Pondering the idea of a medical career as a high school student, I sampled the research side of medicine by working in the rat lab at Presbyterian-St. Luke’s Hospital in Chicago. Every day during one summer I would travel the Congress Street El, don my white coat and help a senior medical student attempt to create a blood-loss, iron-deficiency anemia in white rats who proved to be very stingy about giving up their blood. It was messy work with uncooperative and occasionally hostile subjects, and by the end of the summer we had little to show for our efforts. The next summer I “graduated” to the dog lab, where the subjects were marginally more cooperative and the research projects no more successful. My next premedical summer job was working as an orderly in our local hospital tending to humans. Since then, I’ve stuck to humans.

Yet I have not escaped research. Indeed, no physician can. Regardless of specialty, research is really the food that nourishes clinical medicine. Without research, medicine treads water, stuck with the mistakes and misconceptions of yesterday. With research, medicine moves forward, delving and discovering, revising and renovating.

Interpreting and using the results of research should be part of each physician's training, a formally taught skill just like anatomy or pathology. When I was in medical school, unless you specifically chose a research track, you were expected to pick up those skills along the way. As this month’s articles reveal, that deficiency has been corrected. Most incoming medical students have done some research prior to medical school, and some unsuccessful medical school applicants are advised to do a year or two of research before reapplying. Many residency programs have a mandated year of research built into their rotations. Today’s medical training has elevated research to a virtual requirement so that incipient doctors don’t wander into the wilds of medical knowledge without the training to find their way.

Even after today’s physicians are launched on their career, research is possible within the world of medical practice. Clinicians during their patient care time can participate in practice-based research, which frequently tests and tweaks proposed guidelines.

Throughout their career, physicians have to ingest massive amounts of information. “Staying current” is a concept drilled into the DNA of medical students. As the journals arrive thick and fast (I’m convinced that the New England Journal comes out more often than once weekly), practicing physicians need a triage system to sift the important from the unimportant and to sort out what is relevant to their professional life. Being able to read a research paper and decide whether it merited the light of publication is challenging but vital. Even though papers utilizing meta-analysis have eased the burden somewhat, a first-hand exposure to research is indispensable.

During my last medical school rotation, I wrote a paper that retrospectively reviewed cases of acute renal failure at one of the Northwestern University hospitals. Although it did eventually get published, it didn’t advance the field of nephrology very far. Yet I learned how to glean information from sometimes illegible medical records and fashion it into a cogent analysis. Whether it’s dusty medical records or rats, a taste of research is good preparation for a life in medicine. MM

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