are driving me crazy, systems that won't let me just speak into them and record what I need, forcing me to turn away from my patient for half my visit. There's nothing in the current electronic medical record world that seems to be up to date with what's going on

around the rest of the world in healthcare. There's just headaches and more headaches.

Ron Barshop: What are physicians going to see on the ground in the next two to three years that makes all some of these problems that they're having, trying to be a physician and not a secretary?

Dave Smith: Great question. I know a number of physicians who actually have gone out and hired court reporters to go around with them as they visit patients to where they are not distracted by the EHR or the other elements there.

Dave Smith: The answer to your question is multi-fold. One of them is, we need to see our electronic systems designed from a standpoint of meeting the doctors care abouts as opposed to meeting the requirements of the developers who are developing the software. When I've looked at different EHRs and others in the software industry, the most common thing I see is the software was designed by the developers, the programmers saying, "This is what we think the doctor needs." Instead of the other way around.

Dave Smith: The other thing is, you're seeing new advancements in technology that are going to really help you get there. A bunch of us have played with, for example the smart speakers like Alexa and Siri and others. I don't know if you've noticed it, but they've gotten a lot smarter. We're seeing this trend really pick up now. If I look at smart speakers in the United States today and in China, for example, it's now past well above 20% user base, where they're beginning to learn enough. If we create Lexicons, like we begin to do, where you take patient speak, doctor speak and insurance speak and refined those smart speaker technologies into the exam room, into the OR, into other places like that, it's going to take the typing elements away, for the most part. The places where you've seen speech transcription, even the best ones that you pay a lot of money for still have errors and they don't really use the same approaches as you see in some of these smart speakers. So that's one area.

Ron Barshop: You know, it's interesting, because I can think of ... I think of Jarvis in Iron Man. He gives a guy super powers. He has complete information and there's no reason why IBM Watson can't be the Jarvis for every surgeon, every diagnostic test, to give a doctor in an exam room superpowers to basically have perfect information when they're talking to their patient and there's not going to be missed diagnosis, there's not going to be unnecessary tests ordered. It's going to be almost a perfect world with, again, I think of a doctor with superpowers.

Ron Barshop: That, I think can happen today. I know Watson is being prepared for that. What you're speaking to, though, is taking a Dragon Speak ++ and turning it into something that is not clunky. Things like that [inaudible 00:11:46]

has been out there for 5 years, 10 years, that we're not going to have a clunky, we're going to finally ... This will be the year. Here we are in 2019, still talking about clunky EHR speakers.

Dave Smith: But you hit it partially on the head, in that we have to change some of the approaches to it. I have been using Dragon Dictate for, well, probably 15, 16 years now. So I've trained mine pretty well. But what I find is, for example, when I'm using Siri on my phone, it actually understands me better than Dragon Dictate that I have trained for over a decade.

Ron Barshop: Amazing. Well, there's the problem right there in a nutshell.

Ron Barshop: What problems are getting actually solved in your, again 20,000 foot view that are going to make a difference, either doctors or patients, or just, let's call it the healthcare system as a whole, as an ecosystem?

Dave Smith: One of the things that I really see that I'm very happy about is, we've seen some of the leading health organizations begin to tackle the problems of, "How do I deal with a broad population?". There's a healthcare group here in Texas that I know is down in Houston with you Ron, up in Austin, San Antonio and Dallas and others called WellMed. What they have done is really interesting to me is, they've built their system where they've started out with, "What are the key things my patients need?" Many of their patients are older patients, so they've enlisted many different ways to do home healthcare. They've enlisted ways to go and be able to help their patients with medication adherence, which is a bigger problem than I ever realized it was until I started digging in.

Dave Smith: Almost half the prescriptions given are never filled. That's hard to do healthcare if you don't have that. You see other things where you're beginning to put not only labs in a box in the clinics, but there are now AI enhanced machines that, for the most common prescriptions, will package it individually for patients there in a clinic now, using a different business organization to do it, but still they're in the clinic where you're combining the elements, where the physicians, the PAs, the nurses can do some hands-on time with the patients who don't understand the requirements around it.

Dave Smith: The same thing with them is they have orchestrated their system to where they can geographically campaign with where they see challenges. Places where patients within their domain are not getting the right test run at the right times and things. They've taken it where in the past, that was done with post-it notes stuck to the receptionist wall, the nurses wall, to where they've now automated it into a system where it can be tackled as a team approach.

Dave Smith: What I think the electronics has done in healthcare is over the last 20 years, it has taken and broken down the team to such a standpoint that it was individuals staying late to do the work versus working collaboratively in thinking of the patients first.

Ron Barshop: Do you have a positive view ... I live at a WellMed. They were born in San Antonio with basically a diabetes capital of the world. We have ... You're saying now where they're going to have better management, better labs, better pharmaceutical actually compounding, it sounds like, in the clinic, where the potential is heading with AI. Do you see ... Do you have hope for the future for the patient and for the doctor that this world is going to get potentially simpler with technology or is technology actually complicating things more until we get to that inflection point?

Dave Smith: Ron, I think you have to see the stages for it. Technology tends to go through stages that repeat and build upon each other. It's like your car today. In reality, you're driving a massive super computer today with thousands of sensors in it. But we don't think of that now because of all the things in our car have made it easier. They give us warnings, they help us navigate to where we're going, they individually adjust the settings. Most people don't realize when they sit down in the front seat of the car, they're actually being weighed so that the air bags know how much force to use.

Dave Smith: I think we're beginning to see that coming over into healthcare today. The challenge with healthcare, and this sounds so counterintuitive, is healthcare is actually a lagger in adopting technology that can be heavily leveraged.

Ron Barshop: Can I tell you my theory why?

Dave Smith: Go ahead.

Ron Barshop: 55 or older, guess what percentage of physicians are 55 or older in America today.

Dave Smith: It's probably above 60%.

Ron Barshop: Well, it's a third. A fourth are 60 or older and my older physician clients are still, they're not even using EHR. They're using file systems that they're running, what they call the [inaudible 00:17:31] issue network.

Dave Smith: I understand that one.

Ron Barshop: They're not going to adopt this new technology. So that's a third ... This may be some of the 55 year olds are going to, but when you're 10, 15

years away from retiring and you're burned-out and you don't want to spend money ... I mean, you mentioned the scribe earlier. Let me walk you through the economics of the scribe and why 90% of the doctors aren't doing it, although it seems like a lay-up.

Ron Barshop: A scribe in Texas, in Houston or Austin or San Antonio, is about $20 an hour. A typical primary care physician can see about four patients, maybe five if they're a factory medicine quick change artist, but four patients at $60 to $70 a patient takes you to, we'll call it $200. $250. Their margins are about 5 to 7%. Well 5 to 7% ain't $20. $20 on $240 takes all that 5% away, so they're essentially working for free and they're not making a salary. They're netting nothing out of their practice, if that's ... And I'm just taking you through a typical day, typical hours, typical scribe cost.

Ron Barshop: So that's why a lot of people don't have somebody following them around, a court reporter following them around, is they simply can't afford it. It doesn't make economic sense.

Dave Smith: The economics really aren't there at all if you look at it on a traditional primary care office visit.

Ron Barshop: So what is your theory why doctors are not adopting technology or why medical world is not adopting technology. I've given you my old man, old woman theory.

Dave Smith: Well, you know, I'm a few years older than you are, so I can fit in your demographics there. My reason as I see it, as I've gone out and visited with doctors, one of the key tenets as I look at how to solve technology problems or future problems like in some of the organizations you mentioned at the top of the show is, I want to understand the care abouts of them. Care abouts can be both tangibles and intangibles.

Dave Smith: What is very interesting in healthcare is, we get those two confused, because the intangibles are really what matters a lot to patients, but we're recording just the tangibles. I think you can see that most of the doctors I know in their 60s, use a lot of technology at home, but like I said, they use it in their cars. They use it every place except the office.

Dave Smith: I think part of that is, healthcare is an industry where the doctors have to do life long learning, but I think the way they were taught through medical school and post medical education is they separated their medical knowledge from the knowledge they're learning in the rest of their life. Somehow, and we see this with some of the things being done, for example here in Austin at the new Dell Medical School, those are being forced together in the way the new doctors are coming out. You see the same thing up at Johns Hopkins and some others, where ... Like here in

Austin, the doctors actually have a course where they have to write a simple program to get information back from their patients. That's part of the medical degree now.

Ron Barshop: I've got to tell you, I went to Harvard Medical School to visit my daughter in-law when she was going there a couple of years ago. I sat in a classroom that looked like something I sat in the 1979 when I met you. It was chalkboards, I didn't see a lot of electronics around the room, it was uncomfortable desks. It was a theater made in the 60s or 50s and it hasn't been renovated. I said, "Harvard's got the greatest endowment on planet earth. Why have they not got like a Star Trek scene here instead of something from a bygone era?". She said, "The money that comes into Harvard endowments is coming from engineers, business. It's not going to medical schools. Doctors don't make a good enough living to leave a legacy into the healthcare ecosystem, into the particular Harvard Medical School."

Dave Smith: Well, you hit a very good point though, is that, if you actually go back and think about the new classrooms when you were a student, they all had screens in them. That university, the college of business there was one of the very first ones to project computer screens in the classroom.

Dave Smith: As you begin to go and look into the new places, you're right. Most universities today teach the Socratic method way, which hasn't changed since the times of Socrates. But we have to begin to look at the newer ways to do that. We're going to see that shift, particularly I think healthcare again, as we've talked about earlier, they're a laggard in adoption. I see doctors making a lot of investment in technology companies. Some of the things I'm doing now is advising some companies where they're doing things like Inselicon, early drug molecule discovery and things. Doctors are creating a considerable amount of money into that company and others.

Dave Smith: But what you don't see them is going back to their education roots and supporting it there. Why? I think most of them are frustrated when they get back and like you did, go back and look at what's available elsewhere today and they go back and look at where they went to medical school. They have to figure out how they went from using rocks and sticks to do things to the advanced equipment that they have today.

Ron Barshop: I've got to tell you, if I'm a physician and I've done well in the business world and I want to go back to Harvard, the rooms she did show me where the operating theaters that were just magnificent, now I'm talking four years ago, they're out of date four years later. You look at what's happening in the surgical theater here in Houston Texas, these rooms today in 2019, don't look like the rooms of 2014. It's changing so fast.

Immunotherapy is requiring a lot less invasive and orthoscopic ... It's all going non-invasive. It's all going at a molecular level and a nanotechnology level.

Ron Barshop: What an oncologist learned at Harvard, her year is not going to be relevant today unless they really keep up. If I were going back and making a donation to Harvard, I would realize, "Well, wait a minute. In five more years, my donation is going to be worthless. These rooms I'm building, this technology I'm having, is not going to be as current as something new that we don't maybe foresee."

Dave Smith: Well Ron, you've given me two points to answer that one.

Dave Smith: The first one is ... Again, I'm going to pick on healthcare a little bit here. Healthcare tends to plan for the future by looking in the rear view mirror.

Ron Barshop: Yes.

Dave Smith: That doesn't look out its windshield. And particularly with the areas where the technology halflives are as short as you were talking about, you not only have to look out your windshield, you have to look beyond where the headlights are showing to be active there.

Dave Smith: Most of our universities, as you look particularly in ... I'm going to pick not just on healthcare, but actually in quite a few of the sciences now, they're planning for the future by looking in the rear view mirror.

Dave Smith: The other thing I want to do and I'm going to self-brag, but for a reason on this one. In 1999, the last issue of the year for business week, I was one of six futurists chosen to ask what the next 100 years was going to be like. I said this century we're in now is going to be all about the age of bio. Some of it's from biological computing, biological storage, to actually the places we're going through now with not only stem cell, but regenerative healthcare. The way we can now target things, the way I can go and use crisper and other devices to make proactive things to prevent later problems. That is the big change I see that's going to help pull healthcare out.

Dave Smith: Also, I know there's a lot of business pressures on it, but simple applications of telemedicine, not necessarily for critical, but to handle some of the routines where that doctor during that hour window can go from 4 patients to maybe billing 9 or 10 for short consultations by telemedicine, where those do move faster and they answer many of the problems you see scheduling time to come in to a clinic today.

Ron Barshop: The numbers are shocking. I think something like 75% of clinical visits and primary care unnecessary can be handled with a phone call.

Dave Smith: You're 100% right, with the statistics I've seen.

Ron Barshop: Yeah. We have a telehealth component of our healthcare that virtually every one of my employees has used. They don't miss as much work, my turn-over is lower, absenteeism is way down and I'm recruiting better because I now can tell them they can talk about their child's cough on the phone with a doctor, 24/7, two languages. But the utilization rate of tele health in the country is only one percent. Every time I meet my employees, I used to talk about culture and gosh, you're doing a great job. Now I talk about, "Have you used the tele-health, because it's just such a logical ..." My ladies will go to work and they'll be sick and they'll say, "You know, you probably shouldn't be here sick. You should have called in this morning. You remember you have a doctor at your beck and call. You just push this speed dial and they're going to help you figure this thing out."

Ron Barshop: It saves me time, it saves me money, it saves them aggravation. The fear of losing their job because they're going to have to go to a doctor visit and wait two hours for a Medicare doctor to see them or Medicaid doctor to see them. That's all gone. That's all gone now.

Dave Smith: Yeah, and the sensors are now keeping up with it. You go into Best Buy and you'll see a whole isle of devices that will transmit your Diabetes reading, your heart rate, your blood pressure. You can use them to measure eye pressure. All these other things now that I can do from smart devices that we couldn't do five years ago.

Ron Barshop: Yeah, it's getting exciting.

Ron Barshop: Let me give you the magic wand to waive over healthcare. You have an interesting history in that you have taken very complex systems, like defense, like intelligence, and you've waived a magic wand and you've roadmapped out a future for them that allows them to see, how to stay not only competitive, but way ahead of our enemies so that we have the finest systems in place to take care of our citizens.

Ron Barshop: What would your magic wand do in healthcare if you could just waive it tomorrow and apply your skillset to healthcare to solve the problems out there?

Dave Smith: Boy, I might have to get a bigger magic wand. Part of what you're doing and with healthcare is, we need to look about from a organizational process field how healthcare is going. Your example with your employees

is perfectly right. We triage in healthcare the same way we did 100 years ago and we need to change that process. We need to consider what an office staff might be. I think there's a place within a clinic for technologists to augment the medical knowledge. I can see more and more of that.

Dave Smith: As we move to where we integrate healthcare into our daily lives, like what we see in the automobile, I think that role is going to become one. Physicians continue in education. Boy. That's the place where I don't think I need a magic wand, I think I need something more like nuclear bombs. I think physicians continuing education has to change. We need the leaders within the physicians realm, like AMA and AHA and others to step up and say, "Guys. We're in a new century with new ways to do this." Let us all become leaders of how to move this into the future and understand that some of the things like we were talking about earlier, with like the voice assistants ... One of the biggest challenges is, we've got to understand how to speak languages that not only our colleagues understand, our patients understand, the insurance companies understand, but also that machines understand.

Ron Barshop: I'm speaking with Dave Smith who's the CEO of Strategic Pathways. Dave has agreed to let me pay for some barbecue while he buys the tequila at our favorite barbecue spot in spot in Austin soon. Dave, let's wrap up and ask you just a couple more questions of, what would be a book or two that somebody can read where they can get a bearing on the future of healthcare that you think has a great perspective?

Dave Smith: You warned me with that question. I started putting a couple books on the table. I ended up taking those off.

Ron Barshop: Okay.

Dave Smith: What I would tell you I would do is, I would go into Google and I would set alerts in Google for different areas of the healthcare market place you want to understand. Every morning, Google alerts will deliver to you 9 or 10 articles that are great to help you keep up to date, as opposed to books. By the time a book is out today in healthcare, it's out of date.

Ron Barshop: You're right. You are right. Yeah.

Dave Smith: So I would change that.

Dave Smith: The other thing I would do though, is I would begin to look at places which are analogous outside of healthcare. So if I'm wanting to see where I think surgery of the future is going to be with augmented reality, I would go and look at what is being done in the military, with heads-up displays

and virtual reality and augmented reality. I would begin to go and look over in, even things like shipping and retail, where you see folks like Amazon totally changing the delivery process. This changes to the delivery process, I believe, is very critical for healthcare.

Dave Smith: But set up those type of Google alerts where it's delivered to your inbox every day, curated in a way where you see what is happening today, not what is happening a year ago.

Ron Barshop: Last month I was in a local office here in Houston that is the leading animation studio for the human body. I was walking with a headset on to the human heart. Molecules were running by me and interactions were happening, I could touch on them and it could explain it to me. Boy, if I'm a medical student in the next 5 to 10 years as that rolls out, that's really going to be the way to learn biology, not memorizing note cards in Latin.

Dave Smith: And you look at what Blesson's doing there and you take and combine that with the ability to do self-directed overlays of not only learning, but your current patient, where you can use that to rehearse what you're doing. He has come a long ways with those animations, but they're fantastic.

Ron Barshop: They're heading towards 3D in walkthrough and interactive.

Ron Barshop: Let's figure out in a sentence what an important message you would like to transmit to our listeners who are physicians that are frustrated, maybe hospital administrators that are frustrated. Patients, even, that are frustrated. What would be your message to them?

Dave Smith: Part of the real solution that we need to bring into healthcare is to relearn how to apply group intelligence. We began to do that when we were young. If we think about how we learned as children all the way up through our degrees and others, we begin to apply group intelligence and we begin to understand the careabouts of each other. But somehow when we've gone into the workforce and we've gone into our practices, we have forgotten what that group intelligence is all about. If you apply that well and apply that to your suppliers, your partners, your patients, that will create a greater outcome that looks more like hockey stick innovation than really a flat growth pattern that we typically see.

Ron Barshop: Thank you Dave. How do people find you, if it's not at the tequila bar drinking a nice fortaleza?

Dave Smith: You know, that beach is also a good place.

Dave Smith: Email me at Dave@strategicpathways.com.

Ron Barshop: Great. Thank you for being on the show. I've really enjoyed talking with you and I look forward to another talk soon.

Dave Smith: Thank you and thank you to everyone.

Ron Barshop: 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. 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 out megaphone more than you know.

Ron Barshop: Until next episode.