



Portrait study from a live model, drawn by an SKMC student. The notes and lines on the right represent warm-up exercises in closely observing the model's face.

Courtesy of Julia Clift.



THE *Empathy* FACTOR

A new humanities requirement for first-year medical students draws on theater, drawing, poetry and dance to nurture emotional resilience and better doctor-patient communication.

By Sari Harrar



- ✓ trapezoid shaped. □
- ✓ eyebrows like boomerang
- ✓ top 1/2 of head little bit shorter than bottom (top)
- ✓ 4 1/2 of chin to lip = height of face
 - ↳ lip to tip of nose
 - ↳ tip of nose to point of ear
- ✓ triangular nose
- ✓ thin lips
- ✓ smooth philtrum.
 - mid @ pupil →
- ↳ 3 of chin to lip = 1/3 of face
- 1/2 = ear on ①
- 3/4 chin to lip = ②
- < 3/4 chin to lip = ③

Story Summary

- Research, including studies that use the Jefferson Scale of Empathy, documents a significant decline in empathy during the third year of medical school. Other studies point to rising rates of physician and medical-student burnout.
- Starting in the 2014-15 academic year, first-year medical students must fulfill a humanities requirement by choosing from a wide variety of arts-related classes taught on- and off-campus. Salvatore Mangione, MD, an associate professor of medicine at SKMC and specialist in pulmonary medicine, led the initiative as a way to foster empathy.
- Early research suggests exposure to the arts, such as theater and reflective writing, can help support and increase empathy in medical students. Mangione will review the results of student surveys taken before and after the classes to document benefits.

In a light-filled studio at Philadelphia's Fleisher Art Memorial, Sidney Kimmel Medical College students lean over their drawing pads, pencils sketching a male model in the center of the room. "Slow down," suggests instructor Julia Clift. "Look deeply. Let your eyes travel over every edge of the form."

Around campus and across Philadelphia, first-year SKMC students will shut their textbooks for a few hours each week this year and immerse themselves in the arts. They'll salsa-dance in West Philadelphia. Write and act in plays under the direction of Philadelphia's acclaimed Lantern Theater Company. Craft verse with poet and professor of psychiatry Salman Akhtar, MD, and create personal essays with an accomplished medical writer. They'll delve into mindfulness meditation, sketch bones and human figures — and more.

At a time when research is documenting a rise in burnout among healthcare providers and a faltering of medical students' capacity to connect compassionately with

patients, these decidedly right-brained activities can help foster empathy and emotional resilience, says Salvatore Mangione, MD, an associate professor of medicine and specialist in pulmonary medicine, who has led the initiative to make the humanities part of the curriculum at SKMC.

"When we send medical students to draw or write plays, they're learning to become better physicians — not the next Shakespeare or Michelangelo," Mangione notes. "The humanities offer a different way of thinking, seeing, feeling and engaging with the world. They teach us what it means to be fully human. For medical students, the goal is to nurture important traits so often lamented as absent from medicine today."

The humanities program became a requirement during the 2014-15 academic year, with first-year students expected to add four arts-related credits of their choosing to schedules already jam-packed with classes in anatomy, physiology, neuroscience, biochemistry and clinical medicine. Mangione's experiment has earned applause from students, faculty and administrators.

Now, the medical college plans to offer an expanded four-year Humanities Track as part of its "College within a College" program as early as the 2016-17 academic year, according to Steven Herrine, MD, vice dean for academic affairs/undergraduate medical education and a professor of medicine at SKMC. Herrine says more aspects of humanities training will be "baked into" the regular medical school curriculum in future years, such as by continuing a three-session anatomical drawing class to sharpen future physicians' ability to look closely and notice important details.

The program can have profound benefits, Herrine notes. "The arts exist to deal with very intense and difficult-to-fathom human realities," he says. "A humanities background allows doctors to accept ambiguity, improve observation skills, hone communication skills and develop an understanding of different cultures. It's an important adjunct to the sciences that inform clinical care and research. The ultimate goal is better patient care."



Students agree. In an evaluation of the theater program, one sent this encouraging note to Mangione: "We developed an emotional intimacy that would never have happened in the usual reserved professional medical environment. From hearing the stories and writings of fellow participants, I could feel my level of compassion growing, not only for others, but for myself as well."

Closing the Empathy Gap

Mangione's crowded yet comfortable office in the university's Dorrance H. Hamilton Building attests to his own commitment to science, art, relationships — and his Italian roots. His shelves tell stories. There's a plastic model of the human lungs. A collection of medical action figures. A clock decorated



Student Mike Natter, who participated in the drawing class at Fleisher Art Memorial, is a prolific artist who uses illustrations to help himself retain information from lectures. Natter, who has type 1 diabetes, has created an educational comic book for children who receive the same diagnosis to help them understand their disease and its management.

with Rembrandt's face. An espresso machine and miniature Vespa motorbike. Travel mementos. A model of the London double-decker bus Mangione used to bring asthma education to Philadelphia schoolchildren more than a decade ago. A photo of his 2006 senior portrait presentation picture — the first to show an SKMC professor *not* wearing a white coat. (“I never wear one. They create distance,” explains Mangione, who showed up in a sweater for sittings with painter Dean Larson.) And a reproduction of British artist Sir Luke Fildes' iconic 1887 painting *The Doctor*, depicting a physician at the bedside of a sleeping child.

“That's the doctor we all want caring for us,” Mangione says. “Intuitive, empathetic, wise. Absolutely, we need science and research and high-tech tests and treatments. But along the way, we've lost this. We've lost empathy.”

Empathy, in the context of healthcare, is not easy to define. Mangione calls it “the ability to metabolize pain and suffering, so that a physician can be present with his or her patients.” SKMC researchers who developed the widely used Jefferson Scale of Empathy (Mangione was among them) define it as “an understanding of patients' experiences, concerns and perspectives combined with a capacity to communicate this understanding. An intention to help by preventing and alleviating pain and suffering is an additional feature of empathy in the context of patient care.”

It's the skill students will need in every interaction with patients, and their loved ones, throughout their medical careers. But too often this skill (experts say it can be learned) dwindles before medical school ends. In a 2009 study of 229

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Jefferson medical students published in the journal *Academic Medicine*, a team led by Mohammadreza Hojat, PhD, research professor in the Department of Psychiatry and Human Behavior, found a “significant decline in empathy” during the third year of medical school. A crushing litany of factors explains the drop, the team wrote, including time pressures, academic demands, an “overreliance on computer-based diagnostic and therapeutic technology,” a “belief that a controlled clinical trial is the royal road to advances in medicine,” overly demanding patients, a lack of appreciation, malpractice issues and restrictions on caregivers’ autonomy imposed by institutions and insurance regulations.

To Mangione, whose childhood in Italy “had beauty, culture and art around every corner,” the antidote was obvious: Bring back the humanities. “Before 1910, medical education in the U.S. was inspired by the Franco-English model, with a basis in the humanities for most students. The Flexner Report of 1910 moved the curriculum to a German model, with an emphasis on the lab, the white coat, the supremacy of science.”

But can attending a drawing class or writing a play overcome the pressures that squash empathy? Research — and SKMC students — say yes.

The Lantern Project

On Sunday nights during the 2014-15 academic year, medical student Yasmine Koukaz became a playwright and an actor. The Lantern Project, a collaboration between the university and the Lantern Theater with funding from the Josiah Macy Jr. Foundation and the Institute on Medicine as a Profession, was one way first-year students could fulfill their new humanities requirement — and it was open to the rest of the university community, too. The 15-week course met for two and a half hours a week and drew students, graduates and practicing physicians. Twenty-seven people participated, creating plays that tackle a wide variety of subjects. In one, a cadaver chats with “Death” about donating his body to science while students struggle with dissection. A physician wonders whether to disclose personal information about a deceased patient to the family. A new doctor

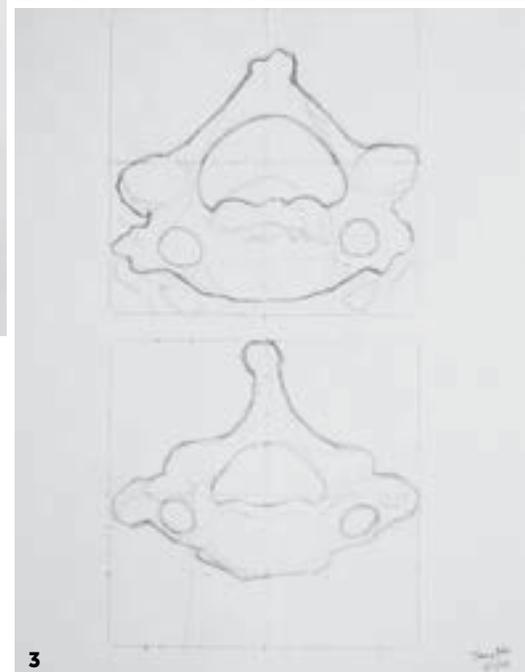


discovers that one ill patient’s care is much messier than expected.

“I had no background in drama, but I wrote a play about a unicorn that was really about my own experiences in medical school — and it resonated with others in the group,” says Koukaz. “It was an outlet that helped relieve stress.”

The newly minted theater students performed classic acting exercises, including writing a monologue from the point of view of a person with whom they strongly disagree. “In theater you have to embrace people you don’t like and don’t think you can understand,” notes project co-leader Kittson O’Neill, an actor and dramaturg at the Lantern. “Otherwise no one could play Shakespeare’s *Richard the Third*! It’s a valuable skill, particularly for healthcare providers, to stop and try to see the world from the perspective of someone very much unlike yourself.”

Koukaz is applying the lesson in her own life. “The Lantern Project has allowed me to see people much more clearly as three-dimensional human beings,” she says. You’re put into the mind of someone else. You learn how to do that more fully. I get a completely different understanding now that I think will help me when I treat patients.”



These images are from drawing classes at Fleisher Art Memorial during winter 2015. Both a basic and a level-two class were specifically designed for SKMC students.

- 1.) Study of a human skull from two angles.
- 2.) Drawing of an individual with muscular dystrophy. During the class, students drew from two photographs of individual faces. Students were told that each individual had a medical condition but not what the condition was. At the end of class, the conditions were revealed, and students discussed what they observed in the faces through the process of drawing.
- 3.) Learning to see negative and positive shapes. Students drew these images from photographs.

A Look at the Jefferson Scale of Empathy

Widely used by researchers, the Jefferson Scale of Empathy was developed by Mohammadreza Hojat, PhD, and his colleagues in SKMC's Center for Research in Medical Education and Health Care to provide a psychometrically sound tool for measuring empathy in physicians, residents and medical students as well as in other healthcare professionals and students. It's a 20-question survey that can be completed in less than 10 minutes and focuses on three key components of empathy: seeing things from the patient's perspective, compassionate care and the ability to step into the patient's shoes.

The scale has been translated into 47 languages and used in more than 70 countries. More than 180 studies in which the scale has been used to provide support for psychometrics, to assess professional development of clinicians-in-training and in-practice and to examine group differences have been published in peer-reviewed journals.

These sample items from the scale measure empathy's three components. Respondents indicate how much they agree or disagree with a statement using a 7-point scale — with "7" indicating "Strongly Agree" down to "1" for "Strongly Disagree."

1. "Physicians' understanding of the emotional status of their patients, as well as that of their families, is one important component of the physician-patient relationship."
2. "Attention to patients' emotions is not important in history taking."
3. "Because people are different, it is difficult to see things from patients' perspectives."

"Empirical findings — that empathy (measured by the Jefferson Scale of Empathy) tends to erode as students progress through medical school; that scores on the scale are significantly associated with assessments of clinical competence in medical school; and that physicians' higher empathy scores can significantly predict more optimal patient outcomes in diabetic patients — suggest that empathy should be considered as an important component of overall physician competence," Hojat says. "It's vital to assess and enhance empathy as part of the professional development of physicians-in-training and in-practice."

Class members opened up about a wide range of experiences, including one long-established physician's story of a medical mistake rarely shared with others, notes co-leader Craig Getting, the Lantern's artistic and administrative associate. "Students also learned about effective story-telling," he notes. "That can be useful when a doctor sits down with a patient and has to convey a treatment plan."

Last May, several Lantern Project plays were presented on Jefferson's campus in a reading by Lantern Theater actors and SKMC students. One, by student Kathryn Linder, dealt with a physician's dilemma: Ask for help and risk looking weak or remain silent. "... you can keep tricking yourself into thinking you're strong. That's true — you're very strong. You're beautiful and fierce. But no one is strong forever, no one can be," a colleague says in the play. Linder told a reporter for Philadelphia radio station WHYY's "The Pulse" that the project opened up an honest conversation. "We talked about faith in medicine in one person's story, we talked about loss, really nothing was off the table," she said. "At least so far in first-year curriculum, we really don't have a platform for that, there's no avenue for that."

Will the project preserve or enhance empathy? Participants took the empathy-scale survey before and after; Mangione is analyzing the results. Research conducted at Virginia Commonwealth University suggests theater holds real benefits for physicians-in-training. In a 2007 study in the *Journal of General Internal Medicine*, a theater program significantly increased measures of clinical empathy in internal medicine residents. As Mangione puts it, "theater is the ultimate laboratory for experiencing the human condition, building empathy, becoming comfortable with the gray areas of life."

Deanna Nobleza, MD, clinical assistant professor in the Department of Psychiatry and Human Behavior and director of student personal counseling at Jefferson says it can help. She attended Lantern Project sessions to provide support. "This project has so

The Power of Reflective Writing

Jennifer Fisher Wilson, a former medical and science writer for the *Annals of Internal Medicine*, directs the Writing Center at Jefferson's Center for Teaching and Learning. She also taught the humanities program's reflective writing classes, for which students met every six to eight weeks to do what Wilson calls "journal writing with a purpose."

Reflective writing is a "brain dump," she says, in which you "write about a personal experience that really matters to you." Early in their first year, many students chose to write about the dissection of their cadaver — "in essence, their first patient," Wilson notes. The process is cathartic; in the general population, research shows it can relieve depression and even improved asthma and rheumatoid arthritis symptoms in one study.

For medical students, it may restore empathy. When University of British Columbia researchers reviewed the research on the topic recently, they found "a significant change in student empathy was observed in 100 percent of the studies" and that "reflective writing should be considered in any medical curriculum."

Says Wilson, "Medicine can be such a grueling career in the long haul. Doctors who practice writing throughout their careers are less likely to burn out. It can be a great tool for gaining perspective."

much potential for creating more empathetic doctor-patient relationships as well as more empathetic doctor-doctor peer relationships," Nobleza says. "It could also help future doctors deal with a phenomenon called the 'Second Victim' — when a healthcare practitioner experiences an emotional impact following an adverse event with a patient. I think one of the biggest hurdles for medical culture is finding a way for physicians to increase empathy with each other."

SKMC Dean Mark Tykocinski, MD, views this from an even broader perspective: "At graduation in May, I appealed to our students to cherish that which is most human, as they march forward in this digital age — with complexity, subjectivity and emotivity front-and-center. By increasing humanities immersion, we are cultivating these cornerstone human dimensions, in deliberate fashion."



Jefferson hosted a Reader's Theater performance May 3 featuring original short plays written by students and faculty. Photos by Roger Barone.

- 1.) Professional actors perform onstage.
- 2.) One of the plays was "Something Else about Khalil," written by John M. Spandorfer, MD, the Roger B. Daniels Associate Dean of Professionalism in Medicine at SKMC.
- 3.) Salvatore Mangione, MD, left, with participants in Jefferson's collaborative program with the Lantern Theater Company of Philadelphia.

Drawing from Life

The ability to look closely and fearlessly can help a physician make a diagnosis or intuit a patient's emotional state, Mangione notes. So drawing classes became a part of the humanities curriculum — and a feature of anatomy classes, too. "Students sketched from bones for that one," explains Clift, the Fleisher Art Memorial instructor, "while for drawing classes we often worked from the human form, with live models. Being able to really see people, their mood, how they're feeling is valuable for artists and doctors. For one class, I asked the students to just look at the model for six minutes without sketching. It was an intense experience."

Mike Natter, a second-year student from New York City, signed up for art class as a continuation of a pilot program begun during the 2013-14 academic year. "Being able to observe closely is an important skill," says Natter, who sketches his class notes instead of simply writing it all down in words. His work drew a national audience when the website BuzzFeed featured his clever cartoons in the spring of 2015. "You pick up subtle clues about a person," Natter says. "And there's something else. Drawing calms me down. You need a little downtime in medical school, to really think about things and see the connections. It's not a stretch to say it makes me more human." ■