Chapter 1

On the Front Lines: Student Voices I

"By the end my second year of medical school, I was almost $100,000 in debt, I had sat through 500 hours of boring lectures, and I could tell you how many bones were associated with the movement of the wrist. But if one of my uncles collapsed at a family gathering I was less useful than a Boy Scout."

—Lawrence Smith, MD, founding dean of the Zucker School of Medicine at Hofstra/Northwell

The Voices That Guide Us

When we started the Zucker School in 2011, we made a number of decisions that broke with and challenged tradition. Throughout the course of this book we tell the story of how we did that, exactly, and how we created a new approach of teaching students of medicine. There was no way that progress would be challenged by tradition!

But before we did anything – before changing the curriculum, the class sizes, the method of testing or grading, before our commitment to be creative but never reckless – we made the single most important decision of all: we decided to listen to our students. We decided to trust these amazing young men and women, to believe in them and their transformative power. We went so far as to ask members of our very first class to work with us to cocreate the school in partnership with us. In our earliest classes, we selected students for admission

based on grades, test scores, life experiences, character, personality, and so on. But another key factor was a willingness and ability to work with us to create something new and different. We found students with intelligence, confidence, and comfort in themselves to join with us on this mission. We invited them to speak up, push back, and they certainly did! Do not be shy about your thoughts and opinions, we said, and they agreed.

Listening to our students – in class, during meals, in the hallways, over coffee, during times that were calm and times of conflict – guided us to where we are 15 years later. More than 1,000 students have graduated from our school since the beginning and the voices of so many of those students still ring true to us. We are a better faculty, administration, and school for having paid close attention to those voices.

So, of course, we start our book with some of those voices. We focus in this opening chapter on the experiences of these men and women when they first encountered patients in our emergency medical technician (EMT) program, which started on day one.

"Wow. This is for real."

In medical education, there is nothing as powerful as treating patients face-to-face. No course on neurology, psychiatry, surgery – nothing compares to being there in the moment when a human being, suffering from illness or injury, needs help. And yet one of the longest standing medical school traditions is waiting until year three to have students meaningfully interact with patients. Until that time, patients are more theory than reality. Patients are removed from what students spend their time doing in the first two years: learning about the body's various systems, cell biology, how diseases present and behave. Even those school who claimed to involve patients called these experiences *shadowing*. We claim to be the *anti-shadowing* medical school.

This never made any sense to us. We believed that foundational to our curriculum would be authentic, meaningful student–patient interaction from just about the first day of school. The question we wrestled with was how to accomplish that goal of getting our students connected to patients from the start of their medical education. There was no easy answer, for the fact was that as far as we knew this had rarely been done before.

And then we saw the solution hiding in plain sight: at Northwell Health we own about 150 ambulances that go out across the Greater New York area day and night, responding to every conceivable kind of call. But we did not want to do what was obvious, which would have been to have students "shadow" first responders in their ambulances. We wanted the students to *be* first responders. Our EMT program answered the question, how do you make a mark from day one that this is going to be about a clinical immersion, where you also learn science and how to apply the science to patient care?

A question we discussed obsessively was, what are the essential elements of a great medical school? And one of the answers is you go to your strengths, and one of our strengths was a 100+ ambulances in one of the most diverse places in the world. We went with that strength and thus was born our first-year program, where all of our students go through a rigorous EMT certification process. We call it EMT-on-steroids for it is a course we built to teach our students the basics, but geared to medical students and their broader curriculum.

We were committed to making our students clinically active right away. We set out to teach them how to feel comfortable working on teams, working with patients, cardiac physiology, how to resuscitate and suture and splinter, how to understand the autonomic nervous system. And they would tell us, "Wow, this is for real. I'm on an ambulance in a neighborhood I have never been to before and I am treating patients." One student delivered a baby on her first shift. Another resuscitated someone on the subway.

3

On the Front Lines

Our colleague, Dr. Ronald Kanner, put it this way:

> *Our students are seeing a patient in their own environment, not as an isolated person in the hospital. They're seeing the real deal. It's very different when a patient's in a gown, in a bed, in the hospital with no family around. It's very different to see them injured or in distress with family members milling around, with people asking questions, with patients who are scared. You will never forget the first patient you saw in that environment. It will not happen.*

Dr. Jordan Cohen, coauthor of the Introduction, observed that

> *the EMT program is one of the most vivid examples of how you could take a new school without traditions and do something that was meaningful and directly related to one of the deficiencies – I will use that word – in the traditional way of doing things. Take students and put them immediately into a clinical situation where they can experience firsthand the kind of both joy and agony of dealing with the human condition in some of its most challenging moments. I think it was an absolutely inspired thing to do. I think it immediately set the school apart and sort of put a stake in the ground. It said look, we are going to do something that is really novel and direct towards trying to improve the ability of our students to grapple with the realities of medicine as it currently exists. I think it was a wonderful innovation.*

It certainly was, although a few adjustments along the way, driven by student feedback, helped. Originally scheduled to cover the first two years, we reduced it to the first year only and that proved to work well.

In addition, it caused something of a splash. Learning clinical medicine from day one? Nobody did that. But when we did, people around the country found that it made sense and that type of attention for a brand-new medical school was a real boost as well as a morale builder in school. Students could come back from memorable experiences on the ambulances and share stories that would make their way through the student body and faculty.

Our faculty colleague Dr. William Rennie put it this way:

> *The EMT experience got them to dive into the pool headfirst, and experience some things, learn some skills so that they weren't doomed to just being bystanders when they got to these other places. We didn't want to have students take on that role of interested bystander. We wanted them actively participating. Some of the students, their very first time they went out they performed CPR on somebody in cardiac arrest. Some dealt with psychiatric patients who needed sedation, restraint. Some of them experienced domestic violence. Some of them experienced multiple car accidents and fire scenes. Some of them experienced people who called the ambulance at 3:00 in the morning because they had a rash. The number of diverse problems that they encountered was astounding when you put them all together.*

On completion of the EMT course, our students would suit up in their EMT uniforms, climb aboard state-of-the-art ambulances, and ride out into the City of New York and its suburbs on the very mission that compelled them to want to become doctors in the first place: to help people. It was exhilarating, intimidating, sometimes frightening, but for many students, unforgettable. In this chapter, we bring you the voices of students for the simple reason that we believe that our students are the best judges of the quality of the educational experience at our school.

5

On the Front Lines

Emma Handwerker, class of 2023, recalled that during her time as an EMT she encountered a lot of homeless people in need which she said was "definitely overwhelming at first and it also pushed us to grow. We were suddenly face-to-face with people in incredibly difficult circumstances, and it made me realize how important it is to approach every patient with empathy." Emma told us about a specific experience:

> There was one instance where we got a call for an older woman. We arrived to her apartment in Queens, saw her in bed, and very quickly realized that she had already passed away. It was the first time that I had seen someone who had died in a non-medical setting, and I remember I started crying when I saw her. Her family, including several children and grandchildren, were visibly panicked and heartbroken. I spent most of my time with her grandchild, who was about my age. There was nothing we could do medically, but I realized that what I could do was be there for them and make them feel less scared.
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> Was I comfortable in that situation? No. But these ambulance runs taught us how to be out of our comfort zones and realize what our strengths were. I learned how to stay present, even when things are hard, and how powerful it can be to simply offer comfort.

Gummies Laced with Fentanyl

Alix Rosenberg, a second-year student, recalled an assignment:

On the ambulance, we were called to Starbucks, where we found a 14-year-old girl unconscious on the bathroom floor with

vomit around her. The Starbucks staff did not know what was going on. Her mom ran out to come get us, hysterically crying. We transferred our patient into the ambulance, and we needed to know what happened to know how to treat her. There were a couple of other kids sitting in Starbucks and you could tell that they were her friends but they were afraid to associate with her. They were sitting near the scene, concerned about our patient but, also, trying to stay away because they were nervous they were going to get in trouble.

We got her onto the ambulance and then, the two EMTs that I was working with, two men who were older than me, were trying to talk to the friends, but they couldn't get any information from them. So, I asked if I could go and talk to the girls before we pulled out and they said, "Sure. You only have a couple of minutes, though." I felt like I could relate to them more as a young female, so I could understand them a bit better. Also, at school, we have a strong emphasis on communication skills early in the year so I felt like I was able to use those skills to connect with the kids.

I went over to the girls and said, "I promise you're not going to get in trouble. We need to know what happened so we can help your friend. If you are able to share any information and then go walk away, nobody will know it was you who told me." Finally, one of the girls told me and I went running back to the ambulance and told them our patient consumed weed gummies laced with fentanyl.

In the ambulance, speeding to Cohen [Children's Medical Center in New Hyde Park, New York] I sat next to the patient's mom while she was hysterically crying. I was holding her hand, and she was crying, saying, "I don't know what happened to her. She's never hanging out with these people again. She's a good girl."

I said, "I know. I know. It's really scary." One of the most important things I had learned about pediatrics was that it involves taking care of the child and taking care of the parent. I was able to help comfort her while the other EMTs were trying to help the patient, who was unconscious the whole time, even when we got to the ER [emergency room].

I asked the ER docs and from what they shared, I think that she was okay. She started to wake up a little bit before we left. I was glad I got that information from the girl's friends.