Inspiring the Next Generation

Sitting Down With... Michael Prystowsky, Professor and University Chairman of Pathology at Montefiore Medical Center and Albert Einstein College of Medicine, New York, USA.

Why did you choose pathology?

Both of my parents were physicians in community practice. They had a strong commitment to helping people; their ability to do good and the respect and appreciation from their patients made
medicine an appealing career. I have four brothers; four of the five of us are physicians!

My studies provided research and teaching opportunities, and I enjoyed both. I felt very privileged to be funded to do research. While my focus remained getting into medical school, I was always thinking about how I could combine research with the practice of medicine. My research projects provided me with a solid grounding in protein chemistry and gene expression, giving me a perspective of science from a very physical chemical, to a genetic, to a biological perspective. In my fourth year of medical school I initiated my second postdoctoral training with Frank Fitch in the department of pathology at the University of Chicago, studying the lymphokines secreted by cloned T lymphocytes. The research was a fantastic experience, but I enjoyed seeing patients and understood how rewarding a clinical career could be.

While I tried to believe that there were more than 24 hours in a day, the only way to satisfy my needs in a career, including my intense research interests, my desire to help people through clinical medicine, my longstanding interest in teaching and any hope of spending quality time with my family, was to become a pathologist. It suited me perfectly.

I graduated medical school in 1981 and started my residency in pathology at the University of Chicago. What an incredible experience – the University of Chicago at that time was such a unique place. There weren’t as many rules and regulations and they would let you do whatever you could accomplish.

**And it was during your training that you had your first experience of heading up a laboratory?**

Right. In my last year of residency I was able to apply the relatively new technique of flow cytometry to clinical pathology by starting a clinical flow cytometry laboratory to assess hematologic malignancies and renal transplant rejection. We were working on T cell biology and we had a new flow cytometer in the laboratory; I learned how to use that for research and then to apply it to clinical medicine. Effectively, I started the first clinical flow cytometry laboratory at the University of Chicago. I learned how to set up a laboratory, including all of the administration, practicalities and finances required to do so. So I was a laboratory director while I was doing my residency.

I took my first faculty appointment at the University of Pennsylvania as an assistant professor of pathology and laboratory medicine, which placed me in a growing pathology department. The chair, Leonard Jarett, advised me to build a grant funded research program and publish papers to become a tenured professor. He also urged me to become board certified – something my mother always used to tell me to do too. To compress nine years into a few sentences, I found the productivity required to achieve tenure and the time needed to study for the board examination were mutually exclusive. I was promoted to tenure as an associate professor without board certification.
By this point, my wife and I had our fourth child and we were looking to relocate to New York. I became vice chair of the newly-unified department of pathology for Albert Einstein College of Medicine and Montefiore Medical Center in 1993 and, in a quirk of fate, I became interim chair two years later. I could not be considered for the permanent chair, though, unless I was board certified. You know what they say – mothers are always right. But because I had a good relationship with the faculty, they tutored me which was critical for passing the board exam and enabling me to become the permanent chair, which I did in 1997.

I’ve been leading the unified department of pathology since then. Our focus: to develop diverse educational programs and clinical services to support Montefiore clinical programs and cutting edge basic and translational research.

**Can you explain the service line model at Montefiore?**

The pathology service line supports all clinical programs and works with all levels of administration – hospital to president – taking active responsibility for delivering optimal service. The pathologists and laboratory directors run the service line, not just individual laboratories – we all work in partnership, not in conflict. We have financial incentives to manage, to perform well and to deliver programs effectively. It’s a true partnership with the hospital. We manage all the pathology services and this way we can be responsive to the clinical and programmatic needs of the medical center. It took years to build that trust throughout the medical system, but we’ve done it.

From when I started at Montefiore more than 20 years ago, it’s grown from a system of two hospitals to eight hospitals plus more than 150 ambulatory care sites in the Bronx and Westchester County, New York.

The service line right now has more than 700 full-time employees, but 10 years from now, I believe it will be a system that runs more than 250 sites (hospitals, offices, clinics). We probably train and maintain compliance for about 5,000 people to deliver point of care testing in the Montefiore system. Our clinical laboratories are accredited by the College of American Pathologists (CAP) and inspected by several other regulatory agencies. Our commitment to quality coupled with this oversight ensures the accuracy of our testing and patient safety.

When I took on more administrative responsibility in the late 90s, it became harder and harder to run an RO1-funded research laboratory. But since the turn of the century we’ve done some great work in head and neck squamous cell carcinoma. We’ve been working alongside a multidisciplinary team of surgeons, oncologists, pathologists, molecular biologists, chemists, computational biologists and biostatisticians. By applying molecular and computational techniques we’re developing new prognostics that will enable optimal treatment decisions at initial diagnosis. We have done 15 years’
worth of experiments; while we have made significant progress, there still is much to be done.

You head up one of the busiest pathology services in the US and serve as a Board member for the College of American Pathologists (CAP) and Councilor for the Association of Pathology Chairs (APC); how do you do it?

Effective delegation is of course important. But in each of my roles, education is a key focus area for me. Delivering the right kind of training to residents is absolutely essential to the delivery of an excellent pathology service and to the future of our field. And we have many ways of doing this.

For example, through experience from the CAP and Montefiore, we use Crucial Conversations to teach effective communication. It helps us to develop a highly professional and respectful workplace environment. In addition, we teach our trainees to tailor their message for each audience; for example, a presentation at a tumor board is quite different from a presentation at a pathology conference.

We use Clinical Looking Glass, a program developed by Eran Bellin at Montefiore, to enable longitudinal analysis of patient cohorts. Beyond looking at reams of patient data, temporal analysis of patient populations enables the development of effective and efficient care models for specific diseases. We’re teaching our residents to use Looking Glass to ask the right questions: “Why is a particular test being done?” “Is it helpful in managing patients?” and so on. In so doing, our pathologists are actively supporting the delivery of effective healthcare and test utilization. We need to manage the care of patients efficiently and effectively.

Underutilization actually costs the healthcare system more money than overutilization. If we look at diabetes, for example, a simple test to make sure someone’s in control of their glucose, will minimize the risk of future complications, poor health, and higher costs.

That’s been the Montefiore system – looking to care for patients in a way that manages care and keeps people healthy – I think it’s going to keep our patients healthier and save us a lot of money.

I would say a hospital that doesn’t understand the value of pathology is never going to succeed at delivering value based care or accountable care. The pathologist is going to help in test utilization – both under and over. He or she will manage blood products, patient safety and quality assurance. All of these are crucial contributions.

If you have a similar situation to ours at Montefiore, where we have an administration that sees us as a partner, doing whatever we can to make all the programs work better, then that’s great. This encourages doing the right test at the right time, enabling optimal treatment decisions at initial diagnosis and best management of patients with chronic diseases. The focus is on lowering the overall cost to provide care for the patient while improving clinical outcome. But if you have a system
where the hospital administrators just see pathologists as the people who read slides, and they are continually trying to cut laboratory costs to save money, then the sole focus becomes reducing the cost per test. While there is nothing wrong with being efficient, the efficiency needs to be judged by the full cost of taking care of a patient or population. By not valuing the diagnostic expertise of the pathologist, the administrator focused on cost per test can delay initial diagnosis and impair management of patients with chronic diseases resulting in ineffective care, poorer clinical outcome and ultimately higher costs. Allowing and enabling the pathologist to be the expert in diagnostic medicine – contributing as a professional to healthcare teams in value based care –represents a necessary culture change for some systems as providers take financial risk for delivering care.

**How can pathologists demonstrate their value?**

Programs that train effective communication will help pathologists get the message out. But every healthcare provider needs to know what pathologists do and to recognize our value. With changing curricula in medical schools, pathologists are losing teaching hours. This is something we’re looking to address by using our contact time with students more effectively.

In the past three years my focus has been on education for both the APC and the CAP. For the APC, the committee on undergraduate medical education, which I chair, developed competencies for learning pathology in medical school ([http://apcprods.org/UME/Competencies/](http://apcprods.org/UME/Competencies/)). Common themes, such as disease mechanisms and the application of basic knowledge to diagnostic medicine and clinical practice are all key educational focuses for both APC and the CAP. Training pathologists to partner with our physician colleagues, to effectively and succinctly communicate patient data (which will include an understanding of all new and emerging fields such as genomics and informatics), supporting effective test utilization and patient management – these are all crucial educational initiatives. The pathologist needs to function as an expert in diagnostic medicine, taking a leadership role in patient safety and regulatory compliance in diagnostics, helping to establish testing algorithms with other physicians, providing integrated reports, making it easier for physician colleagues to make treatment decisions. All of these things demonstrate our value.

**Would you change anything?**

I have no regrets looking back; this career has been absolutely terrific and it’s allowed me to do everything that I have wanted to do. My most important achievement is in the nurturing of people to develop their careers. The preservation of any discipline depends on the next generation. We are simply guides to help them see and develop the means to manage their reality.
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