

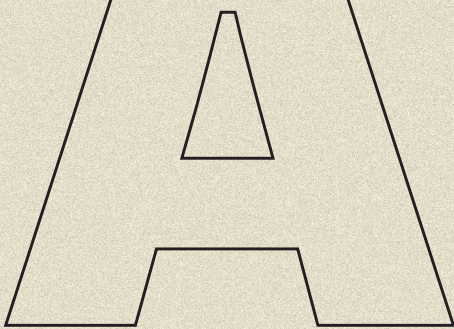
Music's



Healing

BY MICHELE C. HOLLOW

Recent scientific advances show how music can be used in treatments of conditions as diverse as chronic pain, PTSD, and neurological disorders. Members of the Curtis community are exploring these connections.



Deforia Lane (right)

fter a few unresponsive days in intensive care following brain surgery to remove a cancerous tumor, five-year-old Tim's parents sat by his bedside waiting for him to

wake up. Deforia Lane, Ph.D. (Voice '71), former director of art and music therapy at University Hospitals Cleveland Medical Center and a Curtis Institute of Music graduate, approached and asked Tim's parents if they would join her in singing a few of his favorite songs.

"They were reticent and didn't think the ICU would be amenable to their making noise," Dr. Lane said.

With a bit of coaxing, Dr. Lane learned that Tim liked "She'll Be Coming 'Round the Mountain" and "Who Let the Dogs Out." She sang softly, intentionally made up and left out a few words, and waited for Tim to fill them in. When she sang, "He'll be eating mushrooms and spinach when he comes," and stopped, Tim clearly said, "Sounds good to me."

He also sang "Woof Woof" in response to "Who Let the Dogs Out" while "Tim's parents went bonkers and the doctors came running in," Dr. Lane said. "Tim's mom and dad smiled and cried at the same time and wanted to hear more from their son."

The doctors asked her to keep singing while they tested Tim's neurological function. Tim continued to fill in Lane's missing lyrics. After a few weeks of bed rest and healing, he was able to go home. "Young children and adults have a desire to communicate what they're feeling and thinking through music," Dr. Lane said. "It's like a light switch comes on."

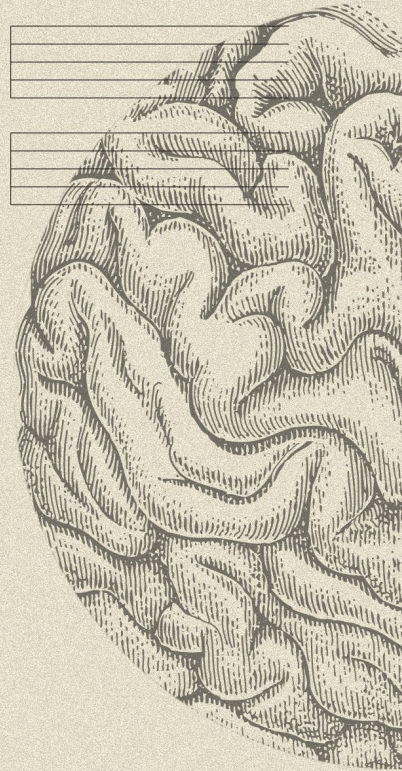
Francis Carr (Cello '21, CAF '23), who earned a bachelor's degree and was a Community Artist Fellow at Curtis, sees

that light switch turn. He curates student concerts at Thomas Jefferson University Hospital in Philadelphia. "When we perform in concert halls, there's a slight disconnect between the musicians and the audience," Mr. Carr said. "Performing in Jefferson Hospital's atrium, with no concert stage dividing us, connections are made."

Visiting family and friends of patients and hospital workers often approach Mr. Carr after each concert to express their thanks. "Listening to a concert can be calming and uplifting for many at the hospital," he said.

Music's Multiple Benefits

The National Institutes of Health (NIH) and the John F. Kennedy Center for the Performing Arts explore the links between music and mental health in their Sound Health: Music and the Mind



Powers





Left: Dr. Francis S. Collins, M.D., Ph.D., former director, National Institutes of Health
 Right: Violinist I-Hao Cheng
 Below: Francis Carr

program. Dr. Francis Collins, former director of the NIH and acting science advisor to President Joe Biden, co-created Sound Health at the Kennedy Center with soprano Renée Fleming in 2016.

“Sound Health explores how listening to, performing, or creating music involves brain circuitry that can be harnessed to improve health and wellbeing,” Dr. Collins said. “This program brings neuroscientists together with musicians to speak each other’s language.

“Music connects with us in powerful ways. Recent advances in neuroscience teach us more about how this works and how that knowledge can be used to enhance the benefits of music interventions for conditions such as chronic pain, PTSD, Parkinson’s disease, epilepsy, traumatic brain injury, and mental health. We’re bold enough to think we might figure out how the circuits in the brain do what they do and use that information to help people with many different disorders that affect the brain.”

Music as Medicine

While music benefits patients and caregivers, Mr. Carr also knows firsthand that performing boosts one’s energy. He

takes part in Curtis’s Medicine + Music program, a partnership with Thomas Jefferson University Medical School where medical students and Curtis students rehearse and perform together. “The life of a medical student is stressful,” Mr. Carr said. “Many medical students and doctors play instruments. They enjoy playing with the musicians from Curtis’s Medicine + Music program. It gives them an opportunity to unwind.”

A 2021 article in *U.S. News & World Report* noted a “disproportionately large number of medical students in the U.S. have a background in music,” including a “considerable number” with formal training. Debra Lew Harder, M.D., D.M.A., co-director of the Medicine + Music program at Thomas Jefferson University, is also a musician and host of the Metropolitan Opera’s radio broadcasts. She’s not aware of the exact number of medical students or physicians who play musical instruments, but it makes perfect sense. “There’s a lot of correlation between medicine and music,” she said. “A lot of the skills you hone as a musician are applicable to medical professionals.”

She points to the physical and mental stamina that musicians and medical

students develop over time and the ability to listen and connect with their patients. “Teamwork and having the ability to pivot when necessary are skills musicians and pre-med students develop,” Dr. Lew Harder said.

Mr. Carr agrees. “Feedback from the medical students is positive,” he said. “It not only helps them de-stress, it helps them connect to their patients.”

“It’s something I can relate to,” he said. “When I’m rehearsing, I relax. And performing can be energizing.” He occasionally performs cello duets with Zachary Mowitz (Cello ’19, CAF ’23), and was also a Community Artist Fellow.

One part of Mr. Mowitz’s fellowship is the Creative Expression Through Music workshop with Penn Memory Center, a weekly program designed for people with dementia and their caregivers. The program features guest performers and Mr. Mowitz leads participants in singing, body percussion, improvisation, graphic score notation, and more. “The program offers respite as well as fulfillment and creativity through music-making,” he said. “For an hour and a half every week, they participate. It’s strictly on a volunteer basis. This allows them to get away

from the daily struggles of the disease. They enjoy connecting with others through music. That's how music works. It allows us to connect on a deep level."

Musicians, Not Music Therapists

Mr. Mowitz and Mr. Carr emphasize that they are not music therapists. "I have a lot of respect for what they do," Mr. Mowitz said.

Mary Javian (Double Bass '99), chair of career studies at Curtis, underscores this point. "We're performers who partner with healthcare workers," she said. "We know music therapy is evidence-based. It helps boost memory, lower blood pressure, reduce stress and depression, elevate mood, and improve speech and physical and motor skills. Our goal as musicians is to enhance the healthcare experience. The music therapist's role is to address the individual's health goals."



For the students in her course, Ms. Javian says, empathy remains the goal. "Empathy allows us to experience what our clients experience. It allows us to be part of their world."

Ms. Javian adds that music therapy is sometimes active, where patients, their families, and caregivers create music.

Other times, it's passive. "Those listening respond to the music," she said. "Music therapy can combine active and passive approaches."

What makes this program work is the fact that Curtis students come prepared and can adjust to different situations. "We have to respect the fact that music is not always welcome," Ms. Javian said. "A patient may be having a bad day. We refer to the music therapists and listen to the healthcare workers before we enter a patient's room."

Music's Impact

At Jefferson Hospital's atrium, people stop and listen or choose to move on. Not everyone is on board. "In a patient's room or a nursing home's public space where dementia patients are wheeled in to listen to a concert, not everyone will be happy," said Sarah Adams Hoover, D.M.A., associate dean for innovation, interdisciplinary partnerships, and community initiatives at the Peabody Institute of the Johns Hopkins University. "Music has the power to heal and to harm.

"We know music can reduce the length of a hospital stay and reduce the amount of medication for some patients. Music can also be used to cause harm by triggering negative memories."

Dr. Adams Hoover explains this in her book *Music as Care: Artistry in the Hospital Environment: CMS Emerging Fields in Music*. "Heavy metal and other genres were used as a form of torture to accompany waterboarding. That's one extreme," she writes, referring to the Iraq War. "Loud music or music that someone doesn't like can feel overwhelming. A lot of untrained people with good intentions can cause anxiety and confusion when the music doesn't serve the needs of the client."

According to the American Music Therapy Association, music therapy plans should meet specific needs of the individual or group. "Patients should be able to have the choice of whether they want to hear the music or not," Dr. Adams Hoover said. "In some nursing homes, patients are wheeled into a performance space regardless of whether they want to be there. Like any other resource brought into a

healthcare environment, the music has to be carefully matched to the situation."

The term, "first, do no harm" is a guiding principle for physicians. Dr. Adams Hoover wants all who work in healthcare settings to follow that belief and be mindful of the type and length of the music, the patient's musical preference, when to stop, and what to do if things go awry. "I know Mary's program at Curtis works because she takes that all into account," she says, referring to Ms. Javian's social entrepreneurship curriculum.

Giving Healthcare Workers a Voice

Many frontline healthcare workers suffered immensely due to COVID-19. "Alan Tolbert, one of our graduate students, wanted to raise awareness about the burnout frontline healthcare workers faced," Ms. Javian said. "He commissioned Edward Babcock (Timpani and Percussion '15), a Curtis composer, to write a piece for string quartet that incorporated spoken stories from healthcare workers."

Called *The Hero's Quartet*, lyrics ranged from a healthcare technician talking about risking his life while treating patients with COVID to a nurse dealing with PTSD. One healthcare worker said she felt like she aged 20 years in one week. Others expressed fear of bringing COVID home to their loved ones.

"Working on this gave healthcare workers a voice," Ms. Javian said. "It allowed them to express their feelings and be listened to."

Hippocrates, the father of clinical medicine, played music for his patients who suffered from mental illness around 400 B.C. Today, many physicians, musicians, and music therapists observe a multitude of benefits that come from playing, performing, and listening to music.

"We know music shares brain areas with movement, memory, motivation, and reward," Dr. Collins said. "The scientific evidence so far shows it's more than an emotional connection."

Michele C. Hollow writes about health, mental health, pet care, climate, and lifestyle.