

# The dean in the ICU



Illustration by Claire Gilmore

When the doctor becomes the patient

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I was 62-years-old and the date was March 17, 2017. I remember that date quite well. It was not only St. Patrick's Day, but it was also Match Day, when graduating medical school seniors find out where they would be doing residency training.

Match Day is always a huge celebration. It includes a band, the students invite their significant others and families, and as the envelopes are opened, balloons drop from the ceiling. I was involved in all aspects of the day and was selected by the students to be one of the faculty who handed out the envelopes that tell them where they will be spending the next three to seven years of their life.

I felt fine and really enjoyed the ceremony. Mid-afternoon, however, I noticed some muscle aches (partially responsive to some analgesics), but no other symptoms.

That night, there was a dinner program at the Biltmore Hotel in Providence to kick off a weekend symposium at the medical school entitled "The Patient, the Practitioner, and the Computer" with the theme of how the electronic health record has impacted communication between patients and physicians. The symposium was the brainchild of Betsy Toll. Betsy wrote an opinion piece that was published in 2012 in the *Journal of the American Medical Association* entitled "The Cost of Technology."<sup>1</sup> It includes a drawing by a seven-year-old girl and depicts her seated on the examination table, with her sister and mother nearby. In the drawing, the doctor sits staring at the computer, his back to the patient. Even children understand the issues with the electronic health record.

As one of the people who supported the symposium, Betsy asked me to give some opening remarks. I took the liberty of talking about a personal experience I had with the electronic health record in 2012, about five years earlier. At the time, I was Chair of the Department of Medicine at a teaching hospital in New Jersey and I had been diagnosed with diffuse large B-cell lymphoma. I was very sick and needed to be urgently admitted to my hospital for chemotherapy. This was the week that my hospital was rolling out the electronic health record. I received all of the correct medications, and there were no errors in my care. I also responded well to the chemotherapy.

After discharge, I decided to review my hospital chart. On my initial history, there was the question—"pregnancy?" The box checked was "patient denies." Now that is an issue

on two levels. The first is the obvious one, but the second is that no one actually asked me if I was pregnant. This highlights a major issue with the electronic health record—just checking the boxes.

### March 17, 2017

About 30 minutes after my remarks and during the keynote address, I began to feel light-headed, diaphoretic, and a little nauseated. I was feeling like I was about to pass out so hurried out of the banquet hall and into the lobby, where I fell to the floor. I thought this was some sort of vasovagal response, but not sure to what. People attending the keynote noticed something was wrong as a number of the doctors followed me out of the room. The Chair of Family Medicine, the Director of the Cancer Center, and several others began to attend to me. I began to feel better as I lay there with my feet propped up on a chair. My pulse was fast and difficult to palpate, but I had no other symptoms. The Chair of Family Medicine thought it might be cardiac, and the Director of the Cancer Center convinced me that I should be taken to the emergency room (ER). Fire Rescue was called and I was loaded into the ambulance.

When I arrived in the ER at Rhode Island Hospital, I was feeling fine, but still with some generalized muscle aches—no headache, stiff neck, chest pain, cough, shortness of breath, or gastrointestinal or genitourinary symptoms. My only medications were aspirin and valsartan for hypertension. I am allergic to kiwi, but had not had any since 1989. No one asked me about drug use or sexual activity, probably because they were afraid about what I might say—after all, I was a teenager in the late 1960s. I had received my yearly influenza vaccine the previous November, and had also received the vaccines to prevent pneumococcal infection.

My temperature was 99.9 degrees, heart rate 101 beats per minute, respiratory rate 14 breaths/minute, blood pressure (BP) 111/72 mmHg, and pulse oximetry of 99 percent on room air—all essentially normal, although my pulse was a little faster than usual. My lungs were clear and there was nothing abnormal on exam. My labs were pretty normal although my white blood cell (WBC) count was 16,200/mm<sup>3</sup> possibly suggesting a bacterial infection. Chest radiograph was normal, and my EKG was also normal except for sinus tachycardia. The ER attending came to see me, indicating that there did not seem to be any obvious source of bacterial infection or anything else. I told her, however, that I still didn't feel quite normal, and after some discussion she decided to admit me with plans to be monitored and recheck my labs in the morning. She

started intravenous (IV) fluids, given my tachycardia, and said there did not seem to be any reason for administration of antimicrobial therapy. As an infectious diseases specialist, I concurred.

The resident was called to do my history and exam—he also did not ask about any drug use or take a sexual history—and I was left on the stretcher in the ER hooked up to the monitor and wearing my blood pressure cuff that would intermittently inflate and deflate. The staff said the hospital was near capacity and I might be waiting awhile for a bed. By this time, it was midnight and I tried to fall asleep on the stretcher.

About 1:30 a.m., I awoke and looked toward the monitor—my pulse was 130 beats per minute and my BP was dangerously low at 75/50 mmHg. Temperature was now 101.6 degrees, and I was short of breath. The oxygen concentration in my blood had decreased to 92 percent. I called for the nurse to get the ER attending, who substantially increased the rate of normal saline and ordered a STAT CT of the chest, abdomen, and pelvis. After taking blood cultures, he also started antimicrobials—vancomycin and piperacillin/tazobactam, which covers almost all bacteria that one needs to be concerned about.

The CT scan revealed a new right lower lobe pneumonia, but was otherwise normal. After four liters of intravenous fluid, my BP was unchanged, still dangerously low. I asked them to add a third antibiotic, azithromycin which should be given to patients with pneumonia from the community, which they did.

I was then sent to the critical care area of the ER where I met a new group of physicians. The resident placed a central line in my right internal jugular vein, and added norepinephrine (levophed) to raise my blood pressure. I was then sent to the intensive care unit (ICU) because I was in septic shock.

I had my cell phone with me and inadvertently dialed a friend in the wee hours of the morning. She answered and I said I could not talk, as I was in the ER and the team was starting the levophed. She said okay and went back to sleep, thinking she was dreaming.

By the time I reached the ICU, it was 6 a.m., and the ICU staff worked to get me situated. New labs were drawn. My oxygen saturation was dropping so the administration of oxygen was increased.

When my labs returned, I asked the nurse for the results—WBC was now 2,600/mm<sup>3</sup>. I remember saying that was not good, meaning that my own immune system was being overwhelmed and not doing a great job in helping to control my infection. My breathing was becoming more

labored, and I was placed on high flow oxygen. I remember saying to my nurse that I thought I was likely going to be intubated. She then said something to me that has stayed with me to this day—she said “Allan, I have been watching people breathe for 27 years and there are many other things we can do first.”

I then was placed on bilevel positive airway pressure (BIPAP), which helped, was quite uncomfortable, but did the trick. By mid-day, I had received a total of nine liters of normal saline and my hands were visibly swollen—fortunately the norepinephrine was maintaining my blood pressure, but it could not be stopped. The ICU attending talked to me about starting corticosteroids for my pneumonia. He said he believed the data indicated that they are beneficial. I told him to do what he felt was best and tried not to think about the conflicting literature on this topic.

The infectious diseases service was consulted, probably because I was a Dean and must have something more exotic than a simple community-acquired pneumonia. They did not make any changes in my antibiotics and asked if that was okay with me. I concurred.

The next day, my WBC count was 8,100/mm<sup>3</sup> with 40 percent bands and platelets a little lower (109,000/mm<sup>3</sup>). Still, not good. I really wanted my WBC count to be higher to show I was combating the infection. All of my blood cultures were negative so far, so the exact cause of the pneumonia and sepsis had not yet been identified.

### Egophony

The residents were in early each day to see me. I had decreased breath sounds and crackles at the right base on chest examination.

Since I am an educator, I suggested that they should check me for egophony, and then proceeded to tell them how egophony was discovered. Egophony is Greek for “the voice of the goat,” and is the goat-like and bleating sound produced by the patient’s voice when heard over an area of lung consolidation. E-to-A changes are a more recent variant of egophony, so I asked them how this was first determined. How did anyone ever figure out that when the stethoscope is placed on the chest over an area of pneumonia, and the patient says “e”, the sound comes out “a”? Why not say “a,” or “o,” or “u”?

Whenever questions like this come up in the history of medicine there are usually three major requirements: a British missionary, a far-flung land, and lots of serendipity.<sup>2</sup> In this case, there was a British missionary named Shibley, who in the 1920s was practicing missionary medicine in China. Part of his job consisted of auscultating

chests while patients were saying “one, two, three.” Since the patients were Chinese, the Mandarin dialect for the number one was pronounced “e” in the province where Shibley was working. That “e” turned into an “a” whenever there was pneumonia. Shibley reported this finding in the *Chinese Medical Journal* in 1922.

The residents listened intently as I told them about this, but they never checked me for egophony. I don’t think it had much impact on them as they were probably thinking of the other sick ICU patients they needed to see and were ready to move on.

### Lots of visitors

During my time in the ICU, people started coming to see me—the Dean of the medical school stopped by several times, as well as the Chair, Vice Chair, Program Director and Associate Program Director of Internal Medicine. There were friends from many departments, especially infectious diseases, and from the medical school, even people from the conference. I was happy they all stopped by, but it was hard to rest.

The weekend was over and my new attending physician told me that no one, except family and my care team, was now going to be allowed to visit. I needed to rest. She personally contacted the Dean and others, and said they should stay away, but I was okay if she wanted to let them know how I was doing. A sign was placed on my door—“NO VISITORS EXCEPT FAMILY.” They offered to hide my identity as a patient, but I did not think it was necessary.

Sleeping at night was very difficult and the ICU bed was uncomfortable. I don’t like to take medications, but the resident convinced me to take some zolpidem (Ambien) at night. I was sleeping so badly that I asked him for the hallucinogenic dose.

Over the next several days, I started feeling a little better and the team was able to get me off BIPAP and then wean off the norepinephrine after three days. However, I was still short of breath, and now had bilateral crackles about half the way up in my lungs—the result of being nine liters positive—so a diuretic (IV furosemide) was begun, and it worked over the next several days.

Given that all of my cultures and other tests to try to determine an etiology were negative, my antimicrobial therapy was narrowed to the oral agent levofloxacin. When I teach the students and residents about pneumonia, I often joke that no one should go through life without getting at least one dose of levofloxacin—I was now getting mine. With my blood pressure fine after being off

norepinephrine for several days, I wanted the central line out of my neck, and they obliged.

On day seven in the ICU, I was doing better and thought I might be transferred out later that day.

The resident stopped by early in the morning, confirmed my improved status, and said that the team would be rounding on me later that morning as they had many other sick patients to see first—that sounded fine to me. A new ICU attending was covering that day. He came in to see me about 15 minutes after the resident. He said he would be formally rounding on me later, but wanted to ask me a question. He said “Allan, I have a patient in the next bed...” I won’t get into more details, but perhaps his note on that patient later that day reflected the input from the patient in bed 18.

### Getting better

After one week in the ICU, I was transferred to the general medicine unit on oral levofloxacin where a new intern saw me and did her own history. She asked me about drug use and sexual activity, but she had been one of our Brown medical students and knows I would not have liked it if she were not complete.

Over the next few days, I began ambulating more and was able to maintain an oxygen saturation of 95 percent without oxygen. That was my cue to get out of the hospital and the attending agreed.

Infectious diseases had signed off one day after the levofloxacin was started. I actually told them they could stop coming by as I could handle it from that point on. Pulmonary was still stopping by. On my day of discharge, they offered to follow me as outpatient but, as they noted in their note that day, I politely declined.

The etiology of my pneumonia and septic shock was never determined. However, I am sure I had pneumococcal sepsis. In my mind, a classic presentation!

### Reflections

Looking back and reflecting on my experiences as a patient in the ICU, there was much that I learned. These are my top five reflections:

1. With all due respect to everyone else, and acknowledging that the approach to a patient’s care is a team effort, the nurses are the most important people in the hospital. They spent the most time with me and gave me great care, especially in the ICU. The nurses are the heart and soul of any hospital. They ensured that throughout this difficult experience I was able to maintain my dignity.

2. The hospital chart is not always accurate. Of course, I reviewed my chart. There are a few inaccurate dates that got carried over, like that I had lymphoma in 2002 instead of 2012; that I was on hydrocodone-acetaminophen as a current medication (I think that was prescribed to me after an ER visit a year earlier for some knee tendinitis, although I never had the prescription filled so I never took any doses); and there seemed to be much copying and pasting. Also, there was a note from the dietitian that I had a cholecystectomy in 1999—as far as I know, I still have my gall bladder—but I did have a vasectomy that year. Well, I guess they were both “-ectomies.”

However, in almost every description of me, I was noted to be a “pleasant” 62-year-old gentleman. That made me happy, and I think that was accurate.

3. Recovery from a serious illness takes a long time. A friend of mine, Henry Masur who is head of critical care at the National Institutes of Health, sent me a note during my hospitalization. He made several important points, including that physical rehabilitation is a lot harder than it appears in terms of returning to the original state of activity. He suggested a physical therapist and taking a professional approach to regaining strength and endurance.

I did not think it would take months, but he was right. I should have known this because for even minor activities in the ICU, I needed assistance. I needed help just sitting up in bed so folks could listen to my chest, and I needed two people to pull me up in bed. For weeks, doing almost all activities was a strain and quite stressful. Once I got home, I wanted to get out and went out food shopping with my daughter—my shoelace was untied and I needed her to tie it for me. However, I decided not get professional rehabilitation, although it was offered, and I never used a walker that was given to me at discharge.

Henry’s second point was that cognitive abilities take weeks or months to recover. I did not initially believe that either. I was awake and alert throughout my hospitalization, although almost certainly had periods of hypotension and hypoxemia. I was not back to normal for about three to four months. Fortunately, because I am a Dean, I have a job that does not require intact cognition. Perhaps I was even better at my job. Of course, I decided not to do any patient care until I was ready.

4. Illness has a significant impact on others. This was my major concern during my hospitalization, and

relates primarily to my wife’s illness. About 15 years earlier, she was diagnosed with idiopathic cerebellar degeneration, which has progressed leaving her wheelchair-dependent. On top of that, she had multiple strokes over the prior three years which made the situation worse. One month before my illness, she spent weeks in the hospital and then in a rehabilitation facility after her fourth stroke and the complication of bilateral deep venous thromboses. I am her primary caregiver and needed to spend my first day in the ICU arranging for extended home care for her. Of course, my children were a great help, but it helped me to understand how hospitalizations can disrupt people’s lives to a greater extent than I had previously imagined. My wife, not my health, was my major concern, and I was concerned about what would happen to her if I did not survive. It really put things into perspective for me. Fortunately, many friends stopped by my home to be sure she was okay.

5. There are some positive aspects to having a life-threatening illness. I was overweight and wound up losing 15 pounds. It was embarrassing to look at my chart and see that my body mass index was elevated and written in red numbers followed by an exclamation point. The result of the weight loss is that I am no longer hypertensive so now aspirin is my only medication even more than a year later. My lipid panel was also not looking good and it has since normalized. I now have the cure for these conditions—put patients into septic shock!

The other positive aspect relates to my family. As you can imagine, my two major illnesses have had a significant impact on them—some positive. Our family has always been very close, but in many ways my illnesses have enhanced our relationships and enriched our lives. I am truly fortunate in this regard. We cannot always say the same for many of our patients, whose lives have been devastated and who do not always have the emotional support they need in order to recover.

This is the main reflection for me. We must, as physicians, strive to enhance the lives of our patients.

## References

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