



First-year medical students Maya DeGroote, left, and Michael Nasr, right, review patient notes before an On Doctoring patient exam. (photos by Mark Washburn)

Maya DeGroote '21 examines Twyla, a standardized patient, in the simulated pediatric clinic.



Thinking Like a

D O C T O R

by Susan Green

It begins with a knock on the door and an invitation to enter—the doctor and patient are meeting each other for the first time. But in this scene, the doctor is a medical student and the patient is an actor.

BY MIMICKING A REAL CLINIC, Geisel School of Medicine's new simulated clinic allows medical students to practice newly acquired clinical skills in a controlled environment that includes standardized patients and all aspects of their care. This progressive preceptor (clinical teaching) model, developed by Geisel faculty, advances the medical school's successful On Doctoring program for first- and second-year students and positions Geisel as a leader in innovative medical education.

Medical students possess a passion for clinical care and a desire to do good. Eager to become doctors, they are ready to leap into the clinical environment. One of the reasons aspiring physicians choose Geisel is because of its reputation for providing early clinical experiences in the first month of medical school—through On Doctoring, first-year students were paired with practicing physicians for clinical mentoring. But this preceptor model that served generations of Dartmouth medical students so well began showing signs of strain a few years ago, particularly with recruiting and retaining preceptors.

"Over the past decade quite a few schools have moved away from early clinical experiences because of the difficulty

of getting preceptors to take very early medical students into their offices," says Roshini Pinto-Powell, MD, co-director of On Doctoring and an associate professor of medicine and of medical education at Geisel. "First-year students require a lot of coaching, and in the past few years we noticed our students were receiving variable educational experiences due to the business and clinical pressures now facing doctors. Many feel they do not have time to teach students—they are willing to teach, but do not have the time."

To ameliorate the situation, Pinto-Powell and On Doctoring co-director Adam Weinstein, MD, an associate professor of pediatrics and of medical education, surveyed the early clinical contact landscape, and carefully reviewed the fundamental objectives of On Doctoring—immersion in history taking, physical examination, communication, clinical reasoning, and counseling skills. As a result, they designed a pilot simulated clinic for the deliberate practice of introductory clinical skills.

"One of our goals is for students to learn how to connect with patients and this new clinic model provides consistent and strong training in those skills," Pinto-Powell says. Developing good communication skills is as important as

Thinking Like a DOCTOR

developing clinical skills—patients have better health outcomes when doctors listen thoughtfully and clearly explain what they are doing.

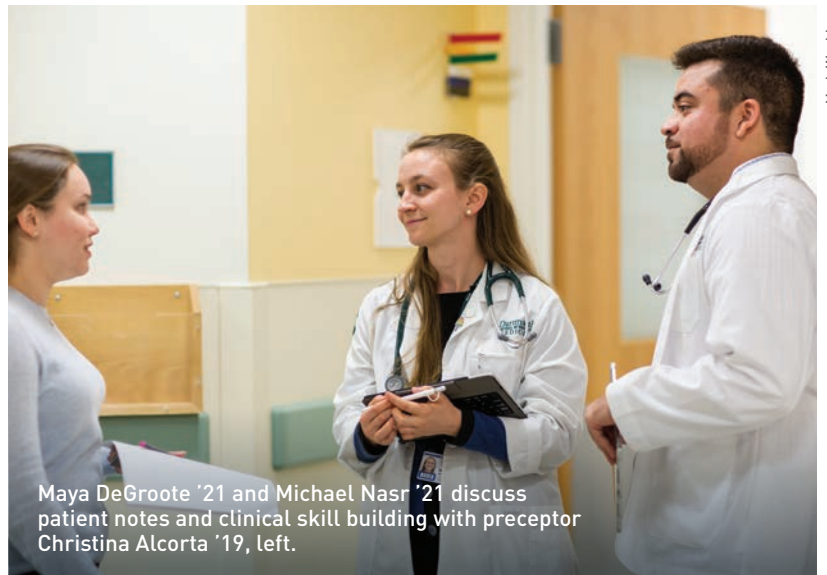
It's never too early to start thinking like a doctor, and even though Geisel students are not practicing their skills in a preceptor's office, "they are still immersed in the clinical experience right from the get-go in a safe environment devoid of the pressures of the business of medicine," Weinstein says. "Preceptors are able to focus on teaching and coaching students in clinical skill building in a way that was not possible with the old program."

To create this curricular standardization, Weinstein and Pinto-Powell create longitudinal cases that both teach chronic disease management and reinforce what medical students are learning in their small group On Doctoring curriculum—scripted simulated patients are trained to present these correlated cases. Clear objectives are written into each case and are shared with preceptors.

"We know which clinical skills are being introduced in the small group sessions and we write cases that help students practice and reinforce those skills," Weinstein explains. "When students learn the cardiac exam, we'll follow up a few weeks later with another cardiac case combined with an additional health issue to further develop their history taking skill while revisiting the cardiac exam. This would not be possible in a preceptor's practice because of the random nature of patient visits."

Though Maya DeGroot '21, was initially a bit disappointed about foregoing early clinical contact, she says

"We want to make sure the students are learning and practicing how to think like physicians and to clearly communicate with other healthcare providers in a way that not only makes care more efficient, but may reduce error."



Maya DeGroot '21 and Michael Nasr '21 discuss patient notes and clinical skill building with preceptor Christina Alcorta '19, left.

Mark Washburn



On Doctoring co-directors Roshini Pinto-Powell, MD, left, and Adam Weinstein, MD, right, discuss the course's introductory session on electronic medical records.

Jon Gilbert Fox

the simulated clinic experience reinforces what they are learning. "Once we started learning in our small On Doc groups about how to do a physical exam and how to interview patients, I realized the clinic is a safe place to practice—it's okay if you make a mistake because although it's a very professional environment, the stakes are lower than with real patients."

At the onset of the academic year, medical students working in pairs meet with their preceptor once a week, every other week, for 10 weeks in the Patient Safety Training Center at Dartmouth-Hitchcock Medical Center. Prior to meeting their patients, brief preceptor discussions often center on what students learned in class and what they want to focus on during their patient encounter.

"When I was a first-year student, the preceptor program was very different," says Ana Rodriguez-Villa, MD-MBA '19, who is a fourth-year preceptor. "My On Doctoring experience was with a physician on the wards at the Veteran Affairs Hospital and during my first year there I didn't see one female patient or participate in any preventive or primary care services.

"The simulated clinic is a more controlled environment where students receive significantly more instruc-

tion and feedback because every part of the student-patient interaction is observed by the student's clinic partner and preceptor; preceptors do not have to divide their time between teaching and providing clinical care—which is fabulous.”

Rodriguez-Villa appreciates the preparedness and professionalism students bring to the simulated clinic. “They approach it the same as they would any other clinical interaction and I'm really impressed with their thoughtful questions and enthusiasm for improving their skills.”

Although students say examining standardized patients can feel more like an exercise in developing clinical skills as opposed to learning those skills with real patients, they find they are acquiring and developing those skills. Patient scripts are delivered so convincingly that both medical students and seasoned preceptors often believe that simulated patients actually have the illness they are presenting. Standardized patients and clinic preceptors receive training on how to provide real-time feedback to medical students, assessing communication as well as clinical skills. Students immediately use that feedback when seeing their next patient.

“At first a lot of us were curious and a bit apprehensive because we didn't know what this idea of simulated patients and role-play was going to look like, but as it unfolded it was very useful,” says Michael Nasr '21. “Being able to implement what we are learning in On Doctoring on a patient with a story, rather than on each other, gave us an opportunity to practice interviewing, work on different complaints, and report it out to our preceptors—it was better than what I'd anticipated.”

“This has become a very real experience for the students—we haven't eliminated anything—and we still provide a consistent longitudinal preceptor relationship. Our intent with this intense skill building is to develop medical students' clinical skills at a faster rate so they are more effective when they go out to preceptors in their offices,” Pinto-Powell says.

“We want to make sure the students are learning and practicing how to

think like physicians and to clearly communicate with other healthcare providers in a way that not only makes care more efficient, but may reduce error,” Weinstein adds.

This spring, and for the remainder of the academic year, first-year students will transition to their assigned local preceptor offices. This transition allows for further mentoring, and acclimation to their new preceptor's practice—their clinical home in the following year.

“I think it's really valuable, but I can't compare this to a real clinic—yet,” DeGroote says. “In sim clinic, when we performed most of the components of the physical exam during an annual physical exam I realized I'd learned so much. There are still things I need to work on, but I will feel comfortable giving a physical exam to a patient. I'm ready for clinic.”

SUSAN GREEN IS A SENIOR WRITER FOR
DARTMOUTH MEDICINE.

Mark Washburn



Michael Nasr '21 talks with Twyla and her mother in the simulated pediatric clinic.

ALUMNI KEEP FIRES BURNING

Working behind the scenes to support many of the innovations in On Doctoring is the Friedman Family Legacy Fellowship for Teaching the Art and Practice of Medicine. Established in 2011 through a generous gift from Alan Friedman, D '56, MED '57, the fellowship provides critical funds for faculty development, teaching, and other resources to support the On Doctoring program.

“We need to expose students to what it is to truly be a doctor—not just to be a technician, not just to be a scientist, but to know how to interact with patients in a way that instills confidence and trust,” said Friedman in 2011. Friedman is the second of three generations of ophthalmologists—all of whom graduated from Dartmouth: Joseph J. Friedman, MED '28; Alan J. Friedman, D '56, MED '57; and Neil J. Friedman, MD, D '88. He established the endowment to help ensure that future generations of doctors learn the clinical and communication skills essential to developing strong doctor-patient relationships.

“Our alumni are so determined to keep the fires burning in the kind of physician that Dartmouth creates,” says Geisel professor Roshini Pinto-Powell, MD, co-director of the On Doctoring course. “For that we are grateful.”

JENNIFER DURGIN