



DukeMed AlumniNews

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How
Duke
Defines
**'CAPABLE OF
BRILLIANCE'**

The Science
of Med School
Admissions

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Armstrong brings science to Duke Med Admissions

WHEN BRENDA ARMSTRONG STEPPED into her role as dean of admissions ten years ago, any student or faculty member could name the “must haves” for an applicant to Duke or any other top medical school in the country: stellar academics, an inclination toward science and research, and a passion for helping people. What **Armstrong, WC'70, MD, HS'75-'79**, a pediatric cardiologist, brought to the process is science—and a unique Duke perspective.

“The faculty said to me, ‘Find those students who are capable of brilliance.’ That meant we had to define brilliance,” says Armstrong.

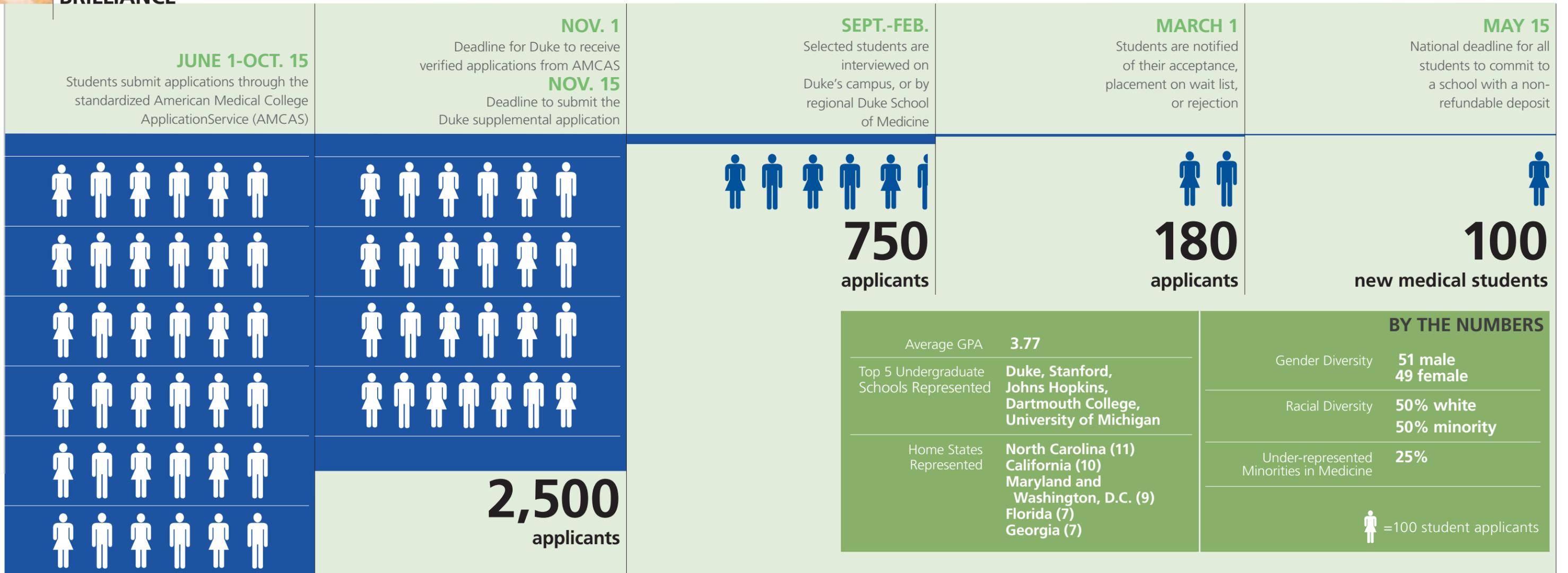
The inclusive, evidence-based approach she took left no stone unturned. She

interviewed clinical and basic science faculty, administrators, patients, and parents of patients to develop a comprehensive understanding of brilliance as defined by key stakeholders at Duke. Then she examined the entire admissions process—not only how Duke evaluates potential students, but how the evaluation process is conducted, documented, kept consistent, and continuously updated. She also opened up the process by diversifying and expanding faculty representation on the Executive Admissions Committee. With the assistance of the dean’s office, she recruited more faculty to the General Admissions Committee to assist in interviewing prospective students.

BY MARTY FISHER



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She also opened the Executive Admissions Committee to four medical students, who are selected each year by the student body. Duke is one of a few medical schools nationally to include students with a voting voice in admissions. Finally, in 1998, Armstrong took the process digital, making Duke the first medical school in the country to offer an all electronic admissions process.

“The beauty of our system is that it is one of the best examples of whole file review in the country,” says Armstrong. “We are determined to deliver—to the country and the world—a group of people who are academically superior, who carry with them exceptional humanism, and who have the capability to be great leaders.”

MANY FACETS OF BRILLIANCE

Armstrong started with her fellow faculty members, asking a broad and diverse group what a student who was truly

capable of brilliance would look like to them. Along with the obvious, exceptional GPAs and MCATs, the faculty wanted students who had taken academic chances by choosing difficult courses and those who sought out and excelled in scholarly research experiences. Further, the faculty wanted to understand the context of students’ lives—did they have to work 20 hours a week; were they participating in varsity athletics or playing in the band; were they the first in their family to make it to college; did they have an unusual cultural background or life experience that would add diversity to Duke and the medical profession?

“We figured that would absolutely be where brilliance is buried,” says Armstrong. “If they are strong academically in spite of these other factors, when we get them in medical school they’ll be superstars.”

Armstrong also wanted a way to see beyond the statistical averages and scores that represent student performance.

“We wanted to find those diamonds in the rough,” she says, “students who stumbled, who took awhile to figure out what was going on, but once they did they came on like barn burners.”

The most poignant and compelling definition of brilliance came from a group of patients Armstrong interviewed.

Patients told her it wasn’t enough for doctors to be smart. They wanted doctors to understand what disease does to people.

“It takes away their self control. It humbles them. It puts their priorities somewhere else, so the other things that are important in their lives get left behind,” says Armstrong.

“People said they want the people taking care of them to be in the trenches as a partner. They wanted us to find those students capable of respect and dignity, those whose life experiences suggested significant maturity. We have to make sure these people who are coming to us to learn how to be doctors



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have the humanistic qualities to translate academic firepower into compassionate medicine.”

GETTING PERSONAL

At about the same time Armstrong began reinventing the Duke medical school admissions process, the Association of American Medical Colleges established the American Medical College Application Service (AMCAS), with a standardized application that it processes, verifies, and sends electronically to each student’s list of selected schools. The AMCAS application covers all standardized test scores; transcripts; academic history and awards; lists of research, extracurricular, and community service activities; parents’ educational backgrounds; and any disciplinary actions. Like most schools, Duke now has its own supplemental application that goes beyond the numbers and data provided by AMCAS to evaluate potential students based on unique Duke standards.

But if you ask any Duke medical student, “supplemental” doesn’t begin to describe the open-ended, six-essay, no-word-limit instrument Armstrong created with input from faculty.

“I applied to 21 medical schools. Duke’s application took me a month or two,” says Michelle Oboite, MSI. “They ask very personal questions about about which relationships have prepared you for a medical career, how you handle ethical dilemmas, how you deal with failure and grow from failure—things that aspiring medical students don’t often talk about or admit to themselves. It was very appealing to think about these things, but hard to write about them. I was proud when I turned it in!”

The complexity of the Duke supplemental application initially was a concern for some. People were worried that the best students, those who could choose any school, wouldn’t bother to dig deep for Duke. But most students seem to appreciate that Duke cared to know about them on such an intense personal level. Armstrong feels she has a duty to protect the quality of the intellectual and academic environment at Duke and the care provided to Duke patients, as well as create the



Brenda Armstrong with students Michelle Oboite, Erik Becker, and Lauren Simel

kind of diverse cultural community that would be cherished by students and faculty alike. Besides, there is no shortage of top-notch applicants willing to go the extra mile—Duke currently receives more than 5,000 AMCAS applications for every 100-slot class. Of those, about 2,500 complete the supplemental application.

“I thought ‘Wow! If they are going to read all this, they must really care about me as a person and the kind of class they are going to get,’” says Jessica Fowler, MSIII. Fowler is now co-president of the Student National Medical Association at Duke and a member of the Duke Admissions Committee on Minority Recruitment.

READING...AND READING TO FIND THE RIGHT STUFF

To read and evaluate all those personal essays, Armstrong recruited a large cadre of people considered to be superb readers—medical and university faculty, retired faculty, and laypeople. This Screening Committee includes lawyers, ethicists, and physicians, some of whom who read Duke Hospital residency applications and evaluate candidates



Bill Bradford

“The duty of a university is to create knowledge. We have to have people who want to think through the problems... someone with clinical brilliance, investigative brilliance, who is a humanitarian.”

Bill Bradford

for the Duke medical faculty. The Screening Committee members receive both the AMCAS application and the Duke supplemental application electronically. Each completed application is read and evaluated independently by two committee members.

“We have them do the academic clearance and answer the question, ‘Can this student do the science, and then do they have the other right stuff—maturity, poise, excellent communication skills, altruistic inclination, passion—basically, would we want them to come to Duke?’” says Armstrong.

Bill Bradford, MD, HS’65-’66, a professor of pathology, current vice chair of the 25-member Executive Admissions Committee and a member since 1968, says Duke places a great deal of weight on scholarly activity.

“The duty of a university is to create knowledge,” he says. “We have to have people who want to think through the problems . . . someone with clinical brilliance, investigative brilliance, who is a humanitarian. Our first year is a higher bar than traditional medical schools’ first year. What we’re doing is buying that Duke third elective year. So you’ve got to be able to hit the ground running.”

If both readers agree the student meets Duke’s standards, the student is invited to interview. If two readers disagree, Armstrong reviews the application and makes the final deci-

sion. All children of Duke medical alumni automatically receive an interview. Of the 5,000 candidates, about 15 percent are invited to interview each year.

THE INTERVIEW

Medical school interviews are legendary for producing sweaty-palmed, tongue-tied candidates, and in the days of Syd Osterhout, MD, founding dean of admissions, Duke’s interview was based on that model.

“Three of us faculty would sit around a table and the applicant would come in and talk to us. It was like the Spanish Inquisition . . . No, it wasn’t really, it was friendly, but I would have been terrorized,” laughs Bradford.

Kathy Merritt, T’75, G’79, MD’86, HS’87, ’90-’92, a Durham pediatrician and behavioral and developmental specialist who now serves on the committee, calls herself a “bent arrow,” someone who took a less than straight path to medicine. During her admissions interview in 1982 she felt compelled to explain an F in genetics, even though it didn’t show up on her transcript.

“They just listened to me. I didn’t feel judged. I think they saw the other things I would bring to the class...Dr. Osterhout got at some of the same stuff we are trying to get at. He didn’t want a class of every valedictorian from every top notch school

To insure balance, there are different advocacies on the committee—basic scientists, clinicians, researchers, people who are driven by numbers, people who want to see other strengths. The discussions can often get to a very high pitch.

Brenda Armstrong

in the country . . . He wanted people who have proven in other ways they have the passion, intellectual capacity, and determination to become a wonderful physician,” says Merritt.

Armstrong’s predecessor, Lois Pounds Oliver, MD, Duke’s second dean of admissions, changed the three-on-one interview to a one-on-one interview and began to involve students as hosts for applicants. Armstrong, who worked closely with Oliver as assistant dean of admissions, went a step further.

She divided the interview into two one-on-one interviews for each candidate, one with a faculty member and one with a third- or fourth-year medical student. The alpha interview is designed to gain insight into a student’s intellectual capacity, the scholarly research they’ve done, their problem solving ability, innovation, and creativity. The beta interview gets at humanism—experiences that show caring and service to other people, an ability to get along with others, leadership qualities, and how well they balance academics with having a social life and interests outside of medicine. For students who can’t travel to Duke’s campus, medical alumni volunteers serve as interviewers for applicants in their region. This year Duke also became the first medical school in the country to offer virtual interviews.

Erin Wilfong, who is now in her seventh year of the Duke medical scientist training program (MSTP) and earning an MD/PhD while researching the chemical properties that cause drugs to bind their targets, says that when she walked out of her Duke interview, she was sure she didn’t get in.

“It was bizarre,” she remembers. “Usually they ask, ‘Why do you want to be a doctor?’”

Instead, one of the questions she was asked was “What would you do if you were in charge of the emergency room on a Sunday afternoon and two trauma cases rolled in: a drug dealer with multiple gunshot wounds and a pregnant woman hemorrhaging from a botched abortion . . . there are three units of O negative blood left in the bank. Who gets it and why?”

“My answer was running through scenarios . . . Who has a

chance to live? But finally I just asked ‘Who hit the doors first?’”

Lauren Simel, T’05, MSIV, who was a star forward on the Duke women’s soccer team as an undergraduate and is now applying for OB-GYN residencies, has served as a student interviewer and a voting member of the Executive Admissions Committee. As both interviewer and interviewee, she appreciates what students have to offer the process.

“The Duke interview is different in that they do include students. I appreciated it. I felt like the medical students focused on very different things than the faculty in evaluating your potential . . . When I’m interviewing I focus on what makes them human and their potential to be a classmate—I want people who can engage in medical school rather than just survive it.”

QUANTIFYING BRILLIANCE

One of the most powerful changes Armstrong made to the admissions process was to make every aspect—from application to evaluation—electronic. Along with needing a tool to objectively analyze all the data and the subjective evaluations collected, Armstrong says she had a hidden agenda.

When she first took over as dean of admissions, she conducted exit interviews with applicants who were accepted at Duke but chose another school. The reasons given for not choosing Duke had to do with stereotypes about the South, and not just concerns about lingering racism.

“Despite the fact that as a research intensive medical center we were on par with Harvard, Penn, Stanford, Washington U., and Hopkins, people had concerns about how progressive we could be located in a small Southern town—people had concerns about race, gender, and religious biases, cultural diversity and educational diversity,” says Armstrong. “I thought we could address these concerns by focused marketing of Duke in a different way, by having something no other medical school in the country had at the time.”

With financial support from Gordon Williams, then chief financial officer for the medical center, she worked with Duke’s IT department to develop a website for medical school



admissions, the only one at the time nationally. The website offered virtual tours of the campus and medical center facilities, conversations with current students, and a portal to submit and track their application online. The website was later extended to incorporate the entire admissions review process—another national first.

Working with the IT staff, Armstrong designed and implemented an electronic admissions template, which included the ideal characteristics for Duke medical students as developed by a subset of the admissions committee, which was co-chaired by the late Saul Schanberg, MD, a pharmacologist and pediatrician, and Timothy George, MD, a neurosurgeon. All applicant data, measurement instruments, and evaluations and scores are housed on the Duke Admissions Web Client.

Armstrong says many elite schools have traveled to Durham to learn about the Duke admissions system and how they can incorporate and customize elements of it into their own processes.

Members of the Executive Admissions Committee debate the merits of a potential student. From left are Linton L. Yee, MD, associate professor of pediatrics-pediatric emergency medicine; Maureen Cullins, director, School of Medicine Multicultural Resource Center; and Lawrence Crawford, associate professor of medicine-cardiology.

“The template shows a standardized set of information on every student,” says longtime committee member Kathie King, MD, professor of anesthesiology *emerita*. “It makes sure we all are looking at consistent information. Over time, this has also given us a way to track characteristics that make students successful at Duke.”

Even the highly subjective interview is reduced to a numerical score. Both interviewers assign a score from one to five, five being the best, and the two scores are averaged to give each student a combined average interview score. Those with four and above go on to the final elimination round, the Executive Admissions Committee debate.



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BLOOD ON THE TABLE

Each student who makes it to the final debate—roughly 450 in a given year—is represented by one member of the Executive Admissions Committee. Using the template as a guide, each presenter orally reviews all of the collected strengths and weaknesses of the candidate as represented on the admissions template and makes a recommendation that reflects “the fit” between the school and the student. Committee members also have electronic access to the confidential admissions template as each student’s case is being presented. There is discussion and debate, and then everybody votes.

“There are lots of debates, in fact, many times there’s blood on the table,” says Armstrong. “Because sometimes there will be students who don’t have the very high numbers but are nonetheless terrific students with extraordinary potential. To insure balance, there are different advocacies on the committee—basic scientists, clinicians, researchers, people who are driven by numbers, people who want to see other strengths. The discussions can often get to a very high pitch. But in the end it comes down to a simple majority vote.”

The committee meets weekly from late October through February, reviewing and voting on about 40 students per meeting. Students’ applications receive a final score, which is an average of the total number of voters. This score is the final determination of their rank in Duke’s pool.

In March, fat acceptance letters addressed to “the future Dr. X” go out to the top 180 students. All students nationwide have until May 15 to commit to the medical school of their choice.

Often the decision comes down to finances.

“We have to compete with the usual suspects,” says Bradford, “and some of them have huge scholarship packages. Duke has done well by us, they’ve given us from 10 to 15 merit scholarships a year, but we never have enough.”

Armstrong says that on average, she makes 180 offers for every 100-slot class of medical students. That’s a strong



Erik Becker is the first Duke medical student to do a third-year research thesis in partnership with Duke Divinity School... [click to read profile](#)



Chikoti Mibenge, MSII, left her native Zambia for the first time at age 19. She had lost both parents to AIDS... [click to read profile](#)



Julian Hertz, MSII, grew up in rural Leesburg, Va., and majored in chemistry at Princeton. He...had been out of the U.S. only once... when he suddenly got the idea to go—alone—to a rural village in Haiti and work in a medical clinic... [click to read profile](#)



Duke medical students serve as hosts for prospective students during interviews and Second Look Weekend.

showing, and she and the entire School of Medicine community go to great lengths to convince the best candidates to come to Duke.

THE PERSONAL TOUCH

From August through mid-November Armstrong and her staff travel to about 80 schools in every region of the country to recruit for Duke. She also speaks at Second Look Weekend, and student after student remembers her talk.

“Second Look Weekend was absolutely amazing,” says Yemtunde Ibrahim, MSIII, a Nigerian-born woman who is leaning towards a research career in women’s health. She was accepted at the two schools where she interviewed. “[At Duke] the people were so warm and friendly and articulate—I didn’t get that same vibe, that sense of excitement at the other schools,” she says.

Michelle Oboite, who hopes to work to address health disparities, says money was a huge factor for her. “I was afraid of not being able to do what I want to do because of debt,” she says. “I had heard of so many students feeling pressured to go into the most lucrative specialties. I didn’t want that.” She received a full ride, including living expenses, at the University of Maryland and full tuition at Duke. Oboite chose Duke, even though she had to rely on some loans to cover non-tuition school fees and living expenses.

Erik Becker, MSIII, who served in the U.S. Air Force and worked at MedTronic before finding his way to medical school, said he was overwhelmed by the interest current students and faculty took in him during his interview day.

“People I had never met, upper-class students, would stop me and ask how I was doing. They were so engaging and friendly and welcoming, I couldn’t think of going anywhere else. It would be astonishing if this kind of community exists at any other school.”

PROCESS PAYS OFF

Duke’s medical school admissions process is unlike any other in the country. It involves hundreds of Duke faculty members and students and thousands of the best applicants nationally and internationally. Counting Armstrong’s three months of on-the-road recruitment, it takes more than a year to complete each cycle. The process has taken years to develop and refine and thousands of people-hours to implement. But Armstrong says the effort is well worth it. Duke’s classes are among the most academically powerful and demographically diverse in the country.

“Our classes get better every year,” she says. “These are indeed brilliant students, very accomplished in and outside of the classroom, and they have their heads screwed on right. Our process has been driven by everybody at Duke, and it is something that we as a medical school can be very proud of.”