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Q&A with School of Medicine's Ed Miller

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In his 13 years as leader of the School of Medicine and Johns Hopkins Medicine, Ed Miller has shepherded a new academic curriculum, JHM's extensive expansion and a master plan to replace aging facilities on the East Baltimore campus. Photo: Will Kirk/Homewoodphoto.jhu.edu

This is part of a yearlong series of talks with the leaders of Johns Hopkins' nine academic divisions and the Applied Physics Laboratory.

Edward D. Miller, the 13th dean of the School of Medicine and inaugural CEO of Johns Hopkins Medicine, has symmetrically entered the 13th year of his tenure. The university's currently longest-serving dean has been a constant in the ever-changing medical realm.

Under his leadership, the School of Medicine and The Johns Hopkins Hospital consistently rank among the very best in the nation, and the school continues to lead in NIH research funding.

He's overseen Johns Hopkins Medicine's extensive expansion over the past decade, both in Maryland and internationally. Miller also championed the creation of a master plan, currently in its final stages, to replace aging facilities on the East Baltimore medical campus.

An anesthesiologist who has authored or co-authored more than 150 scientific papers, abstracts and book chapters, Miller joined Johns Hopkins in 1994 as a professor and director of the Department of Anesthesiology and Critical Care Medicine. He was named interim dean in 1996 and dean in 1997. He came to Johns Hopkins after eight years at Columbia University in New York, where he served as professor and chairman of the Department of Anesthesiology in the College of Physicians and Surgeons. Before that, he spent 11 years at the University of Virginia.

Miller's research has focused on the cardiovascular effects of anesthetic drugs and vascular smooth muscle relaxation. He is a member of the Institute of Medicine of the National Academy of Sciences and is a fellow of the Royal College of Physicians and of the Royal College of Anaesthetists.

Born in Rochester, N.Y., Miller received his bachelor's degree from Ohio Wesleyan University and his medical degree from the University of Rochester School of Medicine and Dentistry.

Miller, whose formal academic title is the Frances Watt Baker and Lenox D. Baker Jr. Dean of the School of Medicine, recently sat down with *The Gazette* to discuss the growth of Johns Hopkins Medicine (the umbrella name for Johns Hopkins' entire medical enterprise), the School of Medicine's recent academic transformation and the future of health care in America.

Q: What is the key to the longevity in your position?

A: I love what I do.

Q: What is the most rewarding part of your job?

A: Probably seeing the faculty do what they do. We have pretty amazing faculty, when you think about it. Whether it's in the research or education piece.

David Nichols, vice dean for education, has done a tremendous job in his arena. Or look at what Janice Clements, vice dean for faculty, has done in helping get faculty promoted. Then there's our vice deans for research, Chi Dang and Dan Ford, and their efforts, whether it's with our clinical or basic research, and Bill Baumgartner, the vice dean for clinical affairs, working with our clinical faculty, and how we deliver care and some of the things we need to fix within the system.

I'm also proud, certainly, of building the health network that we've undertaken: Sibley [Memorial] Hospital, the Suburban Hospital, Howard County [General Hospital], Bayview Medical Center and how that all fits together. There's the great work of Steve Kravet, who is president of Johns Hopkins Community Physicians.

Internationally, there's some very interesting stuff going on. I was recently down in Chile and Panama and saw the impact we had down there.

Q: Tell me more about our international work.

A: It's very interesting to see the impact you can have in places. When I was in Chile, the minister of health was the chief medical officer at the hospital that we've been working with since 2007. I walked in and he said, "I want to thank you because Johns Hopkins International has improved the health of the people in Chile, because of what you did in Clinica Las Condes."

Same thing is said in Panama, and even in the United Arab Emirates, for example. In Cornish Hospital in Abu Dhabi, they started a program that every family—and Cornish is the biggest baby hospital in the Middle East—gets a car seat when they leave. And car accidents are plentiful in the UAE.

So those are the kinds of things that we do. And we're going to have the signing of the agreement in Malaysia [which happened Nov. 2].

Q: Is there ever any hesitation when we grow the Johns Hopkins Medicine brand?

A: All of the expansion, I would say, has come about with a very thoughtful approach. This is all done with a lot of due diligence, with a lot of understanding of reputational risks, and also opportunities. We are not risk-adverse, but I think we're relatively cautious in what we do. If you look at both Suburban and Sibley as examples, those are institutions that approached us. We did not go out searching for hospitals. Once they do approach us, are we going to sell ourselves and say that we can bring value? The answer is, yes, we can. We have a lot of expertise built in that we can share.

The same thing on the international market. We know where we can be successful and where we probably can't be successful. So we stay away from some partnerships and opportunities.

Q: How would you describe your leadership philosophy?

A: Pick good people and put them in positions of authority. All of my vice deans and senior administrative people are just first-rate. If you look at the leadership team here, we've all been together nearly the whole time, which is pretty remarkable. We lost Michael Klag [when he became dean of the School of Public Health], we lost Cathy DeAngelis to *JAMA* [*Journal of the American Medical Association*] and Elias Zerhouni to NIH [National Institutes of Health]. Those are three key individuals, but we replaced them with very good people as well.

Having a team that works together, and we meet a lot, gives stability to the

organization. People know there's strong leadership in place. They know who they are, and who they can trust. They can come to them with their issues and have them be resolved. All this helps an institution. Our people are not worried about the administration; they're just worried about what they are trying to get done.

Q: Last fall the School of Medicine implemented the new Genes to Society curriculum, the first wholesale academic overhaul at the school in two decades. Tell me about the rationale behind this change and how it's being received.

A: When you change a curriculum, you don't do it overnight. Probably five to six years of work went into that ahead of time.

First, we had to sell it to the faculty because it's a lot different. It went from big lectures to small groups. Now the first two years are basic science and the last two years clinical. It required the faculty to put much more effort into it than ever before. It required the basic scientists to be involved in the third and fourth year of the curriculum, which they had never done before.

Why did we do it? First, the whole human genome comes out in 2000 and we ask ourselves, how are we going to take all that information? Some would say it's like the number of words in the dictionary, and how you would put it all together in sentences and paragraphs. How are we going to use all that information and apply it to the future patients we're going to see? We're still in the infancy of this.

We also changed the paradigm. Is what we do train doctors just to care for illness? Or do we want to see how we can keep people healthy longer? And when episodes of illness occur, how do we mitigate that illness? That's really a shift in focus.

There's also been the addition of public health elements. Whole things have changed rather dramatically with the new curriculum.

I think we also wanted to expose our students to a whole range of issues, whether it be AIDS in Africa, malaria or the oncoming onslaught of diabetes and what it means to the country. All of these are issues that medical students need to be thinking about.

Q: How far down the line are we on personalized medicine, and is its broad practice inevitable?

A: It is inevitable. We know that the ability to do the whole genome for a person will continue to decrease in cost, to probably a few hundred dollars. I honestly don't know how far down it will go. It will be kind of like the computer chip industry. So we know the cost will come down, but how do you use the information?

Is there personalized medicine right now? The answer is yes. The first area is in cancer, where we might know the genetic defect and the enzyme that is made and can direct therapy specifically at that. We need to know the kind of cancer that patient has, what the defect is, and then find the drug that will affect just that defect.

We are far ahead in oncology, but this level of medicine will occur in cardiovascular disease, mental disorders and other areas. It will continue to grow.

Q: How much has the workload changed for medical students from a couple of generations ago? Are they learning twice as much, or is it just a different set of basics?

A: There's so much information now. And I also think that before, we concentrated on a lot of the minutiae. There's just differences. We didn't have the understanding of the human genome, for example. In general, we spent a lot of time on rare things before.

Q: Such as?

A: Thalassemia, for one. That is certainly not seen every day. We knew a lot about thalassemia [laughs]. We knew a lot about TTP, thrombotic thrombocytopenic purpura. These are kind of rare. You might see it once and never see it again. Apologies to Chi Dang, a hematologist.

Q: You've been here for ABC's 'Hopkins 24/7' in 2000 and the sequel series, 'Hopkins,' eight years later. Were you happy with these documentaries and how we were portrayed?

A: Yes, I think it was a realistic portrayal. I think [producer] Terry Wrong did a really good job of not sensationalizing more than he needed to. But he grabbed viewers' interests with some special stories.

We were one of the early ones for reality TV, before a lot of this other stuff you see

today.

Q: What are some of the nation's most pressing health concerns?

A: Diabetes and obesity are big challenges. And if I had to say the biggest issue out there, it would be childhood obesity. That is going to have a huge impact on society down the road. It's related to both diet and to exercise. Somehow, we are going to have to tackle this problem in this country.

You just think about these kids who are pre-diabetic already and are going to have significant weight and then maybe cardiovascular disease. They are going to have strokes. They are going to have heart attacks at young ages. And then there's the whole issue of productive lifestyle. Are they going to be disabled because of their illnesses?

This is an issue the whole country needs to deal with, and there's not going to be one thing that is going to fix it.

Q: Certainly we have a video game and junk food culture we have to address?

A: There's a whole host of things that play into this issue.

Q: Does the School of Medicine face many recruitment challenges?

A: No. And the real question is why. People see Johns Hopkins as a bully pulpit of sorts for their specialty. Right, wrong or indifferent, if something comes out of Johns Hopkins, it has an air of authenticity to it. We are a trendsetter.

For the younger people who come here, I think the opportunity is the rich resources that are available to them. Just think of the people resources they can interact with. You can go to a Hal Dietz or a Jeremy Nathans. You have all these wonderful people wandering around this institution who are more than willing to talk to you about issues.

Q: The Johns Hopkins Children's Center and the Cardiovascular and Critical Care Adult Tower will be finished in 2012. Do you foresee much growth after that to the campus?

A: No. We have undergone a great period of growth the past 10 years, and when that last building opens a little over a year from now, that will be the last piece. That doesn't mean we won't continue to grow, but we need to digest what we've done.

In the future, we very well could have a need for a third cancer research building. The space is there to make that happen. As cancer continues to evolve more, and [moves] more to the outpatient side, we need better infusion sites to be more convenient for patients. So, probably adding a second infusion building.

The third foreseeable need is more administrative space. And that might sound crazy, but we have an awful lot of people off-site who probably should be on-site. Our development people, our financial people, our communications people, they are all off-site. It would be nice to have some of these people come back on the campus.

Q: How would you gauge our response to the shooting incident on Sept. 16 at The Johns Hopkins Hospital, which ended with the death of the shooter and his mother?

A: The police chief did all the right things. He was totally in control. Our security people were wonderful, well-trained to act as they did.

What hit me was the sense of calm around here. People weren't panicked. They saw that the leadership is taking this one on and said, "We're OK."

Just imagine that we had this horrible, tragic event, and in a couple of hours we are up and running again. Just so many people did the right things. The two nurses who took care of our physician. Everybody else on the floor was taking care of the patients. It just showed our level of dedication, and I could not be prouder. Everybody was in tune.

Q: Not to go over all the fine details of the health bill legislation that was passed, but what one thing do you take away from that?

A: Giving the ability for more people to have insurance is certainly, I think, what everyone wants. In a selfish way, we hope that people who have insurance will not end up in end-stage diseases in our emergency room or don't use the ER as a clinic, so in that way, we have our emergency room opened up only for true emergencies.

Hopefully with more people having insurance the ability to be thinking about more

preventive measures will become more realistic.

Q: Will we need more doctors?

A: I'm not quite sure of that exactly, and maybe I'm in the minority on this. Now I'm sure there are places in the country that will, but I do believe better use of ancillary people could meet many of our needs. I'm talking nurse practitioners, physician extenders, technicians and so forth.

If you think about it, the armed forces with corpsmen have been able to figure that out. I was in the Army for a few years, and I could tell you that the corpsmen deliver very fine care to a lot of people, but we used ancillary people perhaps more effectively than we do now.

The payment system, I feel, is the culprit in much of this. I only get paid if I touch you as a physician. But if I get a premium per month to take care of you, maybe I don't need to see you every time. Maybe my nurse practitioner sees you.

I think if the payment system were changed, we can figure out a way to more effectively use people so we have the right person helping the patient at the right time.

Q: Biggest challenge going forward?

A: How do we keep our discovery engine not only alive but also thriving? It's very hard to get grants still. I'm concerned that the NIH budget might be flat or decreased. I see people discouraged by the prospect of "Do I have a future as a researcher?" What do we need to do internally to help people be successful? How do we fund the young people?

In the old days, there was a surplus we could use. Who will fund them their first two or three years? As the economy continues in the doldrums, it's harder and harder to get funding. We need to address this.

Q: We've discussed some pressures and what's weighing on your mind. How does a dean and CEO unwind?

A: I work in my yard. I like being outside. Plus we have two dogs, and that keeps me busy. They're Italian water dogs.

Q: What are you reading now?

A: *Genius on the Edge: The Bizarre Double Life of Dr. William Stewart Halsted**.

**Author's note*: Halsted, an influential American surgeon, was named first surgeon in chief of The Johns Hopkins Hospital (1890) and first professor of surgery in the School of Medicine (1892). An early champion of surgical anesthetics, Halsted battled addictions to cocaine and morphine throughout his professional life.

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