CHIEF MEDICAL OFFICER SPOTLIGHT

Benjamin W. Strong, MD

Dr. Strong is Chief Medical Officer at vRad (Virtual Radiologic), the leading national teleradiology services and telemedicine company with 500+ U.S. board-certified and eligible physicians, the majority are subspeciality trained. He is licensed to practice in all 50 U.S. states and holds credentials to read in a number of foreign countries. He is a member of the ACR Committee on Emergency Radiology and a Sanctioned Clinical Lecturer on Trauma and Emergency Radiology for the American Institute for Radiologic Pathology (AIRP). In 2014, Dr. Strong was chosen the winner of the "Top People to Watch in Radiology" by *Diagnostic Imaging,* a leading online community for medical imaging professionals.

How did you get into medicine?

While studying chemistry and physics as an undergraduate and suffering from a resulting lack of motivation, I thankfully stumbled on a class in human anatomy, which inspired and informed all my further efforts to become a doctor. Anatomy dissection offered a practical, visible and physical manifestation of textbook learning that I think is unequaled in the scientific world. After becoming a teacher's assistant for five more semesters and participating in more than 100 human dissections, I set off for medical school determined to become a surgeon. Ultimately, however, after a circuitous course I decided to focus on radiology as the single best way to put anatomic knowledge to practical use.

What made you focus on radiology?

After observing my first procedure, a thyroidectomy, I quickly discovered it was the interacting with the whole human body and its many systems that I loved – seeing the many abnormalities one body may demonstrate and combining them into a unifying diagnosis. At the time radiology did not seem to offer that as much as it did in later years, and so I initially went the route of Internal Medicine and Emergency Medicine.

In the late 1990s and early 2000s diagnostic technology was developing, and I got excited about early multi-slice CTs, PET/CTs and MRI and how these tests allowed you to see completely inside the patient and evaluate multiple organ systems. I switched specialties from Internal Medicine and Emergency Medicine once it became clear that the challenge I sought was a steady, fast-paced flow of diagnostic puzzles that clinical medicine could not provide. Ultimately radiology also appealed to my love of technology and interface efficiencies – something I retain from my preteen years in the arcade.

How did you connect with *v*Rad?

Before *v*Rad, I worked in a private practice that was using technology in innovative ways. They had a system where we could share studies across healthcare facilities, and I had a workstation in my home. I could take a call at midnight from one of my partners, look at a study and offer my opinion – it was perfectly functional. Except none of the radiologists could regularly work from home or other convenient locations.

Every morning I got up, showered, dressed, and drove across town to sit in an imaging center or facility to review studies that were coming from all over the eastern part of Washington state. They moved me from one site to another to different workstations that were not customized and lacked my own personal computer settings/preferences and input devices. I had to bring along my favorite wireless mouse to help me get through the day. It was so illogical: If they could move all of these images to different facilities, why not just send the images to the one computer at my home? If I could work from just one workstation, I could develop a routine, insulate myself from distraction and interruption, and set up a customized system that would allow me to be efficient. It was clear that I would be more productive and accurate from a single centralized location.

What about IR work? You can't do that from home.

Of course, but for me, dealing with multiple interruptions while juggling diagnostic readings and IR procedures just didn't sit well. I got concerned about the quality of both my diagnostic and interventional work. I saw IR and diagnostics as two very different skillsets that should technically be treated as different specialties, and I decided my real strength lay in diagnostic work. I had private practice partners who worked with me to split our workloads along these lines and that was successful, but those were informal arrangements, and the practice as a whole did not embrace this philosophy.

I joined 𝒱Rad in July 2004 as their 30th radiologist and it was the answer to my prayers. I could standardize my workflow, insulate myself from distractions, customize my reading environment for my own style, and I didn't need to drive across town anymore. 𝒱Rad hired me as one of the first specialty readers doing daytime work, which was unique back then. We started doing the first daytime readings as well as daytime finals, and it was exciting to see our practice grow. We were overwhelmed pretty quickly by that growth, but had a great espirit de corps on that service. I remember that early in my time with 𝒱Rad I worked every single day for 15 consecutive months, and many of the others had similar schedules.

How were the early days?

I was ready to read on my first day, and I sat in front of a very sparse worklist. I quickly realized that worklist wasn't going to fill itself, and so I committed to communicating the obvious benefits of teleradiology to the radiology community. I made myself available to our sales force and was on the road a lot. Traveling with the sales team helped me learn the business from the bottom up, and what I learned on the road I brought back to help the practice. I began collaborating with our IT team to develop what is now the 𝒱Rad integrated platform. My clinical background helped – and it also helped that I had been an ED physician – because I understood what clients wanted, and I could translate and communicate it. And it worked. By 2006, after visiting hundreds of facilities, my worklist was more than full. From my workstation, I can read any study at any time of day from anywhere in the country and many other parts of the world.

How much reading do you still do in your role as CMO?

About 20 percent of my time is spent reading, but it has a different character now than it did in the early days. I now read the unique, uncommon or challenging cases – PET scans, virtual CT colonographies, coronary CTAs, or MR spectroscopies. I do gap coverage at night when needed. I also work with our Quality Assurance (QA) Committee and contribute over-reads for our stringent QA program, which integrates peer review and quality metrics monitoring. We use our QA data for ongoing professional performance evaluations and focused professional performance evaluations so that we maintain the highest professional standards for our radiologists.

What do you think the future holds for your specialty?

Radiology must do two things to prepare for the future. The first is to embrace analytics and the strategic use of data to show the value radiology provides outside of the reading room. By having access to – and an understanding of – your data, you gain insight and understand where your distribution and workflow weaknesses lie. Once you understand it, you can control it, and once you can control it, you can improve it. That is the benefit of embracing and leveraging radiology analytics.

The second is that we must make better use of available technology to enhance our workflow and remove elements not directly related to interpreting a diagnostic image. We must use technology to do things like guaranteeing the presence of prior studies, prior reports, presenting symptoms, or lab values and other clinical data points. Creating a seamless integrated workflow, and the communications process to support that workflow, is the best way to leverage technology to fill the gaps in the clinical picture. It should be easier than most make it out to be, and I expect it will prove to be just that – easy – if the right people get involved.

What is your greatest professional accomplishment?

It is believing in the vision of, and being an advocate for, teleradiology as a viable, valuable clinical specialty. Early on, many past teachers and private-practice colleagues told me it would never work and never be embraced. But when I first saw an X-ray on a computer screen in 1996 during my first year of residency, it was immediately obvious to me that this was the direction things were heading. So watching and being directly involved in the acceptance and adoption of teleradiology as a practice model is something that is quite satisfying.

It can be daunting to hold your ground when something is untested and people view your mission as uncertain at best, frivolous at worst. But when I came to 𝒱Rad, there were many other people who wanted this to succeed, and I worked with them to create the early iterations of our radiology workflow platform and operations center. Seeing the clinical perspective deeply ingrained in these technical elements is quite satisfying as well.

What makes 𝒱Rad different as a practice?

There are many factors, but it boils down to two. Firstly, 𝒱Rad understands intimately the business of teleradiology. In fact, I would say 𝒱Rad created the modern teleradiology practice. The solution to any problem can be technology-based once you ask the right questions and determine exactly what you are reaching for. Once the thinking is in place, you can build a system that reliably automates the process. 𝒱Rad built such a system from the ground up, which, in its simplest form, gets the right image to the right radiologist at the right time so they can make a diagnosis, get that diagnosis back to the referring physician, and treat a patient as quickly as possible.

Secondly, 𝒱Rad is a born-and-bred Midwestern institution. They are down-to-earth people who say what they think, do what they say, and are motivated to provide a quality service for a reasonable price. As a Midwesterner myself, I have always valued these characteristics and I have definitely found my ethical and professional counterpart in 𝒱Rad.

What do you want referring physicians to know about 𝒱Rad?

There are several things. I want them to know that more than 70 percent of our studies are over-read by our clients the next day. So we have a vested interest in ensuring high levels of quality, diagnostic accuracy and accountability. Through this systematic process, we objectively validate the accuracy rate of our diagnostic interpretations, so as CMO I am confident in the quality of our radiologists.

For us, quality is not some multi-headed hydra that is hard to define. Such thinking, writing and speaking obscures the issue and allows people to deemphasize the importance of interpretative accuracy. For us, it is simple: Was there a bleed on the CT scan and did you report it or not? Did you identify and record any significant findings that would alter the care of the patient – yes or no? To apply equations, disclaimers and subjective dismissals to these objective data points is to distract from the true purpose and potential gains of a QA process.

𝒱Rad wants to be seen as a valued partner, and we believe that begins with diagnostic accuracy. We want more engagement with referring physicians so we can get more information about the patient – get additional history or have a conversation with the referring physicians to find out their specific concerns or the particulars of a given patient's presentation. To facilitate this aim, we have proven systems around communicating critical findings that show 𝒱Rad radiologists are as invested and accountable in the care and treatment of patients as any consultant can be.

What do you want patients to know?

I want them to know we are a radiology practice based in the U.S. and all of our doctors are U.S.-trained and board certified. They have been through a rigorous testing and evaluation process to read for us and they are under constant and vigilant supervision. We want the best radiologists we can find because we know there are people behind those images. For them, every second counts. The sooner I can get a diagnosis back, the sooner that person – a mother or father, son or daughter, a friend or loved one – will get the treatment and care they need and deserve. We take that responsibility seriously at 𝒱Rad.

I also want them to know that, as a radiologist, I am happy to talk to patients about their studies. And they must understand that, as a radiologist, I only have one image of them. I don't have the entire picture – no radiologist does. That total picture is best seen by the doctor or oncologist that oversees their care regularly and knows them well. Radiologists help most by being part of a team, and radiologists can do that best by objectively interpreting the images in front of them. Radiology is only one part in a larger process of the patient's care, and that process is best managed by their primary care physician.

But rest assured, that communication between our radiologists and their physicians is our top priority. If there is something their doctor needs to know, we contact them immediately. We have a 24/7 Operations Center just outside Minneapolis that ensures ongoing and rapid communication and contact.

Any closing thoughts?

I would like to think that the technology innovations we have applied to radiology workflow are just the beginning of a larger trend. I sincerely hope that real efforts to integrate medical records, reporting and all other types of patient information pick up momentum – to date they have been sadly lacking. The fragmentation of patient information is the single greatest obstacle to quality patient care that our country faces today, and I believe we have provided a prototype that can be applied to multiple specialties and in larger systems. The potential effect on the quality of care is so great as to be unquantifiable.

Learn more about us. Contact 𝒱Rad today at 800.737.0610 or go to www.vrad.com.

Talk To Us About:

RADIOLOGY SERVICES

ANALYTICS & BENCHMARKING

QUALITY ASSURANCE

WEBINARS & EDUCATION

PARTNERSHIPS

CONTACT US