Patient Safety and High Performance Leadership Summit Issues in Governance, National Collaboratives, and H.I.T.: 5 Rights of Imaging™ and High Performance Imaging

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Webinar Transcript

Charles Denham: Could everybody take their seats? So the next topic is that area that we think offers a huge opportunity, a real-time opportunity, and what I would call … I like to use the term "speed to impact." This is an area that we're going to talk about imaging today. But this applies to laboratory testing and many areas of medicine and care that we have delivered today.

What we have done, a number of us in a program called The Greenlight Program, is a group of really high-performing hospitals that have great core values that we hand-picked and we said, "Let's work together on the things that we can target and really be able to verify clinical, operational, and financial performance by applying best and better practice." And they have the talent and the desire to do that. We started with infection. So we created impact calculators on infections. We had in publications [that] infections we give patients is anywhere between a dollar and a million dollars. So go ahead and figure out what your ROI is going to be when you reduce them. I was constantly hearing from our 3,100 hospitals, "Well, we don't know exactly, you know, how can I go to the boss to get funded for a project?" And then we learned the tough lesson that in order to get the green light, in this case it comes from the movie industry. A greenlight movie is when you have the funding, you have the talent, and everybody is ready to go, and you have a little bit of a party and you say, "We have a green light. Let's go make a movie!"

And so we thought, you know what, we need to figure out how to get the vote for the green light for safety and quality projects. It turns out that the Chief Operating Officer and the Chief Financial Officer are the dynamic duos that kill many of these projects. I don't want to be pejorative, but they're responsible for the dark-green dollars. So the CFO is keeping a count of all those dark-green dollars and the COO is talking about capacity. And we would put great projects together and the CEO would say, "This is great and this is how to beat the other guys in town," or "This is how we can be great and wonderful." And then the COO and the CFO would kind of shake [their heads] and say, "Boss, you know, you told us to get the budget," and it would kill the deal. And we said, "Doggone it, we're so frustrated with this and our special sauce and what we do is healthcare services engineering and tying clinical, operational, and financial together." So we did it with infections. And it really, really helped our hospitals. I think at The Mayo Clinic it helped us really understand, and Dr. Bob Cima worked tirelessly on it. And a team at Cleveland Clinic and the folks at Harvard … we all worked together to figure out what kind of impact we could have. And it really helped us understand how the clinical, operational, and financial fit together.

And so what happened was then we focused on imaging. So we had this wonderful opportunity in imaging that actually can translate immediately to laboratory. And it is the 5 Rights. Basically, you all [who] saw the movie this morning, we addressed the 5 Rights framework: public domain, free, providing it out through medical articles, but trademarked so that others can't change it so that we can keep the focus on each of the 5 Rights in a proper manner and can write articles about it and build a body of knowledge. Basically it is the right study, the right order, the right way, the right report, and the right action. Most of our radiology departments for years have been kind of a "just say yes" department. You know, you get an order and you do a study. We've worked with hospitals that had … you know, the radiologist will say, "I read 22 normal CT scans of the head. I think there is a problem in the Emergency Department." Yeah, there is. So this was a way to go all the way around the loop. Then working with Dr. Swensen, who is a radiologist, and other radiologists around the country and around the world, and working with the World Health Organization with Edward Kelley and the team at WHO, and a number of organizations, we focused on each of these rights. And it turns out that if we take CT scans, we'll do 80 million this year, likely 240 million globally, and it's likely that we're probably overusing CT by 20%-30%. If we then go

around the right order, anywhere from between 30%-60% of the orders are mis-ordered or it's an inappropriate order: wrong information, incomplete information, and not the information, or the technique, or the requirement of the radiologist. You go down to the right way. We've all seen the news about accidents when patients that had high doses to their brains and to other organs. Now we're really sensitive to radiation safety. And then the right report. I'm a radiation oncologist. I treated cancer for many years and had a really big practice. And I can tell you that the breakdowns all the way around would impact my patients every single day. And I was the largest; I ordered the most studies in my field in the community where I was. And then the right action. It turns out that not all the doctors get the reports. They're not part of the medical record. We don't invite the patient into the medical record. They have no way to verify it, and they're one of the best ways to tackle it.

So this topic is really to kind of address those issues in what we've learned. And Steve, you're in charge of leadership for Mayo Clinic, but you still see CT scans. You're a specialist in chest CT and a real specialist in the screening and understanding the risk-benefit areas. And you've been doing some great research. Can you share with us the latest learning in that?

Stephen Swensen: I think we should start with understanding that CT, over the last four decades, has saved countless lives. It is a good, valuable diagnostic and therapeutic device, if used right. The opportunity, though, to improve the care of patients is maybe 10, 20 – 20%-30% of those exams don't need to be done or are done the wrong way. That is where we are doing harm to patients. We're doing harm with the cost, anxiety, and risks of radiation over decades. The *New England Journal* looked at the radiation exposure, which projects from the number of scans in this country that 20 years from now we would have about six preventable deaths per day from patients who were radiated who shouldn't have been radiated, or had the wrong dose. So there are a number of approaches we can use with this. I think we should start with having the patients be the best partner and advocate for themselves and have them ask six questions when they come in. When a CT scan is ordered, the first question is, "How will this affect the decision?" Is it just interesting or nice to know, or is it really a need to know? If it's a need to know, then will ultrasound or CT give the same answer? And the second question is, "Do you as the person ordering the exam have a financial conflict of interest?" Will you make more money if you order this scan? The third question to ask is, "What is the accuracy rate?" If it is a CT for colon cancer, if they don't know the percentage or it's less than 90, walk down the street. Another question to ask is, "What's the dose?" When we do screening for lung cancer at Mayo Clinic, the dose we use is 36 times lower than the average CT scan dose to the chest. And we still see lung cancers as big as a sesame seed. So you don't need the regular dose to do most of the diagnostic exams we can do. And then finally I would ask, "Do you do double scans?" The vast majority is, we do a "without" and a "with." It doubles the radiation exposure. There's a huge amount of variation in the dose and in the double scans in this country. They should all go away if the answer is if they're an outlier on that, which half the country is, walk down the street and find another place. So we've found that engaging patients with shared decision-making – this would be a crude form of it – reduces … improves the satisfaction, reduces cost, and without affecting the safety or the outcome of that patient. So engage a patient as patients, ask those six questions, and that's where we can start to reduce the overuse and the misuse.

Charles Denham: What we've learned about this radiation is that, yes, we want to minimize it as much as possible; and "unconflicted" was what we've put in the movie – unconflicted meaning no relationship of industry. Experts disagree as to how much is enough to cause harm. But they also agree we should minimized it wherever we can and that we should never miss having a study that could really help us and prepare us for surgery or identify a cancer without taking the risk-benefit decision into consideration. Now that's a loaded question. Risk-benefit decision: the majority of doctors in America have no idea what a millisievert is. They have no idea even what the stochastic story is on calculating what the risk could be. And most people [who] aren't in our field with treating in radiology would even know that. So the other thing that we had in the film this morning, which Dr. Soffa addressed, is that 88% of the high-tech studies are ordered by doctors who order [fewer] than five a month, or [fewer] than one a week. Any one of the high-techs, which means that they can't keep up on the indication. To me it is an entrepreneur, social entrepreneur, commercial entrepreneur, that's a huge opportunity for education. But it is also a big gap. So there's something really great that we can really tackle here. Mike Williams is one of our best trained hospital CEOs. He runs a hospital in Fredericksburg, Texas. He has an MBA. He's a specialist

anesthesia, critical care, and also did a master's at Harvard. We got together with Sully, actually, and that's how we all met together. We briefed Mike's team on the 5 Rights of Imaging and actually some of the issues. For those in the audience globally who can't see what we have up on the screen here, but we have Image Gently and Image Wisely. These are national programs to make sure we are using the right protocols. And with a 30-45 minute briefing of your radiology department within two to three weeks tell the story. This is an example of what is going on in America today. Just to know about some of these dose-reducing approaches and duplication of studies.

Michael Williams: After we had a conversation with you, Chuck, and Frank, we had a simultaneous event where we identified a patient event where we had a five-year-old who came to our hospital who we identified as having sequential ER visits to different hospitals. We totaled it up and [he] had seven abdominal CAT scans over his five-year history. I am not a radiologist, but my guess is that's going to be close to a lifetime [of] dose totals; but it's a lot of radiation, I'll put it that way. It became clear to us that there was no communication between our sister hospitals in our area, and so we did what I believe Dr. Henderson said in the movie this morning. We talked to the front-line staff; we took the information that Chuck and Frank had given us; and we then started removing the barriers to let them go to work. Our staff, on their own, identified ways they communicate with physicians; they met with vendors; they met with the people in the staff; they signed pledges to adapt to the Image Wisely campaign; as well as they took it to the ER all on their own without my knowledge. I got a call from a sister hospital CEO; they contacted other hospital radiology departments, asking them if they can set up a communication data line so that when a patient showed up at our ER, they could double-check to make sure what studies they'd already had. The line got set up before I even knew it happened. They took care of what needed to be done, and since that time we've identified many, many studies that have been completely eliminated prior to initiation, and have really reduced a significant number of pediatric studies that were not necessary. On top of that now our radiologists are involved; they have gone back to the 4 Ts. It's become "tell the truth to our patients." We now give our patients a card much like Steve talked about. This goes with their driver's license and on the back it has a log where it tells the facility, the exam, and the date. They can always take it with them wherever they go, and tells the studies they've had, how to get a hold of us, and the questions we ask – and we're from Texas, so we can only handle three questions. "Why do I need this exam? How will it improve my healthcare? Are there alternatives to this study?" But again, I was smart enough to get out of the way. Our front-line staff did the work, and it's been a wonderful success. It continues to grow and expand in terms of a model of what we can accomplish.

Charles Denham: And one of the things, does this cost money? The interesting thing is the entrepreneurship of your team, it didn't cost almost anything to put a bug on the screen of the sister hospital that isn't even part of your system, just a nearby hospital to allow to cross-check on CTs on kids and adults. It didn't need a data exchange, and it didn't need a $100-million system, it just needed to have the intentionality to reduce dose. Now we know also from the studies that when doctors own radiology equipment, they order four to seven times as many than the doctors that don't. So is there a motivation there? Absolutely. Is there a financial incentive there, and will that make the headlines? Absolutely. The reason we got into doing movies is nobody is telling the good guy story. Nobody is telling the role model of the good guys that are doing this kind of stuff. All you hear is the headlines of the avarice of the doctors [who] own the equipment, because that makes the headline; or the catastrophic accident that burned patients. I think we need to be telling these role model stories that actually leadership didn't cost anything. This doesn't cost very much money. It's just understanding what the five rights are. It's kind of fun, in that we interviewed three or four radiologists to go through the framework on the five rights, and we end up with the ONC Medical Director telling the best stories. So we put them in the movie. So, David, you've talked about imaging being kind of almost the locomotive to pull the EHR. Your thoughts?

David Hunt: Everyone knows in all the different specialties that radiology is really the nexus. So many … it's the intersection where so many things cross; and the radiologist in many communities, they really know, they have a good sense of the hub of what's going on because everyone gets some type of X-ray. They know the specialist, they know everything. One of the things that we found is that the radiology department is an opportunity to actually afford some of the best health information exchange, whether you do it with a dedicated line, or an HIE, or just with a telephone. The information that can be garnered

from just allowing the radiologist to exchange information about what's going on with the patient is absolutely profound.

Charles Denham: Trisha, your experience … What we didn't tell about Tricia is that she's really been able to have a voice with patient advocates and create a system and a way for advocates to really help patients and families as they go through their trajectory of care. I've taken advantage of this network three times to find people [who] would help patients along the way. The five rights are impossible unless you are an engaged patient; or if you can't be an engaged patient, have somebody advocate for you because there's no way. One of the things we've learned about chronic illness: if you're over 65 and you have 5 chronic illnesses, you'll have 35 doctor visits, 50 prescriptions, and you'll be treated by 14 doctors in America. Do you really think they all got the imaging studies and the laboratory tests? Is there any way, any IT system could keep up with all that unless it was totally integrated like Mayo Clinic or some totally integrated organization? No way; but there's one way, and as a cancer doctor, the way I got the records from A to B to Z was with the patient and the family. You've got to trust them to trust you in order to get that to the next step. Until we are completely wired, we have to do that. Just like your team came up with a really simple solution. So, Trisha, whatever you'd like to comment on … but I think that you built a network of people that actually can be an assist to people [who] can't be fully engaged on their behalf. They might be older or have some . . .

Trisha Torrey: Right. Here are a couple of things I would like to comment on to then interface with the things like the advocates, and that is I love shared decision making. I've written about shared decision making. I know people who are doing that as a living now – as shared decision making is private advocates. The problem with being a patient and engaging in shared decision making with a doctor who is recommending we do these things, is that the minute you question the doctor who is recommending that you do these things, in some doctor's eyes you destroyed the relationship. And how can you then move forward in that trusting relationship? The minute you have some kind of a financial stake in do you own this machine? That's the end of the relationship. And so even though I love the idea, it's an impractical idea in most cases. I love hearing that there are people, and I agree with you, Chuck, we have to tell the good stories. I usually hear the bad stories, and I love hearing the good stories. But the reality of the world is most of the time it is not necessarily, it's more about you can get reimbursed for that if we order that scan. So let's now take that to somebody independent. So the organization I started is called ADVOConnection. You can look it up, advoconnection.com. If you need a private advocate to accompany you to the doctor's, to sit by your bedside in the hospital, whatever it is. Right now, we have about 300 active advocates across the United States and Canada. I support them in their business endeavors because guess what? Most of them are nurses who burned out in the hospital, are burned out with doctors, and they want to do something entrepreneurial and they don't understand the business. So that's actually the thing I do. But they are an independent voice, and so to the extent that somebody can have an independent person asking these important questions because they are vastly important. Otherwise, you destroy the relationship with the doctor, and I don't know how you overcome that. It's not really so simple as going down the street, even though that is the right answer.

Michael Henderson: A couple of quick comments. First, one of the people [who] came along when I started was my radiologist, Mark Sam. You know how radiologists are always in the basement where no one really looks? Well, it rapidly became one of the best and the most functional, quality safety parts in the hospital under his leadership. So I had a radiologist who really got on board. In this particular state, I think the whole issue of the necessary studies is huge. What we have done is we take a problem … our radiologist sits there reading scans all day, every day from our triage, and cases coming in. Are these the right studies for this patient? If there are questions, calling the referring docs saying, "What do you really want? What are you trying to get at?" So we pull some out of the generating part of the triaging part for effectiveness. Along with that is optimizing the studies. I'm no techie in this field who've got 60 scanners across the health system. They're all different in how they're set up. Are they really all set for their optimum settings – minimize, and what are the protocols, standardizing how we do all the scans. I see the data now coming through. It is dramatic; the dosing has come down, how the number of studies looks a lot more appropriate. These little bits that have built into a program that looks at the appropriate utilization and referral patterns, and then the way the scans are getting done. I think it's just building these component bits, so when you put this out, I thought, "Oh, how do we fit in the five rights as we move on

through this?" I think it's a great program, and I think we all should be building on the steps that you've outlined.

Charles Denham: I know Ed Kelley's not on our panel, but we're working closely with the World Health Organization, and we know around the world we have the same identical issue, we have the same issue with laboratory. If we do believe that we have 30% waste, conservatively, in the system, and we have to convert that 30% of $2.8 trillion dollars into value for our own nation and then the nations across the world, this is a great place to start. Because the other part that we didn't mention – and David, you and I are radiation oncologists – is the "incidentaloma." Now, the "incidentaloma" is a term that we always use when we say it's a finding that is a mass, and we are not sure what it is, but now we are utter bound or we're malpractice protection-bound to do a whole set of new tests for something that we didn't need to get in the first place. That isn't even factored into many of the calculations because – and we're doing it now. We're actually mapping the trajectories of the "incidentaloma," and say, "Well, what does that cost?" And once you start to change reimbursement so that you're paying for a whole population, no longer do you want that. You won't have to ask the question, Trisha, of "do you own the equipment?" You might ask the question, "I hope you own the equipment because I know you're not going to overuse it because it's going to cost you now, right?" The whole thing is going to turn around completely if this ACO or whatever term is used. But David, you and I, dealing with cancer, are probably one of the top referrers for high-tech studies for sequential studies to monitor the care that we deliver. I retired a long time ago, but there's a huge opportunity, isn't there, to even better the care that we deliver even if we order the same number of studies? But if we do the 5 Rights, aren't we getting better care out of the dollar we spend?

David Parda: Absolutely. More focused care is always better care. We have to deal with the humbling reality that every test that we order is not 100%. There are false positives, there are false negatives, there are adverse consequences to it; and oftentimes patients – and the population at large – really do think that these tests are either "yes" or "no." There are a lot of gray areas with these tests, and radiation was only discovered a little more than 100 years ago, and it is amazing the progress that's being made with the visualization capabilities. We are seeing things at the 2- and 3-millimeter level that really are nothing, and it causes quite a lot of consternation mainly for the patient, but you're mobilizing a lot of unnecessary health resources for sure.

Charles Denham: So as we round out our panel, we'll go to Dr. McDowell, who is first up now, and he was in the movie that you all saw. Now I've known Dr. McDowell for a long time, and he's a four-time specialist. He just kept adding to his credentials, but he is a urologic oncologist, an anesthesiologist, a pain doctor, and really can help us really understand this. As we talked in the movie – for those who haven't seen it, or will see it on Discovery – that pain is something everybody owns and nobody owns. It's also an area of huge overuse of imaging studies. So we talked about the fact that the physicians [who] own the equipment, they order four to seven times as much. We also know the Choosing Wisely program, which I mentioned during the day – I'm very proud of physicians in society standing up and saying, "We're doing too much testing." I can't tell you as a recovering optimist what that did for me. I got on the phone; I called everybody and said, "Can you believe it?" We finally have physician leadership groups that got on the right side of this curve in patient safety and quality, and back pain was one of the areas. So you're our anchor person in the area … is it not true that we could … if we practice the 5 rights that we would reduce overuse, but then we also … there's underuse. We can't be kind of vigilantes and say that every study is an excessive study. When we found out that 88% of all of the orders – this is on 20,000 a day for 35 million covered lives – 88% of the high-tech studies are ordered by doctors [who] order [fewer] than five a month. They can't possibly know the indications. You and I were ordering how many in a day? We knew the indications, and we were still catching up on what we would do. So talk about pain, overuse, underuse, and this issue, Gladstone, because it is a huge opportunity for the nation to cut our costs and our waste.

Gladstone McDowell, II: Sure. Thank you, Chuck. I am very happy to be here. This is a very great forum that you've convened. I just smile listening to my fellow family. I see so much of this every single day. There is a segment of the non-pain population that will not feel pain … in a back-pain patient unless they have an MRI because this diminishes the need to talk to patients. Now there's a concept. And also think. Oftentimes we are paid much more to do than to think. There is overuse of imaging studies. I think

imaging studies should be ordered to either confirm or not confirm whatever your clinical impression is. Somebody with back pain, you can figure whether they have a lumbar radiculopathy without an MRI. You can treat them, and if they don't respond then you look for pathology. But you're right, a lot of these MRIs are owned by physicians. The other big problem is that we have a communication gap, because oftentimes a busy practitioner will say, "Well, you had an MRI, but we've called the radiology department, we've called the hospital, we can't get anybody to fax it so we'll just order another one." Anybody who is in clinical practice knows that this is an issue. This comes to the 1,800-pound gorilla that we've all been dancing around, with health information technology, is that they don't talk to each other. My system doesn't talk to your system. A patient is admitted to the hospital and has a study, and every patient assumes that all the information from their hospitalization, including their lab work and their x-rays, were sent to me when they come back to see me. What we need is an integrated health information system-wide, which I know is difficult to do. But people say that it is impossible, but I say, "Rubbish." Racing did it. Aviation did it. I think we can do it. Everybody reports taxes on the same IRS form, so I think that we should get health information systems together so that we can talk to each other. The Cleveland Clinic has been a model for this; Jim Bagian and the VA system. I can get on a VA computer and I can see a test that was done in Tuscaloosa. I can actually read the X-ray. I actually contracted the VA system last year to introduce them to some advance pain management techniques in one of the clinics, and I was really impressed about that. But we don't have that in our everyday hospitals, and patients don't know this. They just assume that we know exactly what has been done. So I'd like the 5 rights.

Charles Denham: So, Gladstone, what you brought up is a big issue. Time is done for this panel, but the one issue you brought up that is really important about the 5 rights: everyone wants to point at malpractice as the overuse problem. I will tell you it is defensive medicine, but in the research we've done, it's defense of your volume-driven practice. You can't afford to pay somebody to go find a prior study, so you order the study. It's not defensive medicine because of malpractice; it's defending a high volume environment in your clinic. When incentive models change, just watch how fast the ordering goes down. When you start … if, Cleveland Clinic, if you had to start paying for every study that a doctor did for [his] own convenience, all of a sudden, it would turn around. And I think that's where we need to be responsible, and I am very proud, for once, I am so proud of the physician groups that got together on Choosing Wisely because they were so specific, they were focused, and they stood up and said we need to take care of our own industry. To me, I think that's great leadership. I think these are great leaders. Thank you for this panel.