As a medical student, do you ever wonder what it’s like to specialize in pathology and laboratory medicine? Meet Scott Koepsell, MD, a pathologist and a featured physician in the AMA’s “Shadow Me” Specialty Series, which offers advice directly from physicians about life in their specialties. Check out his insights to help determine whether a career in pathology might be a good fit for you.

Scott Koepsell, MD
The AMA’s Specialty Guide simplifies medical students’ specialty selection process, highlights major specialties, details training information, and provides access to related association information. It is produced by FREIDA™, the AMA Residency & Fellowship Database®.

Learn more with the AMA about the medical specialty of pathology.

“Shadowing” Dr. Koepsell

Specialty: Pathology and laboratory medicine with a subspecialty in transfusion medicine and cellular therapy.
**Practice setting:** Hospital.

**Employment type:** Academic practice.

**Years in practice:** 10.

**A typical day and week in my practice:** Every day can be very different, which is an aspect of my job that I love. A typical day usually includes wearing several different hats. On one hand, there are the day-to-day issues of laboratory medical direction, which includes dealing with testing issues such as how well a test is working or not working, establishing new test methods, regulatory oversight, quality issues, interpreting complex tests, and answering questions from physicians and advanced practice providers about which test to order or what a result means.

When wearing my transfusion medicine hat, I am typically overseeing blood procedures such as stem cell or immune cell collections, processing of cellular therapy products, blood exchanges (using a machine to swap out diseased parts of blood for healthy parts of blood, called apheresis) or helping select and provide the best possible blood products for our patients. While doing these duties, I also teach medical students and residents.

Transfusion medicine typically has a lot of on-call work involving answering questions about testing and blood products after hours, which happens 24/7.

**The most challenging and rewarding aspects of pathology:** Many of our patients have significant medical and personal issues. Coordinating our blood procedures or finding the best blood product can be a moving target that often requires specialized testing or working around many health care colleagues and teams. In addition, there are often challenges where there is not a great answer, and we need to choose the best path forward which might not be optimal because of inventory limitations or patient biology.

My transfusion medicine patients include both adults and children. I get to treat patients with rare and complex diseases on a daily basis, including patients with neurological disorders, solid organ or stem cell transplants, and patients with hematologic disorders. No day is alike! Many of our patients undergoing blood procedures are treated over months to years, so we really get to know them. This familiarity with our patients means we get to celebrate their milestones as well as be there for them when there are setbacks.

**How life in pathology has been affected by the global pandemic:** From a laboratory medical direction standpoint, we have faced significant challenges with supply chain issues. At one point during the pandemic, we were running up to five different assays for SARS-CoV-2. Depending on the day, one, two or three of the assays were short on reagents. At one point, even the collection swabs that go into the nose were not available. At the same time, our clinical colleagues were needing results...
as fast as possible to keep everyone safe in the hospital and to make the right diagnosis.

So, we dealt with the challenges through innovation! We relied on test utilization strategies and algorithms to make sure the most urgent patients were prioritized for testing. Early on, we published how well pooling samples to save on reagents works depending on the prevalence of disease. We also utilized newer technologies such as 3D-printing to make nasal swabs to address the shortage.

**The long-term impact the pandemic will have on pathology:** The pandemic will leave us more prepared for similar new infectious diseases in the future. Hopefully, we have learned from some of our supply chain issues, and preparedness will be a major part of operations going forward.

**Three adjectives to describe the typical pathology:** Detailed, attentive and curious.

**How my lifestyle matches, or differs from, what I had envisioned:** In general, pathology is one of the specialties where physicians maintain a structured schedule, which really helps work-life balance. However, with a lot of call duties, my family knows that my phone can go off anytime, even when we are on vacation.

**Skills every physician in training should have for pathology but won’t be tested for on the board exam:** An effective pathologist is an effective communicator. We are constantly visiting and advising by phone with our colleagues, sometimes in high-stakes situations. Learning how to have an on-point message that is concise is imperative.

In addition, we generate pathology reports making a diagnosis after examining tissues or fluids or other tests, and those reports must be clear and contain all the information needed to take care of our patients.

**One question physicians in training should ask themselves before pursuing pathology:** Though I see patients when I am on the transfusion service, much of the pathologist’s work is behind the scenes. The question trainees should ask themselves is whether they would miss the constant face-to-face patient care aspect of being a physician.

**Books every medical student interested in pathology should be reading:** Since so much of medicine relies on laboratory testing, I would recommend medical students get a good laboratory medicine textbook such as *Fischbach’s A Manual of Laboratory and Diagnostic Tests*, by Frances T. Fischbach, RN, BSN, MSN, and Margaret A. Fischbach, RN, or *Henry’s Clinical Diagnosis and Management by Laboratory Methods*, edited by Richard A. McPherson, MD, MSc, and Matthew R. Pincus, MD, PhD, to really delve into topics such as ordering the right test on the right patient as well as to understand pitfalls of any given test.
For transfusion medicine, I recommend *Brain on Fire: My Month of Madness*, by Susannah Cahalan. She tells her story about developing a neurological disease that was treated with an apheresis blood procedure.

**The online resource students interested in pathology should follow:** Pathology Outlines gives insight into the different diagnoses that we make as well as many job listings to get an idea of what a career in pathology might look like.

**Quick insights I would give students who are considering pathology:** Medical schools do not usually expose students to transfusion medicine and other sub-specialties of pathology and laboratory medicine, so if you might be interested, seek out electives or shadowing opportunities to see for yourself what being a pathologist really looks like.