

FROM THE EDITOR

BEAM ME UP, SCOTTY!!

Joseph Conigliaro, MD, MPH, Editor in Chief, SGIM Forum

“I’m a doctor, not an *engineer*.”

—Dr. McCoy, *Star Trek: The Original Series*

This month’s SGIM Forum is dedicated to the subject of point-of-care ultrasound (POCUS) and how internists teach and use it. I don’t know how to use an ultrasound. But I do know how to use a stethoscope! I have often thought that the stethoscope was the ultrasound of my age or at least the age of providers who were around when it was introduced. The stethoscope was invented in Paris, France, in 1816 by René Laennec^{1,2} because he was not comfortable placing his ear directly onto a woman’s chest to listen to her heart. One hundred and sixty-eight years later, in fall 1984, I bought my first stethoscope as a second-year medical student. I remember agonizing over whether I should pay the extra money for the Littman “Cardiology,”[®] or the Hewlett Packard Sprague Rappaport[®] (yes, Hewlett Packard made stethoscopes back then). I opted for the “Cardiology” and still use it today, 35 years later.

In many ways, the stethoscope symbolizes our craft and has become an iconic symbol of how we examine patients. It was immortalized by Norman Rockwell’s “Doctor and Doll” printed on the March 9, 1929 cover of *The Saturday Evening Post*. We internists use it to listen to the sounds made by the heart, lungs, or intestines as well as blood flow in arteries and veins. We can discern if a heart valve is stenotic or regurgitant, if the lungs are fluid filled, or if the bronchi spasmodic. It’s even a fashion statement.

The first use of ultrasound in the medical field occurred in the early 1940s by Dr. Karl Theodore Dussik in Austria and has evolved as a ubiquitous tool for healthcare providers.³ During my training, I remember large bulky units with cathode ray monitors attached to VCRs used to examine and record the ultrasound images of human organs, including the heart, the uterus, and abdomen.

Over the last 10-20 years, we have seen the evolution of electronic devices becoming more powerful, more affordable, and small enough for personal use. How much more powerful is my iPhone than the first desktop computer I bought back in 1995? This explosion in miniaturization and increase in power of everyday items has also occurred with ultrasound technology. As a result, we have seen a plethora of small or hand-held devices that

are affordable enough for any physician to use. Like the stethoscope, the ultrasound has become an essential part of medical training. Many medical school and residency training programs have required courses in ultrasound use and incorporate ultrasound into other areas of education. Societies, including SGIM and SHM, offer courses and workshops in ultrasound so those of us not part of the current wave may get up to speed. Indeed, the standard of care now is to use ultrasound to determine where to put the paracentesis needle on the abdomen or thoracentesis needle on the chest wall instead of using a stethoscope or an even more old school method, percussing it out with your fingers.

So, has the ultrasound replaced the stethoscope as the iconic tool for physicians? I don’t think so. But just like the medical tricorder was the essential tool that Dr. Leonard “Bones” McCoy used in *Star Trek* (come to think of it I never saw him use a stethoscope), we may soon see the day where providers all have an iPhone sized unit in our pockets to record and evaluate images that are automatically uploaded to the cloud and part of the medical record.

This issue covers medical education around POCUS including how we teach it as well as how it can augment teaching about the physical exam. We also cover advice for general internists when acquiring equipment. A Morning Report case illustrates how POCUS helps hone the physical exam. Finally, Dr. Ankita Sagar lays out the important issues around women and healthcare access that we need to know about when we cast our vote in the 2020 elections.

Live long and prosper!

References

1. Laennec R. *De l’auscultation médiate ou traité du diagnostic des maladies des poumon et du coeur*. Paris: Brosson & Chaudé, 1819.
2. Laennec RTH, Forbes J, Sir. *A Treatise on the Diseases of the Chest and on Mediate Auscultation*. New York: Samuel Wood & Sons; Philadelphia: Desilver, Thomas & Co., 1835.
3. BMUS. The history of ultrasound. www.bmus.org/about-ultrasound/history-of-ultrasound. Accessed November 15, 2019.