The Modern Bloodletters

Charles Volk

New York Medical College

Follow this and additional works at: https://touroscholar.touro.edu/quill_and_scope

Part of the Arts and Humanities Commons, Higher Education Commons, and the Medicine and Health Sciences Commons

Recommended Citation


touro.scholar@touro.edu.
The Modern Bloodletters
Charles Volk

Bloodletting was once considered as much a profession as an art. If one came down with any number of diseases up until the mid-19th century, you would often find yourself on the business end of a gleaming blade. All along, the physician wielding it assured you that this was for your own good. In the very limited treatments of the time, bloodletting was often called upon to relieve suffering and possibly to cure the imbalanced humors that were believed to be the source of disease. Funny how in the current era hospital patients often feel they are being subjected to the same treatment. Instead of brass spring-loaded scarificators or ornate knives, we now have gleaming surgical steel hypodermic needles and colorful plastic tubes. The patients are constantly assured the blood they give will be used for diagnosis, but the connection between the bloodletting of antiquity and the modern age is inescapable. The people who find their niche in the world as these “modern bloodletters” are called phlebotomists.

A phlebotomist is a technician who specializes in drawing blood samples. The majority of states in the US have no law requiring phlebotomists to be certified, although many hospitals give special consideration to those who are. However, more consideration is given to people who have previous phlebotomy or laboratory experience. I was a recently unemployed college student looking for a new job, and I wanted to work in the medical field, so this looked like an attractive entry-level position. I had no certification, and I didn’t have the time to duck out of my already significant school workload to take a 4-6 week course on drawing blood. Nevertheless, I did have a pretty significant laboratory background, and I stressed that as much as I could. I submitted my application and waited to hear back. As luck would have it, I got the position and soon started my new job as a phlebotomist.

My starting wage was about $13/hour. I found out later that this was about the national minimum, but it was more than I had ever been paid before and I was just happy to have my foot in the door. I had no misperceptions that this relatively high wage was because of the inherent danger of the job. When one works with blood and needles all day, a mistake could mean contracting a serious disease or harming a patient with a poorly executed blood draw.

I found I had a knack for venepuncture and completed my monitored training quickly. This took about a week. My hospital really just wanted to teach me the basics and assumed I’d pick up the rest on the job. If I had gone through the certification course, they would have taught me about regulatory agencies, venepuncture equipment, legal issues, and the cells and fluid in blood. Surprisingly, what the blood tests actually look for or the medical indications for said tests are not in the curriculum, as this is not considered important.

All these things I learned in the coming weeks of my job and I am of the opinion that certification probably wasn’t a very time-efficient method of preparation. However, if I had been certified, I probably wouldn’t have been quite so nervous the first time I stuck a needle in a patient. My hand was shaking so vigorously I was afraid I would miss the vein. My first patient was actually someone about my age; early twenties. She had veins big enough to hit blindfolded, but this was the first day I was actually on the floors of the hospital instead of just doing administrative paperwork. Bumbling and putting in the needle upside down, I still wound up drawing the blood correctly, all while the patient just smiled at me and said I was doing a good job. I have a sneaking suspicion she just thought I was cute.

My coworkers were a diverse group, but could be lumped into three major categories:

Students: Like myself, there were a number of people who were either premed or were at some point in their nursing career. There were also a few people who were trying to go to a radiology technician
school or other medical technician training. We all found phlebotomy to be an excellent entry-level medical job to get experience.

Foreign-Born: These people had advanced medical degrees in other countries, but for one reason or another their qualifications just didn’t come to the U.S. with them. Of these people, the person that most exemplified this category was a physician from Ethiopia. While working on getting his MD certifications reinstated here in the states, he needed a job with minimal qualifications even though he was vastly overqualified.

‘Lifers’: Some people inadvertently fall into jobs that they simply do well. While the first two categories of people work at most a few years, ‘lifers’ have a considerably longer lifespan. They have found something they do well and that pays well. They don’t have any particular love of medicine as a profession, but they’re happy right where they are.

The level of knowledge required to do this job is very minimal. The powers that be just want you to be able to stick a needle in a vein and hit it almost every time. After a couple of months, pretty much everyone is proficient enough to hit 90% of their blood draws. This may seem low to many people, but don’t forget that this is a hospital, and some of these patients have already had blood drawn twenty times in the past week. This means that many of the sites used for blood draws are no longer available, and very sick patients have a tendency to have fewer sites and worse veins. Chronic illness takes its toll.

Within a year, most people hit their peak and get anywhere from 95-99% of their assigned blood draws. There is a certain amount of luck in every venepuncture and skill simply allows the portion ascribed to luck to account for less and less, but one can never get to 100%. This really is true for every medical procedure, however.

This is simply the skill portion of the job, though, and most people stop right there. Medical knowledge and insight are not technically required, but it is disheartening to always tell a patient who asks you which tests are being run, “I don’t know.” That being said, simply knowing a little about medicine goes a long way. For example, I had an order to draw an A1C level (shows long term glucose control by looking at markers on hemoglobin in red blood cells) on a patient, but looking over their previous labs I noticed that we had run a considerable amount of blood typing for transfusion. I figured that this test might produce an erroneous value because of all the donor blood the patient had in their veins. Instead of getting the patient’s A1C, the ordering physician would get some summation of all the different donors’ A1C values, confounding the result. After asking a number of nearby lab personnel if this line of reasoning was correct and receiving blank stares in the process, I ventured on into the forbidding land of the pathologists.

I’d like to take a brief foray here into the unspoken separation between physicians and lower employees. There is a feeling that doctors are too busy to answer your menial question or to be bothered by a mere phlebotomist. Whether cultivated by society or to some extent by physicians themselves, this created a gulf between those who take care of patients, and those who dictate that care. That is, if you can ever even get a hold of a doctor.

As luck would have it, the pathologist who specialized in blood disorders happened to be in his office. If it was after business hours, I don’t really know what I would have done; probably shut my mouth and presumed the patient’s doctor knew what they were doing. I brought my question to him and to my relief, he agreed. He calculated that at least 25% of the patient’s blood was from a donor, and that this test would probably come back erroneous. He thanked me and called the physician to notify them the test could not be run.

It is things like this that make knowing a little about how a human body works helpful in allowing a
hospital employee to stop a problem before incorrect results are posted. If I hadn’t noticed it, it would have gone through the system without a peep. Every phlebotomist has a story like this, and this shows that some knowledge about medicine is useful and shouldn’t be stifled just because of the fear of legal reprisal. Knowledge can help head off problems before they begin and prevent the kind of errors that end up in lengthy court battles.

There are many different kinds of patients. I’m not talking about patients with specific complaints. I’m talking about abrasive patients, interrogating patients, apathetic patients, comatose patients, etc. It isn’t long after dealing with them that you have a bag of tricks to deal with most every type of personality you encounter. That being said, the majority of patient types want to know what you are doing when you walk into the room with a cart full of needles. When I started, since I got little to no training on what these tests actually mean, I had no other option than to reply, “I don’t know. Please ask your doctor or nurse to explain it.” I knew that this was passing the buck and that it was doubtful the nurse (who was the likely one to be asked) even knew what exactly had been ordered. This wasn’t out of ignorance, but because they didn’t have the time to memorize their patient’s lab tests. The next time the ordering physician came in, I doubt they’d take the time to explain every test in detail. That is, if the patient even remembered to ask.

I felt like I was really in the ideal position to explain what I was doing and maybe even provide some rationale as to why the doctor ordered it. For routine labs, the reason they were ordered was usually too general to be able to determine. For example, the physician may have ordered a complete blood count (CBC). The reasons for wanting this test are so numerous I could never say exactly why it was ordered. However, even with those general tests, simply explaining what a CBC looks for (a test that looks at all the cells in your blood) is usually sufficient. It actually takes a few trial runs to learn how to explain a test to a member of the general public. You never really know where the person you are talking to is coming from and you don’t want to shoot over their heads or talk to them like they are children. I often found myself erring on the side of vague. For example, the subtleties of iron metabolism are not common knowledge and the numerous tests that look at iron regulatory proteins in the body can really be summed up with, “These tests will look at how your body is handling iron.” Usually people were satisfied with this level of explanation.

On the other hand, when a physician orders a serum drug level, it is abundantly clear what they are looking for. Perhaps this was taking my job too far and overstepping my “place” in the hospital hierarchy, but I don’t want to be part of a system that treats people in the same way as a mechanic would fix a car. I would like to have patients be a willing partner in their medical care, not just a passive recipient.

I had to draw a blood level of an antibiotic on a patient one evening. I stepped in to the room, made my introductions and then said, “I need to draw some blood to get a level of the antibiotic you are taking. We want to be sure that you aren’t getting too little that it won’t be effective, and not too much that it will start to cause undue side effects.”

The patient responded, “I sit here all day and have random people jab needles into me for who knows what reason. I feel like it is worthwhile if I at least know why. Thanks.”

Similarly, I had a patient who was getting calcium levels checked every few hours. A bit annoyed at the frequent disturbances, she asked me why this was happening so often. I saw gauze taped to the front of her neck. I knew that the parathyroid glands had something to do with calcium control, that they reside in the neck, and that surgery was usually curative. So, I asked if she came to the hospital for a parathyroid surgery. She answered “yes” and I said that since parathyroid disease causes blood calcium level abnormalities, we were checking her calcium levels to make sure her treatment was successful and that we didn’t need to do anything further. After that explanation, she was more than happy to get the testing done.
In another scenario, there is a newborn screening program where a phlebotomist collects blood from babies once they pass 24 hours of age. It involves using a lancet on the baby’s heel and blotting the blood on filter paper. The phlebotomist usually also has to apply a gentle massage of the foot to keep the blood flowing. About half of babies cry and the other half don’t. The majority of those who cry are actually doing so because you are holding their foot. Other than the slight pinch of the lancet, the procedure is painless. However, from the parent’s point of view, it appears like we are stabbing and crushing their baby’s foot. It looks kind of barbaric.

This was one of the most universally despised blood draws amongst my colleagues. When I was being trained, my colleagues would only describe the test to the parents in the most basic of terms and hand them a pamphlet, referring them to an absent nurse or doctor for more information. This did nothing to assuage their immediate anxiety of mortal danger to their newborn child. They would then leave the nonplussed parents to make the baby undergo what appeared to be a horrifying procedure. The phlebotomist knew they were actually causing no harm and would get frustrated when parents got upset. The whole situation made us look like monsters. After a mother broke down in tears while I was collecting a specimen, I decided I needed to change something.

I did my research on what exactly the test looked for and why it was done. I sat down and read through the pamphlet we would hand out as well as looked the testing up on the internet. From that point on, as soon as I entered a room to do one of these tests I would start a lengthy spiel about how the test can prevent serious disease and how it really isn’t painful. I would even go as far as demonstrating the massage on a parent’s hand to show I wasn’t going to crush their child’s delicate foot. After that, collecting these tests was a breeze. The couple of minutes it took me to explain everything in detail resulted in less frustration, saved time, and made for a better birth experience for the parents. It was a uniquely satisfying experience from that point on. Much to the delight of my coworkers, I gladly snatched up these orders.

I’ve walked in on plenty of physicians talking to their patients about their treatment plan, and the most common thing physicians say about blood draws is, “Someone will come up here in a little bit and draw blood for some tests.”

I can’t really blame them for being so vague. It’s likely the doctor is not yet totally sure what they’re going to order. However, it’s very doubtful that after the orders are put in the doctor comes back and explains in great detail exactly what they ordered and why. Presumably the doctor doesn’t want to overload the patient with the minutiae of their care. The doctor moves on to another patient and the phlebotomist is left holding their orders in one hand and a bunch of patient questions in the other.

It was standard practice that if there was a question about a blood draw, we would ask the nurse. One, because they were always there and relatively easy to get a hold of. Two, it was presumed that the doctor had explained something about the tests they ordered. At the very least, they knew the patient so they could perhaps extrapolate why.

In most cases, the nurse could figure out the problem. Largely, they were scheduling or duplicate order errors, but there were occasional problems where an order didn’t make medical sense. They would then be stuck in an uncomfortable position between us and the doctor. For example, there was a patient admitted the afternoon of Christmas Eve. The doctor ordered some routine labs but put them in the computer incorrectly. They were ordered to be drawn immediately instead of the next morning when normal “routine” labs were drawn.

I had no reason to doubt the orders, so I went and collected the tests. By the time I got back to the lab, the orders had been cancelled and retimed for the next day. It essentially meant the blood in my hand was useless. I called the nurse to explain what had happened and that we should just use the blood
I collected and not get more tomorrow, since they’re just routine admission labs anyway. We don’t have any previous lab values to compare these to, so it didn’t matter if we collected them now or tomorrow. She came back at me with the old catchphrase, “Well, if the doctor ordered it…” It occurred to me that since it was a holiday, the floors were mostly staffed with their most inexperienced staff (read: those who didn’t have the leverage to get the day off) and this nurse sounded fresh out of college. She didn’t want to possibly ruffle any feathers, and I can’t really blame her either. It’s tough out there for a new nurse. In this case, despite my continued protestations, she wouldn’t relent on her position and I gave up. I threw the blood I had just collected away and the patient was drawn the following morning for the same tests.

As relatively benign as this case was, it highlights a more pressing concern. The common sense of the hospital staff is purposefully confined since the legal ramifications of allowing them to think for themselves are just too damning. It seems like a stretch to claim that a phlebotomist saying routine admission labs are as good now as they will be tomorrow morning is tantamount to practicing medicine without a license, but I’m sure the hospital legal department would come to a different conclusion. However, I am of the opinion that one doesn’t necessarily need a medical license to point out a glaring fault in logic.

The examples I gave were not me trying to hand out my own brand of medical advice. In fact, a lot of the things I said to patients were just explanations of what tests were being run and what they look for, with me not even trying to guess what the doctor wanted to see. I didn’t have that information and in most cases the patients didn’t want to know that much. They just wanted to know what was happening to them and to have some semblance of control after they’ve been stripped of their clothes, possessions, and made to live in a small room while strangers come and stab them with needles. Training phlebotomists to give small explanations of their orders makes the patient feel like they are a part of their own care. We don’t need to train phlebotomists to make life-or-death medical decisions, but merely to know what the tests look for. Just knowing which color tube to put the blood in is the minimum requirement. Perhaps we really need to push for more.

Time after time, I was put into impossible situations. I would go up to the floor and the patient would ask me detailed questions about their labs that I could not possibly answer. I had never met the patient before and I didn’t know their diagnosis. I wasn’t even allowed to look at their chart. When I would try to find answers for them, I found a nurse who had no idea what the doctor was thinking and a doctor that was nowhere to be found.

The answer to this dilemma, of course, is “Keep your head down and do what you are told.” This is probably why ‘lifer’ phlebotomists stay on for so long. They don’t want to know what a blood test is because then they will have to explain it to a patient once they ask. A woman who had been working there over ten years and had probably drawn several thousand CBCs did not know what the test looked for – just that the test required a purple top tube. This is likely why people like me stay only a couple of years at most. It’s a great way to get your foot in the door, but there is just no growth. This is true of many of the medical technician jobs. It seems like the only person allowed to use their head is the doctor, and this is the antithesis to the multidisciplinary approach.

We are all a team in the hospital, and I honestly wanted to help the patients I drew blood from. The phlebotomist is in a unique position where a good amount of time is spent talking to the patient during the procedure. Lab personnel are also less intimidating than the overworked doctors and nurses. People would open up to us and they felt like it was okay to complain, but I was powerless to make any change for the better. Confining phlebotomists to doing a robot job may be efficient, but once the process breaks, the individual pieces are helpless to respond.
As luck would have it, a few years after starting the phlebotomy job was my first day of medical school; training to be the person writing the lab orders instead of collecting them. Once my day comes to explain to patients all the tests I want to run, I have no doubt that I will likely say, “I’m going to order some blood tests,” and leave it at that because I have 20 more patients to see. However, I will do my best to try to come by the same patient’s room a little later and ask if they had any particular questions about the labs that were drawn, all the while wishing I could empower the “modern bloodletter” who drew the blood to give the patient the detailed explanation they deserve.