



A SUMMER TO UNDERSTAND LIFETIMES

WHAT'S LIFE REALLY LIKE FOR
PEOPLE OUR STUDENTS WILL TREAT?

BY CRISTINA ROVALIS

ILLUSTRATIONS | ATHENA CURRIER



Through a new summer enrichment program, med students are learning from community mentors. As part of her project, Taylor Williams participated in a festival focused on children with autism.

Susan Burke had long suspected something was different about her son when he was 6, but she couldn't put her finger on it. She marveled at how Jack (not his real name) could memorize scene after scene in movies, so she knew he was intelligent. But he also spent much of his time seemingly in his own fantasyland; and when he would play in the vicinity of other children, he wouldn't really engage with them. His mom just couldn't figure out why.

When she and her husband sent him off to first grade, Jack's behavior became more concerning after he and a classmate had a physical altercation. To get to the root of his misbehavior, he was referred to a school psychologist, which ultimately explained a lot. Jack was later diagnosed with autism.

The earlier intervention begins, Burke learned, the more dramatic a difference it can make for developing social skills and maximizing learning potential for youngsters like her son.

The Burkes did everything they could to get Jack services. In elementary school, he received an IEP (Individualized Education Plan), which outlines personalized educational goals and services for children with disabilities. He also attended a special summer camp for children with autism. In these group-based therapy settings, one thing always stood out.

“We were the only Black people there,” recalls Burke.

That was often the case back when she was trying to get services in the 1990s. Jack is in his 20s now.

Historically, Black and Hispanic children have been diagnosed with autism at lower rates than white children. A 2017 study based

physical conditions in which people are born, grow, live, work and age—has been a priority for Anantha Shekhar, senior vice chancellor for the health sciences and John and Gertrude Petersen Dean of the School of Medicine at the University of Pittsburgh.

When he began his leadership positions, he made it clear that the School of Medicine was committed to advancing medical education and research that promotes health equity. He was right in line with many students at Pitt Med. During the 2020 summer of civil unrest, students lobbied the University to teach through the lens of social justice, recalls Noble A-W Maseru, director of social justice, racial equity and faculty engagement for the health sciences.

As a response, school leaders created a summer SDoH enrichment opportunity for first-year med students; 2022 was the second pilot year of the program.

When a physician addresses the issues through a lens of health equity, Maseru says, studies show it’s more likely patients will not return with the same issues over and over.

Taylor Williams (Class of ’25) is a second-year med student who completed what’s called the dean’s summer research project after her first year. Students who opt to do this project receive a summer stipend to devote 40 hours a week to conducting research in collaboration with a faculty research mentor. That’s nothing new at the school. It’s often the first foray into a required longitudinal research project that students pursue through graduation, typically offering opportunities to publish papers and give scientific presentations.

But the med students now have the option to spend an additional 16 hours that first summer on an enrichment component, which has them talking to real people about real barriers to good health. The SDoH project gets them

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on CDC data showed that white children were 19 percent more likely than Black children and 65 percent more likely than Hispanic children to be diagnosed with autism between 2002 and 2010.

While the disparity has narrowed significantly according to 2018 data, some are still falling through the cracks. Fewer Black children are screened by the recommended age of 36 months. And more can be done to identify Hispanic children on the spectrum in some communities.

Lu Randall, president of Autism Connection of Pennsylvania, isn’t surprised by what the Burkes experienced. Randall says that too often children from underrepresented groups still aren’t diagnosed properly until there is a behavior problem in elementary school or later—years after the ideal time for a diagnosis.

The delay in diagnosing Burke’s son demonstrates how a life can be impacted by the social determinants of health (SDoH). Addressing SDoH—the social, economic and

Maseru, who codirects the program with Leslie Hausmann, assistant dean for medical student research, says understanding socioeconomic factors leads to better outcomes for children like Jack. He cites a CDC study showing that life expectancy in the United States increased from 47 years in 1900 to 77 years in 1999. Of the 30-year increase, 25 were attributed to improvements in SDoH, such as safer cars, safer workplaces and safer and healthier foods and homes. Also key: a living wage, less racism and a healthier social environment.

“The conventional thinking is that medicine—the diagnostic intervention—is the silver bullet,” Maseru says, “but the science proves otherwise.”

A doctor should look at the person in the context of their environment, he adds: “Maybe the person doesn’t get exercise, which is attributable to the community where they live not being walkable. Or if they are malnourished, it may be because they live in a food desert.”

out of the bubble of med school, where they spend the first year buried under books, memorizing bones, muscles and glands and immersing themselves in genetics, immunology and neuroscience.

“Students are very focused on learning the body systems and how to recognize problems and what to do about those problems,” says Hausmann.

“There is so much biology that needs to be learned, and the community piece hasn’t historically been baked into the medical training. So this is an opportunity to expose students early on and get them out of the University and into the community. They can see the different issues that people may be facing and grappling with as they engage with the health care system.”

Williams, like other med students taking part in the dean’s summer research SDoH project, was paired with a mentor in the community. Pitt compensates these professionals for their expertise and time, notes Maseru.

Autism Connection’s Randall mentored



Some kids are expected to prepare meals for younger siblings when they themselves are quite young. Lucy Cheng ran a cooking class with those youngsters in mind.

Williams, who decided to help spread the word about the importance of early detection of autism to families with Black and other under-represented children.

Williams came into the program knowing that the medical establishment sometimes fails to diagnose children of color with autism. Lu Randall encouraged her to find out why parents might not seek out a diagnosis. The student learned that some view a child's atypical social interactions as part of their personality. And some sense stigma about disabilities.

In recent years, significant progress has been made in closing the diagnosis gaps, yet disparities persist in certain subgroups, including Black kids with autism who do not also have an intellectual disability. Many of these students aren't receiving special education services in school, which might lead to problems making friends and self-regulation in the classroom.

"It's so important for doctors to recognize this, and there's often a lack of focus on this in med schools," says Randall.

Williams has a personal connection to the topic. Her younger brother is on the spectrum, and she saw firsthand how early intervention helped him reach his potential. She says he's a "super-social" high school student who is a member of the marching band and plays dek

hockey.

For her dean's summer research project, Williams focused on how having a disability limits access to care. A patient may have issues with transportation, or a doctor's office might not accommodate a patient's physical or sensory needs. When Williams met with Randall, they discussed ways to equip physicians at community health centers to diagnose kids on the spectrum and to encourage Black parents with concerns to seek a diagnosis.

In their meeting, Williams learned that Randall and a young man on the spectrum had talked about creating brochures to distribute at community health centers. They decided that Williams would write a plain-language brochure telling parents about signs of autism in children of different ages.

From the pamphlet, parents will learn that younger children might not respond to their name or avoid eye contact, while older children might find it hard to say how they feel.

Williams also touched on the stigma of autism in some communities.

She notes that the lack of diagnosis can become problematic when children are expected to follow specific school routines and social cues.

"This can cause issues adapting and look

like purposeful behavioral disturbances when truly it's caused by being overwhelmed or overstimulated."

Williams also helped Randall plan ways to connect with people during an event called Autistic Urban Connections Fun Days in the Pittsburgh neighborhood of Hazelwood.

That Sunday in late summer, Williams met with families and used sensory-friendly toys as tools to start conversations. She engaged in games with the kids and their families, spending time learning about them as they played.

She says the kids ranged from very verbal to nonverbal, including one child who didn't say anything but lined up candies methodically. "Everyone communicated in their own way," Williams recalls.

She talked to a mother who was well-informed about autism but had never heard of a developmental pediatrician (a doctor who specializes in diagnosing developmental disabilities in children). It made Williams realize that even some parents who are tuned into the autism world may not be aware of all the resources available.

And now, after her experience this summer, Williams is even more inclined to explore a career as a developmental pediatrician—perhaps specializing in autism spectrum disorder

and ADHD: “I want to focus on helping a child have the proper tools growing up.”

When driving through the streets of Braddock, just east of Pittsburgh, Lucy Cheng (Class of '25) can't help but notice the lack of grocery stores. Despite the food pantries and community gardens, she sees how difficult it is for residents to get fresh and healthy food in what was once a bustling steel town.

But good nutrition is not just a matter of accessibility.

Cheng now knows that some of the youngsters she drives past are tasked with taking on a lot of responsibilities for children of their age.

Elementary and middle school kids are often expected to prepare meals for them-

He shrugged.

She convinced him to take a bite. He did and shrugged again. “Thank you for trying it,” she told him.

That's the point of the program—to expose kids to healthy foods, as well as teach basic nutrition and cooking skills.

The summer project is an offshoot of Cheng's clinical research project on pediatric facial fractures, often caused by falls and motor-vehicle accidents. Given the importance of nutrition in the healing process, Cheng decided to look more broadly at pediatric nutrition education in communities where food insecurity is common. She cites a study from the University of Virginia showing that the dramatic rise in childhood obesity and diabetes is most prevalent among kids of

Chillinsky was happy to see kids trying new dishes and flavors in Cheng's classes. “I would like them to say their favorite food isn't Hot Cheetos, but tacos they have made with their moms,” Chillinsky says. “It is more filling and nutritious.”

The program will continue this fall as part of Cheng's yearlong Albert Schweitzer Fellowship, a graduate student award designed to develop leaders who can address the health care needs of underserved communities.

She's hitting the books again for her second year of medical school, but Cheng will continue teaching a simpler version of the weekly cooking classes, enlisting other med students as volunteers. “I want to be able to impart some skills and confidence in the children so they feel less unprepared and alone when they are cooking.

“I would like them to say their favorite food isn't Hot Cheetos, but tacos they have made with their moms.”

selves and younger siblings while their parents are at work.

And, not surprisingly, kids tend to resort to easy options like chips and other junk food, her SDoH enrichment mentor, Melissa Chillinsky of Heritage Community Initiatives, informed her. Heritage is a nonprofit that provides out-of-school-time education and meals to youth.

That's why Cheng's SDoH enrichment project looked like a day in the kitchen with an older cousin. On a recent summer day, she stood in a brightly colored classroom, showing elementary and middle school kids how to mash avocado into a bowl, blend in cilantro and squirt in lime. They were making guacamole for a taco dish with pico de gallo.

“A lot of time, we say fat is bad; but avocado has healthy fat,” she told the 12 kids rotating between three stations.

Then came the moment of truth—would the kids eat what they made?

One little boy made a face when he saw the guacamole, saying, “I don't like green stuff.”

“Why don't you like green stuff?” Cheng asked him.

lower socioeconomic status, and that it can be attributed to changes in activity level and meal preparation.

Chillinsky, codirector of the Heritage Out-of-School Time (HOST) program, says, “A lot of our kiddos have to play a mature role at home, but they don't necessarily have the skills to do it. In past years, we've seen a lot of their daily intake of food is just chips or candies.”

Cheng had some exposure to food insecurity already: In her hometown of Chicago, she signed people up for SNAP benefits. When she worked for a tech company on the West Coast, she also taught cooking classes to low-income Bay Area families.

She still learned plenty from her experience working with Chillinsky and the teachers in the out-of-school program, including priceless tips for getting the kids involved.

They told Cheng: Pair reluctant kids with those who were more eager.

Also: Kids get motivated by doing little tasks, like juicing a lemon.

“I was surprised by how much they wanted to get involved in the entire process, even if they didn't enjoy the food itself,” says Cheng.

“Ultimately, it's about meeting the kids where they are. Hopefully, by doing so, we can help them make small healthy decisions that turn into life-long healthy habits.”

Williams' pamphlet would have been helpful to the Burke family. Although they had done everything they could think of to help Jack, Susan Burke's one regret is that he wasn't diagnosed in time to receive language and social skills therapy at an early age.

She pointed out concerns to her pediatrician, but her son was not diagnosed. He did graduate with his class, but the bullying that began in elementary school intensified in middle and high school, leaving him with severe anxiety. “He almost didn't graduate because of bullying.”

Randall points out that bullying can often escalate into discipline problems for the autistic child.

“The child will have an outburst, and then adults come running; and it gets louder and louder and the child has a heightened sensitivity. He may not even know what he is doing,

screaming and pushing people away. If he pushes the wrong person, he can be in a huge amount of trouble.

“If they’re not diagnosed when they are 2 or so, it becomes a cycle of discipline. They are getting timeouts in daycare. They can own that feeling: ‘I am a bad kid.’

“If you are not diagnosed correctly, people give you punishment instead of support.”

As Williams wrote the brochure, she thought about how her brother didn’t speak much as a preschooler and was easily overstimulated. But because he was diagnosed early, he saw a developmental pediatrician as well as speech and occupational therapists from a young age.

His therapists helped him work through difficult social situations and try to respond

to them rationally rather than emotionally. He can now adapt to typical life stressors and other unpredictable situations.

“I cannot imagine all of the children and families who do not receive that support, and how much harder that makes navigating social situations and life,” Williams says.

“It is harder to deal with an issue and adapt when you are not given the tools to do so.” ■

AWARDS HONOR SOUTH-PAUL

In the first year of the social determinants of health enrichment program, 2021, Pitt Med recognized two students with Jeannette South-Paul Awards, **Shruthi Venkatesh** and **Danielle Gruen**. The awards, named for revered former chair of family medicine South-Paul, recognize students who did exemplary work in their enrichment projects.



Shruthi Venkatesh

Venkatesh realized that sometimes people with multiple sclerosis had to buy expensive wheelchairs, stair lifts and other assistive devices to get around in their day-to-day lives. But not until she met with people who had the disease did she realize how daunting and frustrating the process can be.

For her summer project, she talked to members of the Pittsburgh MS Empowerment Support Group and Pennsylvania Keystone Chapter of the National MS Society. “Each insurance company is different in terms of approved assistive devices. Many do not offer financial assistance for purchases at all.” Getting grants from national nonprofit organizations also can be difficult, they told her. “It was eye-opening.”

Her summer research project has made Venkatesh even more interested in researching neurodegenerative diseases such as MS and Alzheimer’s. When she becomes a doctor, she says, she will be more sensitive to the day-to-day struggles of those living with chronic illnesses.

For her project, Gruen, who came to Pitt Med with a PhD in biogeochemistry, examined the history of the Freedom House Ambulance Service and its role in the foundation of emergency medical services (EMS) in Pittsburgh. The service, which became a national model, started in 1967 serving Pittsburgh’s predominantly Black Hill District community and staffed by mostly Black medics.

Gruen conducted interviews with community advisors, founders of the Freedom House Ambulance Service, including Philip Hallen, and organizations aimed at increasing diversity in EMS.

“It’s really important to amplify” voices from the community, says Gruen, who is interested in practicing emergency medicine.



Danielle Gruen



Jeannette South-Paul

This year’s South-Paul Awards went to Taylor Williams and Caitlin O’Brien.