A PUBLICATION OF NORTHEAST OHIO MEDICAL UNIVERSITY • **VOL 18.2** FALL 2017

IGNITE

IT NEVER GETS **EASIER**

As an avid cyclist who has been riding for decades, I enjoy long rides. From the wonderful trails and metro parks of Northeast Ohio to the national parks of Colorado and the hills of Los Angeles, my up and downhill travels contribute heavily to my wellness—both physically and emotionally.

Though I start out knowing where I ultimately want to end up, I realize each time I set out to ride that I have to think beyond a single destination point. There are things of beauty to appreciate and alternate pathways along the way to consider. The most difficult journeys get better over time: You just have to keep working hard to improve the outcomes. Or as cyclist Greg LeMond once said, "It never gets easier, you just go faster."

The mothers and fathers of children in contact sports may hear similar mantras from youth league coaches, but ease is the least of Dr. Holly Benjamin's concerns in "Hard Knocks: The Public Health Problem of Concussions." It's the thought of a thousand hits to a kid's head before high school that frightens her.

The difficult journeys of the migrant worker are not easily imagined, but the Hartville Migrant Clinic strives to provide a place that nurtures and appreciates those who return each year. "Planting Roots" draws you in to the essence of whole-person wellness. This Plymouth Rock of migrant care was where the first migrants in the U.S. were assisted through the Migrant Health Act of 1962. A half-century later, migrant workers still come and go for all kinds of needs: GED and ESL classes, medical attention, donated food and supplies.

Many things created to benefit humankind have peaks and valleys. Even those with more highs than lows are not beyond reproach. "The Determinants that Make up Your Cabinet" confronts the discourse surrounding Medicaid. By providing facts from independent findings, the article enables readers to better understand the impact of Medicaid and leaves them with questions to consider.

While one NEOMED student's experience ("Ibrahim's Dream") reveals a path that was new to him but helps him better understand the plights of the underserved, a group of NEOMED students' experiences in the SOAR Student-Run Free Clinic shows us the inside of "A Medical Home like No Other," where students learn by listening.

Achieving whole-person wellness is as much about the journey as it is the destination. Dr. Ashley Brown, a 2013 NEOMED College of Pharmacy graduate, explains it well when discussing motivational interviewing techniques for engaging those with drug addictions. In "Getting to Yes," Dr. Brown says that the more you start to highlight a patient's successes over time, the more open and willing they become to sustaining the changes you've been desiring for them all along.

Journey. Time. Wellness.

It never gets easier.

Jay A. Gershen
President

IGNITE

VOL 18.2 FALL 2017

Northeast Ohio Medical University is a community-based, public medical university with a mission to improve the health, economy and quality of life in Northeast Ohio through the medicine, pharmacy and health science interprofessional education of students and practitioners at all levels. The University embraces diversity, equity and inclusion and fosters a working and learning environment that celebrates differences and prepares students for patient-centered, team- and population-based care.

Ignite magazine (Fall 2017, Volume 18, No. 2) is published twice a year by the Office of Public Relations and Marketing, 4209 St. Rt. 44, P.O. Box 95, Rootstown, OH 44272-0095

Email: publicrelations@neomed.edu

Jay A. Gershen, D.D.S., Ph.D., President

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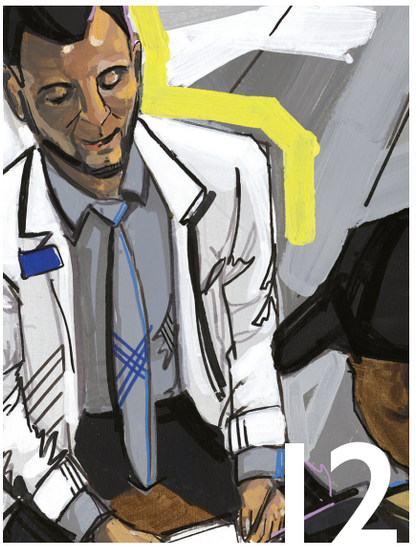
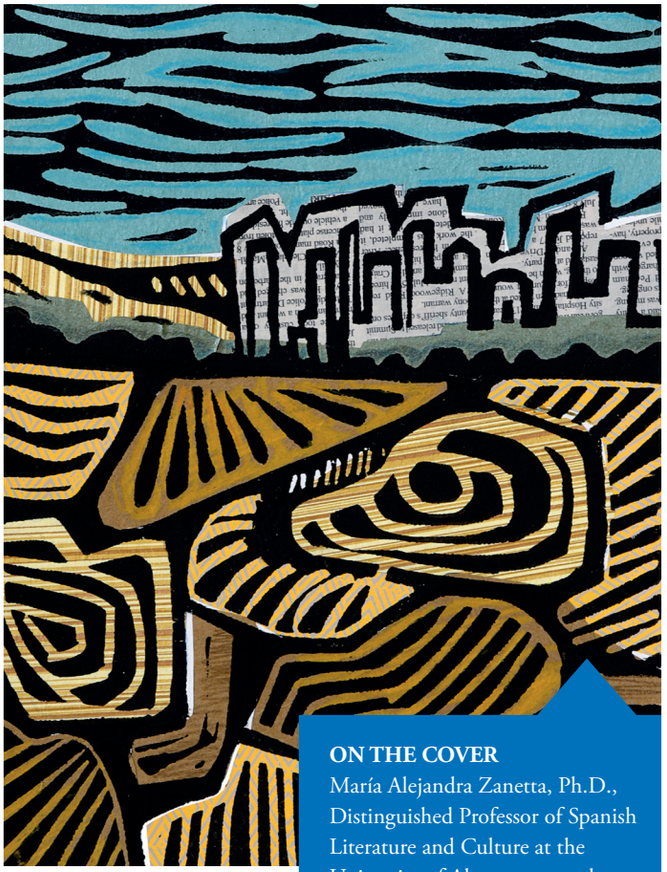
As a health sciences university, we constantly seek ways to improve the health, economy and quality of life in Northeast Ohio. The Accent Opaque paper used for this magazine has earned a Forest Stewardship Council (FSC) and a Sustainable Forestry Initiative (SFI) certification. Strict guidelines have been followed so that forests are renewed, natural resources are preserved and wildlife is protected. *Ignite* was printed by Printing Concepts in Stow, Ohio, using soy inks.

DEPARTMENTS





ON THE COVER
María Alejandra Zanetta, Ph.D., Distinguished Professor of Spanish Literature and Culture at the University of Akron, captured NEOMED's rural/urban landscape in a linoleum print with collage.

Ignite placed third internationally in the 2017 Council for Advancement and Support of Education Circle of Excellence Awards Program. It received CASE's Bronze Award for Magazine Publishing Improvement.

FEATURES

PLANTING **ROOTS**

BY ELAINE GUREGIAN

Driving through Northeast Ohio's gently sloping farm country near NEOMED is like entering a world apart from the urban centers of Akron to the west and Cleveland to the north. Soft swaths of amber-colored crops alternate with crisp, golf-course-green fields and patches of the coal-black soil known as muck. As my car crunches onto the gravel parking lot next to the Hartville Migrant Center—a tidy renovated white farm house—I spot several farm workers, identifiable from their wide-brimmed straw hats and sun-shading headscarves, getting back into a truck. People come and go here for all kinds of needs: GED and ESL classes, medical attention, donated food or supplies. Tonight, I'm here to observe the latest addition: a yoga class.

1962 was the year that the original umbrella organization called the Hartville Migrant Ministry became a 501c3 nonprofit. It was here, at the oldest standing free clinic in Ohio, that the first migrants in the U.S. were assisted through the Migrant Health Act of 1962, which authorized federal funding for primary care to migrant farm workers. Each year, as the same seasonal farm workers return to Hartville, NEOMED alumni, faculty and students collaborate on a regional team of professionals and students at the Hartville Migrant Clinic to keep the families healthy.

Inside the small wood-frame building, volunteers are standing by to help. Because it's Thursday, loaves of bread are displayed on a table with a sign saying they're free. When a farm worker enters and gathers a couple of loaves, a student from a nearby university greets her in Spanish and urges her, like a friendly grandma, to take one more. Walk further, past a library brimming with children's books in Spanish and English, and you enter a central community room surrounded by several medical examination rooms. Here, visitors can read about the dangers of the West Nile Virus (and help themselves to a can of insect repellent) or learn anatomy through the bilingual posters that paper the walls.

Two BS/MD students from the University of Akron are here to observe and learn from tonight's yoga class, led by their medical Spanish professor, Parizad Dejbord Sawan, Ph.D. Also at the class is Haley Coleman, Class of 2019, NEOMED College of Medicine, who recruited Dr. Sawan as a yoga instructor after she and Neha Chevali (a Class of 2018 College of Medicine student) took the professor's Conversation for Future Health Care Professionals class at UA. Last summer, as volunteers through NEOMED's Hispanic Community Outreach Group (HCOG), Coleman and Chevali had felt the desire to help the migrant workers further, but they wanted to be sure that any new pro-

Illustration: **Lizzi Aronhalt**

gram they offered would be one that the workers themselves valued—not something superfluous. They conducted a survey asking people about their health habits and knowledge. Based on the results, they organized a new Thursday night yoga class, led in Spanish by Dr. Sawan.

INHALA, EXHALAMOS

Flexibility is needed, and not only to stretch into poses for the class that was originally scheduled for 5:15 p.m. Tonight's yoga session is delayed past the already-adjusted starting time of 5:45 p.m. because the instructor received a message that the migrant workers were held over to work later in the fields. The medical clinic serves workers from four nearby farms, whose owners all have good relationships with the clinic's physicians and volunteers, says Medical Director Teresa Wurst, M.D. ('93). When a migrant worker needs to adjust their work schedule for medical reasons, the farmers make allowances, too.

So, the group waits. At 6:10, worker Beatrice Gutierrez arrives with her young granddaughter, who is quickly welcomed by a volunteer. Gutierrez changes into new exercise pants (one of the many items donated to the clinic) and a shirt designed by one of the volunteers that says "Breathe. Balance" in Spanish. Before the class begins, she tells me about her day hoeing red lettuce and escarole.

"What hurts?" I ask her. "Everything," she says, with a small smile. She points to her shoulders, miming the action of swinging a hoe, then gestures toward her knees with a grimace. "When we are weeding parsley on our knees, our knees start to hurt," she explains.

Repetitive stress and overuse injuries are among the most common reasons the workers come in to see Dr. Wurst. After 18 years running the clinic, she knows to keep well stocked with splints on hand to relieve pain, including carpal tunnel problems. Like Beatrice Gutierrez, Dr. Wurst hopes that yoga's stretching and breathing techniques will help ease the workers' chronic pain.

Yoga is new to Gutierrez, but she's quick to move into the poses accompanied by the instructor's gentle directions to inhala (inhale)—and hold the breath while counting uno, dos, tres, quatro, cinco; then to exhalamos (exhale) while counting again. The room fills with the sound of slow, heavy exhalations. Later, when one of the participants gestures that her wrists hurt when she rests on them in a pose, Dr. Sawan shows her how to lean on her forearms instead. Yoga lends itself to modifications. Its movements can be adjusted for a farmworker whose joints hurt from the repeated motions of weeding or cleaning vegetables, making it useful as a restorative practice.

MANY RETURNS

Like most of the seasonal workers served by the Hartville Migrant Center and its medical clinic, Gutierrez has returned for many years—about 20, in her case. Dr. Wurst estimates that more than 95 percent of the clinic's clients are Mexican. The others include Americans from the southern U.S., a few Jamaicans and a few local workers. In conversation, Gutierrez, who identifies herself as being from Florida, speaks Spanish as readily as English. Her four children were already born when she started working in Hartville, so she didn't need the pregnancy care; still, it helps her a lot to have doctors available and to have blood work performed right at the Center.

Not only do many of the migrant workers have a long history with this clinic; so does NEOMED. There are alumnae like Dr. Wurst, who sees patients at the clinic every Thursday and from May through the end of October, and Katherine (Katie) Sheridan, M.D. ('06), an OB/GYN who sees patients at the clinic on Tuesdays during that period. Board president Lora Wyss, Ph.D., the clinic's nursing director, is a NEOMED faculty member. There's also a long tradition of student volunteers, including from NEOMED's HCOG.

Dr. Wurst first learned of the clinic through a colleague at Aultman Hospital, where she is on the family medicine faculty. "I had studied Spanish in high school and I thought it sounded like fun—I could use my Spanish. I didn't know much about what went on out here, but when I came out here, I just loved it. It's just so rewarding. The people are so grateful for what you do. There's a woman who cooks us food every week, just as a thank you. I take care of her whole family and have since I started here," she says.

One example of the routines Dr. Wurst and team have established is Head Start Day, when a crew of professionals and volunteers organizes itself, assembly-line style, to get patients through the paperwork and process of annual physicals for children age five and under who are at day care while their parents work. The help doesn't end when the workers finish their six months in Hartville: The physicians at the clinic often arrange for workers to continue obtaining needed medications during the six months when they are working elsewhere. The physicians have even been known to connect with colleagues in towns where the workers have gone next, to provide follow-up care.

In an age of 15-minute visits, doctor-patient interactions at the clinic can be unusually personal and the physicians have the option of taking the time they—and the patient—need. In this pocket of rural Ohio, care comes to the people. And the system, supported by hospitals, universities, volunteers and a network of grants from loyal individuals and foundations, continues to work.

TENDING THE **NEXT GENERATION**

When Katie Sheridan, M.D. looks around the waiting room at the Hartville Migrant Clinic, she feels connected.

She has spent every summer since 2003 at the clinic, first as a NEOMED student, then as a resident—and for the last seven years, providing obstetric care. She figures she has delivered around two dozen babies—some of them now toddlers, returning for vaccinations. Dr. Sheridan loves practicing medicine with people who otherwise wouldn't have access to it. She's driven to serve people who don't have healthcare because they don't have money or transportation or insurance.

"The population of people we see are hard-working, good people. There are so many racial tensions, including tensions regarding immigration, but when people in some of the border states flare up about immigrants, I wish they knew that the people we see are not causing trouble. They are there to work hard and raise money for their families," says Dr. Sheridan.

"Here at the clinic, sweeping the floor is as important as writing a prescription. I remember Dr. Wurst saying that to me when I was a student and I wholeheartedly agree. No one of us is too good to change a roll of paper towels or the sheet on the exam room table. ***We're all here to keep things going."***

— Katherine Sheridan, M.D.

She started at the Hartville clinic after her first year of medical school, working on a project to educate the Mexican population about the dangers of latent tuberculosis. Because of the continued high risk in that population, the clinic's nursing director, Lora Wyss, Ph.D., and her students complete several hundred TB tests the first week of June on kids and adults alike. If they are positive, patients are treated with medication to prevent active infection, using a 12-week regimen.

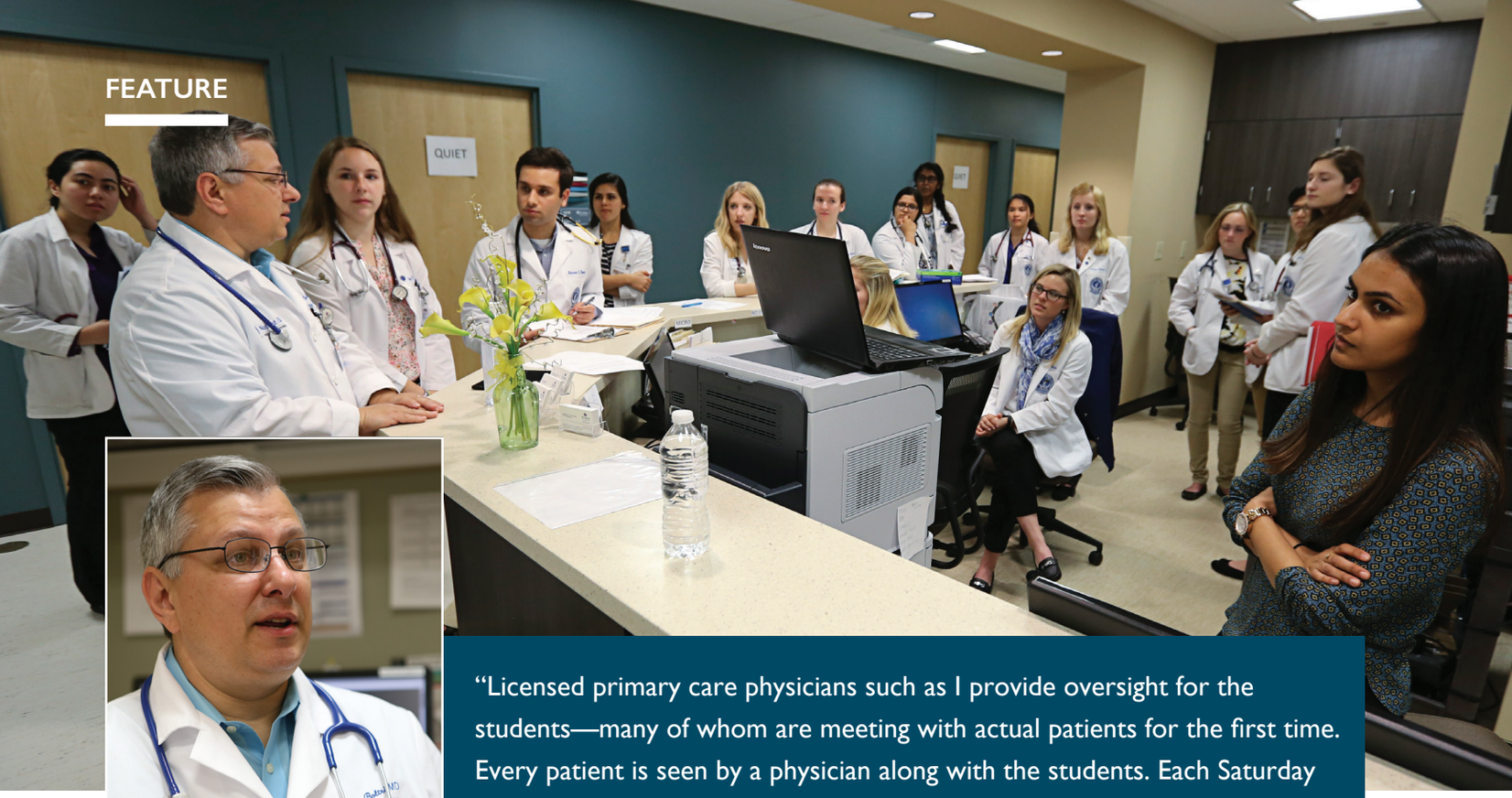
Off-site hours at Hartville are built into Dr. Sheridan's schedule at Aultman Hospital, where she practices in the Family Residency Clinic. "For pregnancies at the Migrant Clinic we can do labs, OB-related exams, measuring the baby, listening to the heartbeat, labs—all the regular prenatal care that doesn't require large equipment," she says. "Doing OB within family medicine creates a different bond. It's extreme continuity. I speak Spanish and if the mothers speak only Spanish, I can speak directly to them while they are delivering –instead of going through an interpreter. I think that creates a special bond."

She remembers the ages of many of the migrant children she has delivered by connecting them to when she was pregnant with each of her own five children. Like these mothers, Dr. Sheridan has always worked right up until she delivered—but she realizes the differences in their situations: "I'm not working out in the field in the heat." She has found that the farm bosses are willing to make accommodations, like reassigning a pregnant woman to a seated job, like packing. What strikes her is that the pregnant women don't ask for a lot. "The way they see it is, working is just what you do, right up till you deliver."

What's also interesting to Dr. Sheridan, from a teaching perspective, is that sometimes the pathology of disease in the farm worker population is unusual. Because medical services aren't readily available and diseases aren't addressed early, students will see classic, textbook presentations of things that they wouldn't necessarily see otherwise.

One person whom Dr. Sheridan has mentored for a few years now is Josiah Smith, who started as a pre-med undergrad "eager to do everything and anything" and is now in his third year in the College of Medicine. "What struck me the most in my time at the Migrant Clinic was the community of people who help to make the clinic possible. Whether physicians, nurses, office coordinators, interpreters, students, or any other volunteers, all the people there had a passion for service," he says. Working together, they provide health care to a group of people who otherwise probably would go without.

– ELAINE GUREGIAN



"Licensed primary care physicians such as I provide oversight for the students—many of whom are meeting with actual patients for the first time. Every patient is seen by a physician along with the students. Each Saturday session of the clinic begins with a full team meeting of all of the volunteer students to discuss our two primary goals: to provide the best patient experience and to provide the best student experience." – *John Boltri, M.D.*

A MEDICAL HOME **LIKE NO OTHER**

BY ELAINE GUREGIAN

Deductibles over $10,000 a year. Medical insurance that disappears altogether after retirement.

The list of barriers goes on. For many, regular visits to the doctor are out of the question. At a time when Medicaid expansion is being questioned and insurers are pulling out of the state exchanges begun under the Affordable Care Act, obtaining and keeping health care that can be used for anything other than dire circumstances has become out of reach for many people.

When the Student Outreach to Area Residents (SOAR) Student-Run Free Clinic opened on the NEOMED campus one year ago, the first patient spent more than two hours talking with the students running it—a sure sign that people desperately need access to care and to have their stories heard, says Kathleen (Katie) Fay, College of Medicine Class of 2018 and the clinic's chief medical officer for the 2017-18 academic year.

Stephanie Koppes, College of Pharmacy Class of 2018 and pharmacy executive officer at the clinic, says many practices are under time constraints and don't have a lot of time to spend with each person: "Some patients I've seen have been really grateful, because they feel that they're being heard. It's great that they have the time to express their concerns."

TEACHING THEIR PEERS

"It's amazing to me that the students really do everything, behind the scenes and with patients at the SOAR clinic," says Fay. One Saturday each month, the clinic is open for medical visits. Medication management—where pharmacy students help patients sort through their medications to review each one's purpose, along with potential side effects and interactions—is available, too. Medicine and pharmacy students work as a team whenever the clinic is open, and the more advanced students coach the less experienced ones.

They can't wait to get there. "As first- and second-year students, you don't have the opportunity to go see patients; you're just learning out of books. Volunteering at the clinic gives the you the opportunity to see patients," says Haley Coleman, who for the 2016-17 academic year was the clinical executive officer. She was working that year as a Volunteers in Service to America (VISTA) worker for AmeriCorps and is now back for her third year in the College of Medicine. Another key person in the clinic's first year of operations was the 2016-17 chief medical officer, John

Photos: **Lew Stamp**

"We were discussing a patient with multiple concerns who hadn't been treated in three years, due to lack of insurance. I wanted to make sure the patient navigator confirmed which medications the patient was currently taking. I was teaching the navigator what additional questions to ask and where to record this information in the chart." – *Haley Coleman, COM 2019*

"This patient had been trying to eat healthier since coming to the clinic three weeks earlier, but she had not added any exercise into her routine. She was concerned about her weight because she also has high blood pressure, and she was told that losing weight along with taking her medications could help with that. I was reassuring her that losing weight can be hard, but we would only know her progress if she stepped onto the scale." – *Meghan Gorbach, COM 2020*

Hill IV, M.D. ('17), who has now begun his residency in emergency medicine.

LEARNING BY DOING

A typical day begins with attending physician John Boltri, M.D., a NEOMED professor and chair of the Department of Family and Community Medicine, holding a staff meeting. When the doors open, a reception team of two students greet each patient and show them to their examination rooms, where they take their vital signs and give them screening tests for conditions such as anxiety and depression if their answers in conversation indicate a need.

Led by a fourth-year medicine student, a team of two second- or third-year medicine students take a thorough history and complete a physical exam. They then leave the exam room to present the case to Dr. Boltri or another attending physician and devise a treatment plan. During this time, pharmacy students and a licensed pharmacist listen in on the case presentation and weigh in on the treatment decisions.

Within 10 minutes, the students and attending physician return to the patient's examination room to propose the vetted treatment plan. When needed, the pharmacy students, under the guidance of a licensed pharmacist, will go in to discuss new or current medications in detail with the patient.

So it goes for each patient. At the end of the day, the whole staff gathers for a 30-minute debriefing. Sitting in a circle, each student takes a turn to talk about their cases, how the process worked or could be improved, and what they got out of the day.

TIME FOR CARE

Russell Risley, who retired several years ago as an air quality engineer for the Summit County Health District, does have insurance. "But they might as well call it catastrophic, because the family deductible is $13,600," he says. When he saw a brochure for the SOAR clinic at the Giant Eagle grocery across the street, he and his wife, Maria, became two of the clinic's first visitors—and their most loyal. The Risleys have now visited the clinic a half-dozen times. Right off the bat, from routine blood screenings, they discovered that Maria was diabetic. The physicians put her on a regimen of glucose-lowering drugs and counseled her to eat smaller portions. Pharmacy students explained the medicines and the procedures for taking them, answering her questions about risk factors and side effects. The result: Her cholester-

"The patient I was seeing had a lot of concerns. It was nice to be able to address her concerns, reassure her and provide her with the prescriptions and referrals she needed. Participating in the clinic has helped solidify that I want to go into family medicine." – *Katie Fay, COM 2018*

ol readings have dropped. So has her weight. Maria is determined to improve enough that she can maintain the good readings without medicine.

The couple has thrived on what Russell Risely calls the "no-rush environment" at the SOAR clinic. They like and trust Dr. Boltri ("He doesn't talk a lot, but you know he's thinking") and feel good that as patients, they are contributing to the students' education—just as the students are helping them.

COLLABORATING FOR THE PATIENT

The interprofessional concept helps everyone, says Kelsey Wasko, College of Pharmacy Class of 2018 and pharmacy vice executive officer at the SOAR clinic. Initially, at least, a lot of medicine students really don't realize the cost of certain medications, she says. "They're like, 'Oh, this is first line,' (the standard, preferred medication) but then I'm like, 'But it costs $300 and the patient doesn't have insurance.' The idea at the clinic is that the students teach each other, under the watchful eye of Dr. Boltri or one of his colleagues from the Family and Community Medicine department, such as David Sperling, M.D.

"Another thing that we do in the clinic is to help the medical students write their prescriptions. That's kind of cool, because normally we're in the pharmacy interpreting the prescriptions. This way, we're able to see first-hand if mistakes are being made and teach them from the beginning—before they even go on to clinical rotations," says Koppes.

Medicine students also rely on their pharmacy colleagues for advice on herbal supplements. When one patient came in for a problem, the team discovered there was an herbal product she was taking that could have been making the problem worse or even causing it, says Koppes, adding, "Patients need to know not just about the herbal supplement itself, but how it can affect the medications they're currently taking, because there are some drug interactions that can be very serious."

That advice also holds true for antidepressant and anxiety medications. The stigma around taking prescription medications for depression causes many people to try over-the-counter medications, says Wasko. "There's one popular herbal supplement that people try as a way to treat depression and anxiety, but it's one of the more dangerous ones to use."

The medicine and pharmacy students are learning what a valuable resource they can be to each other, behind the scenes and for every patient. As Koppes explains, "At work in a pharmacy, when we get a prescription we might look at a medication profile and think, 'This doesn't look right.' At the free clinic, we're able to ask the physician that question and be a part of the decision-making team—and even have the opportunity to talk with the patient, right then and there."

Photos: **Lew Stamp**

"The patient was following up for pre-diabetic lab results. We talked about her diet and how to include the foods and drinks she loved in a balanced way. I couldn't help but smile when she started telling us about how her husband brews his own beer and explained how to tell the difference between brews. Apparently home-made beer tastes much better!"
– Ileana Horattas, COM 2018

SOAR
Student-Run Free Clinic

Opened: September 2017, the result of the Student Outreach to Area Residents (SOAR) organization begun in 2012 by Emily George, M.D. ('13)

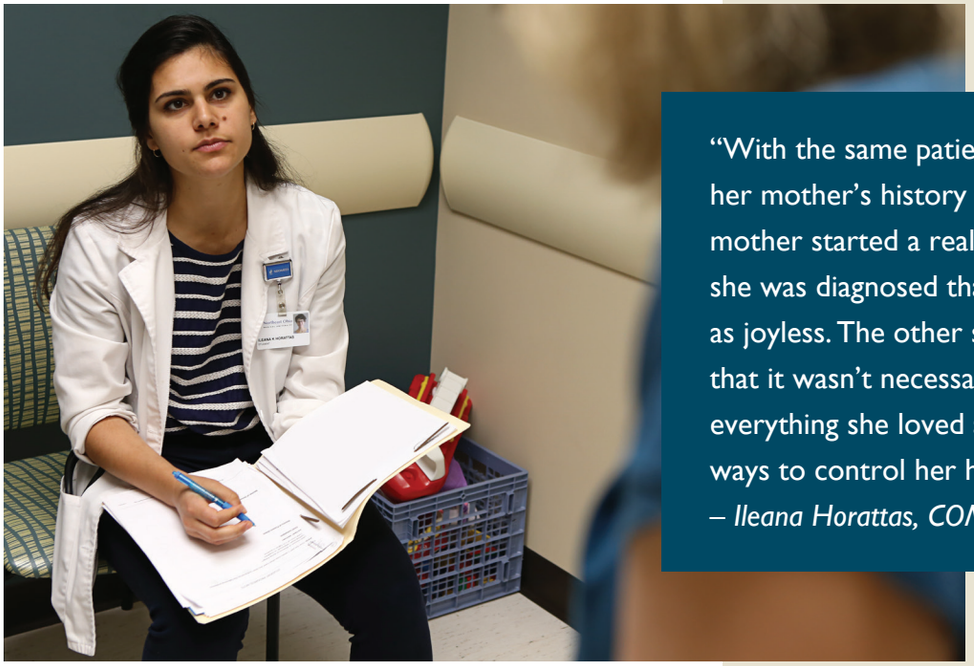
Purpose: Provide high-quality, non-emergent, no-cost health care to medically underserved patients

Hours: 9 a.m.-1 p.m. Saturdays Sept. 2, Oct. 7, Nov. 4, Dec. 9 and through the winter, additional dates TBD

Location: NEOMED Education and Wellness Center, 4211 State Route 44, Rootstown 44272

Philanthropic supporters include: American Academy of Family Physicians, Ohio Association for Free Clinics, United Way of Portage County, University Hospitals Portage Medical Center and Walter W. Born Foundation

More information: 330.552.7080 or **clinic@outreachneo.org**, **outreachneo.org** and **facebook.com/SoarSRFC**



"With the same patient, we were discussing her mother's history with pre-diabetes. Her mother started a really restrictive diet when she was diagnosed that the patient described as joyless. The other student and I explained that it wasn't necessary for her to cut out everything she loved and discussed other ways to control her health."
– Ileana Horattas, COM 2018

IBRAHIM'S **DREAM**

BY ELAINE GUREGIAN

Ibrahim Hasan remembers taking his usual path, a strip of pavement leading from school across a field to his family's comfortable home on Cleveland's West Side. A crossing guard was on duty, as ever. Cars lined the street. The boy's stay-at-home mom's car was always one of the first ones, waiting for 10-year-old Ibrahim—also known as Abe—and his siblings, but on this sunny spring day she was nowhere to be seen. Finally, Abe saw his aunt's car. She wouldn't explain why she was there; she just quietly delivered the children to their home. When Abe saw a houseful of people, he knew something was wrong. His mom told him the news: Something had happened and his father was in jail, but everything would be all right.

His dad? The man who made a success of every business—gas station, grocery store, check cashing store—he owned? After hearing the incomprehensible news, the middle-schooler followed his mom's advice and went upstairs to play video games with his cousins. But things weren't ok. Hasan's father served a seven-year sentence. After that, the father of four—who like his wife had immigrated from the Middle East as a teenager—was deported.

It's still hard for Hasan to talk about that time of his life.

"We lost everything overnight. They confiscated everything that was in his name," remembers Hasan. His mother, whose high school in Brooklyn, New York hadn't offered any English as a Second Language classes, struggled to read, write and speak English as she supported Hasan and his three siblings through low-end jobs at fast-food restaurants and hotels.

Hasan got his own job, working at McDonald's, at age 14 (before the laws regulating working age raised the limit). Eight hours on Saturday. Eight hours on Sunday. His siblings worked, too.

"I still don't know how my mom did it," he says. "When I look back, it was really hard for our family, but the good part is that it shaped me into who I am. I got to experience two lives; one more fortunate and one where I watched my family struggle to pay the bills," says Hasan.

SOCIAL SUPPORT

Ibrahim Hasan is now beginning his fourth year as a medicine student in the NEOMED-CSU Partnership for Urban Health, having completed a bachelor's degree in health sciences from Cleveland State University.

As a third-year student, completing required rotations through multiple areas of medicine exposed Hasan to the hard truths of patient's lives. One especially poignant experience happened during a pediatrics rotation at MetroHealth Medical Center, a Cleveland hospital group that serves many of Cuyahoga County's most vulnerable patients. As part of the rotation, Hasan spent two weeks performing physical exams at a juvenile detention center under attending pediatrician Philip Fragassi, M.D.

The setting allowed for extended time

Illustration: **Lizzi Aronhalt**

BEING WITHOUT A FATHER AND IN A LOW-INCOME HOUSE ALLOWED ME TO UNDERSTAND MANY HARDSHIPS IN LIFE, AND IT HAS OVERALL **SHAPED ME INTO A STRONGER, MORE UNDERSTANDING PERSON**.

Ibrahim M. Hasan, Class of 2018

to ask patients about themselves—a luxury that this curious and empathetic student knows he won't always have in the future.

"You'd be surprised how much people want to share if you ask them directly and let them know you are interested," says Hasan.

One boy told him that in the country where he had lived before immigrating he had been sexually abused by a teacher, leaving emotional scars that hadn't been addressed but that came out in his behavior. "I guess his mom didn't know how to cope. He said she would beat him every day and tell him she didn't want him," Hasan recounts. One day the boy fought back. His mother called the police and he ended up in juvenile detention, then in foster care.

It was one of a few different conversations during which Hasan realized how differently his own story could have turned out. Whether his family had money or not, whether his parents were physically together or not, he knew he could count on them. Strong, positive parents have guided his family, no matter what.

"My parents have always been super-supportive of me. Part of me almost felt guilty about going to medical school because it's an eight-year path. I thought maybe I should do something quicker, but they said no, you want to be a doctor and you should do it," he says.

In NEOMED classes, family support is discussed as one aspect of the term social determinants of health—along with things like socioeconomic status and access to nutritious food, medical care, safe housing and transportation. For this student, the sociological concept resonated as true to life.

SERVING IN URBAN SETTINGS

Through experiences visiting underserved urban patients in such settings as a jail or a so-called shower clinic (a place for homeless people to bathe as well as receive free health services and addiction education) Hasan has been both a confidant and sympathetic observer. During the summer, a rotation took him to work at a MetroHealth re-entry clinic for people recovering from addiction. There Hasan met a former social worker who had gone off track from the stress of a congenital disease that gradually was causing him to lose his sight. "It was a hard thing to cope with, so the man turned to drugs and went down a wrong path. Finally, he tried to rob a bank, because he wanted to die. He thought if he robbed a bank, the police would shoot him," says Hasan, incredulousness matched by compassion.

"It's a privilege to hear people's personal stories, even in their darkest moments," says Hasan, whose goal is to become an emergency room physician working in an underserved area. Hasan's aim is to be sensitive to the various values and beliefs of a diverse population—and competent at addressing all of them.

For more information about the NEOMED-CSU Partnership for Urban Health programs, visit http://www.csuohio.edu/sciences/neomed/

GETTING TO YES

BY ASHLEY BROWN, PHARM.D. ('13)

EDITOR'S NOTE: *When Ashley Brown, Pharm.D., graduated from the College of Pharmacy in 2013, the opioid epidemic hadn't yet ramped up to its current crisis mode in Northeast Ohio. But Dr. Brown soon plunged into the thick of it when she began working at a clinic in Huntington, West Virginia—a city that has been ranked the worst in the country for opioid abuse.*

Completing two elective psychiatry rotations at NEOMED had prepared Dr. Brown to understand that addiction frequently co-occurs—as much as to 40 or 50 percent of the time—with common mental health issues. "Addiction often comes from people trying to treat their own anxiety or depression and having a predisposition toward addiction," says Dr. Brown.

From participating in the extracurricular Generation RX program while at NEOMED, Dr. Brown had practice at going into the community to talk with high school students about the dangers of drug use. Still, it was a revelation to discover, working professionally, that she had an affinity for talking with people trying to cope with addiction. She was good at it: They seemed to trust her, open up to her and find their way to making a positive change.

The Westerville, Ohio native now practices at Southwest General Hospital (a partner with University Hospitals) in Middleburg Heights, Ohio, where she completed a Postgraduate Year One residency. Dr. Brown is involved in the national Breakthru Program in place at Southwestern General—a medically assisted withdrawal program that serves patients with addiction in a mainstream setting instead of housing them in separate detox units. There, Dr. Brown works with nurses and physicians, coaching them in new developments in medications and treatment programs that may help the patients stay clean.

Dr. Brown agreed to supply some examples of what works—and what doesn't—when applying the technique of motivational interviewing to the subject of opioid addiction, a topic that seems to grow ever-more challenging.

MOTIVATING FROM WITHIN

Motivational interviewing is a collaborative conversational style used to strengthen a person's own motivation and commitment to change. The motivation already exists; we just have to find a way to pull it out. Remember: It's a conversational style, not a therapy technique. And while motivational interviewing works for a practitioner and patient, there's nothing to stop the lay person from borrowing from it.

Both parties need to recognize four points:

(1) Partnership - The patient is best positioned to provide personal insights into their disease. As care providers, we need to tap into their expertise to help them to change.

(2) Acceptance - It is important to emphasize each patient's worth, to show empathy, to give them autonomy along with support, and to affirm their strengths (even when they appear to be weaknesses).

(3) Evocation - The motivation for change resides within the patient. We have to figure out how to pull it out by drawing on the patient's own perceptions, experiences and goals.

(4) Compassion - Showing empathy for others and a desire to alleviate their suffering for others along with a belief and commitment that you are acting in the other person's best interest.

Illustrations: **Branden Vondrak**

Having the conversation isn't easy. Arguing for change with a person who is arguing precisely the opposite takes the conversation nowhere. Think of a diabetic patient: We want them to change their diet, to exercise and to monitor their glucose levels throughout the day. They want to get medications that will treat their diabetes and be on their way. How do we react and respond to these patients? Talking with a patient suffering from addiction is not so different.

Some people might challenge me by saying that people with an addiction do emotional and other damage to those around them, while diabetics only hurt themselves. To them I'd respond that the emotional trauma and stress that falls on the family of a patient with addiction is more readily apparent. But think of this: How often have you worried about your grandparent who has heart disease? Your parent who won't go to the doctor or comply with prescribed medication? Or a family member is weak and frail? We all worry about others who are struggling with disease, and even others who are healthy but whom we are afraid to lose. Some diseases or personalities heighten the turmoil, but it's also human nature to worry about everyone and everything.

AFFIRM THE PATIENT'S SUCCESSES AND STRENGTHS

Patients aren't good at identifying their own strengths and successes. It's human nature to emphasize actions (through praise) rather than efforts (affirmation), which leaves patients feeling less successful. Rather than telling someone, "That's a great painting," focus on what it took to get there: "You're a great painter." With this step we need to ask patients to see the good in themselves. Never start affirmation statements with "I." (Don't say "I think" or "I feel.") Focus on the patient.

For example, a helpful affirmation to a person who openly says that he will return to drinking as soon as he has healed from surgery could be, "You're not somebody who does something just because others say you have to. You have to decide it's right for you and that means standing against pressure."

In this step, it's important to provide understanding without judgment or evaluation. That's why it's so difficult!

BUILD A RELATIONSHIP

How do you start a conversation and build a relationship at the same time? Open-ended questions! When you put the other person in an active role in the conversation, they'll give you a lot to work with.

A practitioner might ask:

a) What brings you here today?

b) How has this problem affected your day-to-day life?

c) How do you hope your life might be different in five years?

d) How do you hope I (we) might be able to help you?

REFLECTIVE LISTENING

Most people listen with the intent to reply, rather than to understand. Good listening is paramount to success in these conversations. The goal here is to take a guess at what a person means, then explore their motivations more deeply.

a) **Patient:** I know I have a lot to live for.
   Provider: Your family is very important to you.
b) **Patient:** It scares me to think I might fail.
   Provider: It reminds you of times in the past when you weren't as successful as you wanted to be

Providing this insight into the patient's own words reduces their defensiveness. It also provides them another opportunity to elaborate for you. The goal is to make a guess about what someone means and voice it as a statement of understanding about their situation. Incorrect reflections can reveal as much from the patient (when they correct you, and they will!) as correct ones, so don't be afraid to try it.

SUMMARIZING

At the end of your conversation, take the time to summarize, as a deeper reflection into the whole conversation. The goal is to collect all that was said in a conversation, potentially link it to previous conversations, transition all of that into a goal for the future, and summarize the patient's own concerns, problems, or internal struggles. It is important in this step to emphasize any thoughts a patient has expressed about changing, rather than their statements about sustaining or continuing a behavior. The more you start to highlight a patient's successes over time, the more open and willing they become to sustaining the changes you've been desiring for them all along.

Illustrations: **Branden Vondrak**

HARD KNOCKS:

THE PUBLIC HEALTH PROBLEM OF CONCUSSION

BY ELAINE GUREGIAN

"My daughter was ignoring me. She was irritable and cranky. I didn't know who was living in my house anymore," the mother told Holly Benjamin, M.D. ('94). Three months after her child was diagnosed with a concussion, "I finally got my daughter back," the relieved parent said.

"If you started in pee wee football, you could have more than a thousand hits to your head before high school," says Dr. Benjamin, who started and directs the University of Chicago's primary care sports medicine program. It sounds like an incredible number until she breaks it down: Young football players take about 1,000 hits a season, or 100 hits a week. Dr. Benjamin has been thinking about concussions a lot during the past three years, as UChicago's principal investigator participating in a massive, 30-institution national research study that's focused on concussions and head impact exposure in National College Athletic Association (NCAA) student athletes.

Dr. Benjamin and her sports medicine team recently wrapped up studies of 475 Division III athletes at UChicago. Their work contributes to the Grand Alliance Concussion Assessment, Research and Education (CARE) Consortium study, finishing its third year in September. The study is jointly funded by the Department of Defense and the NCAA. The vast storehouse of new data will give researchers sufficient raw material to ascertain correlations as well as causations. The long-term goal? To enhance the safety of student athletes and service members alike.

"IF YOU PUT A HELMET ON YOUR SON AND WHACKED HIM ON THE HEAD A THOUSAND TIMES, **THAT WOULDN'T SEEM GOOD, WOULD IT?**"

— HOLLY BENJAMIN, M.D.

The CARE study has created a database of baseline information to determine good screening tests: eye movement, balance and coordination, and so on. Subjects are screened not only for headache, depression and anxiety, but also for learning disabilities, deficits in balance and coordination as well as the age at which the person got their first concussion, and more.

"If I did this study by myself, we wouldn't have enough concussions among our athletes to find reliable patterns, but with 30,000 athletes across the country being studied, the little differences will even out and anything that is statistically significant will stand out. It's how we (researchers) learned about other public health problems like cancer and diabetes: with registries and studies," says Dr. Benjamin.

MENTORSHIP AT NEOMED

"I feel so fortunate to have been a Northeast Ohio resident all my life leading up to medical school where there was so much mentorship," says Dr. Benjamin. In 1986, she graduated as valedictorian from Aurora High School, going on to complete the BS/MD program through Kent State University and Northeast Ohio Medical University, graduating in 1994. Success at the College of Medicine served as a springboard to a residency in pediatrics at the University of Chicago.

Dr. Benjamin then completed a sports medicine fellowship and believes she was the first board-certified and fellowship-trained pediatrician in sports medicine in the state of Illinois. She has been practicing ever since as a sports medicine specialist at UChicago.

"It all started with Dr. Congeni," she said. That's Joseph Congeni—another NEOMED graduate, and head of the sports medicine program at Akron Children's Hospital—who mentored Dr. Benjamin when she was a NEOMED student. They still keep in touch. He has visited UChicago to lecture at a course that she teaches, and they have presented together at the American Academy of Pediatrics and with the American Medical Society for Sports Medicine. "He showed me that sports medicine could be a very valuable and rewarding path in medicine," said Benjamin.

A team doctor for high school and college teams and a consultant for hockey, swimming and soccer clubs, Benjamin believes she may be the first female pediatrician in the country to serve on the leadership board and committees of these three organizations:

- American Academy of Pediatrics
- American Medical Society of Sports Medicine
- American College of Sport Medicine, which has 50,000 members. Dr. Benjamin is in her second year as vice president.

PUNCH DRUNK

As the magazine was going to press, the *Journal of the American Medical Association* released a study by neuropathologist Ann McKee, M.D., on chronic traumatic encephalopathy (CTE) in football players. Dr. McKee studied the brains of 202 deceased football players, 111 of whom played in the NFL, and discovered CTE—a degenerative disease related to repeated blows to the head—in 110 of them. Wide media coverage of this report reflects the growing concern among the medical community and public alike.

In a 1928 scientific paper, American physician Harrison Martland coined the term "punch drunk" for the confusion, slurred speech, and dazed behavior he observed in boxers.

ABOUT THE **CARE STUDY**:

NAME:
Concussion Assessment, Research and Education (CARE) Consortium study conducted at 30 sites.

FUNDERS:
The U.S. Department of Defense and the National Collegiate Athletic Association (NCAA).

PURPOSE:
In a span of three years, to conduct "the most comprehensive investigation of sport-related concussion conducted to date…[and] facilitate a better understanding the natural history and neurobiology of concussion in athletes."

PROGRESS:
As of March 2017, 28,809 male and female NCAA student athletes and military service academy cadets had been enrolled in the survey, and 1,931 concussions had been documented.

HOT TOPICS IN SPORTS ARENAS **AND BEYOND**

Nearly one quarter (23 percent) of the people surveyed by an NPR-Truven Health Analytics Health Poll in March 2017 reported having had a concussion. The 2015 movie "Concussion," starring Will Smith, brought public attention to the cognitive deficits, vision loss, migraines, mood issues and less obvious problems associated with the repeated head trauma endured by athletes.

The NCAA has taken action to limit tackling in football practice because there are too many head hits and many of those result in excessive force to the head. Benjamin notes that a player who started football when Tom Brady did, in high school, would have a lifetime of many fewer hits than kids who start contact football in the pee wee leagues.

Contact sport athletes get a lot of aches and pains, including headaches, related to their sport. Unfortunately, some athletes fail to recognize when pain or headaches are a sign of injury. Other student athletes deny feeling bad because they don't want to be told they can't play, says Dr. Benjamin. Family members need to talk to kids when they come home from practice with headaches as they might need to be checked out by a medical professional. When an athlete is diagnosed with a concussion, this can be very helpful. Most important, athletes can be protected from further injury. In addition, there are newer and better treatment options for athletes with concussions, such as physical therapy to help with balance, eye-hand coordination and reaction time, as well as eye therapy to treat blurry or double vision and reading problems.

Many questions remain, and as of summer 2017, the funders were already planning phase two.

As the CARE website puts it: "To date, the natural history of concussion remains poorly defined and no objective biomarker of physiological recovery exists for clinical use." The second part of that statement is the most striking: physicians still don't have a way to know when or if a patient has recovered from a concussion.

"If you get injured and diagnosed with a concussion, you are screened with the same tests until you recover," says Dr. Benjamin. And physicians wonder: Could someone have predicted or prevented them to begin with? "We don't really know the answers yet these questions get at the heart of the CARE consortium's purpose and that is to get better at screening athletes at risk for concussion as well as identify symptoms that can be treated to improve recovery and safely clear an athlete to return to sports participation. I'm hopeful that having greater knowledge and better public awareness of risks and dangers associated with head hits and concussion will lead to safer sport participation by our youth."

WHEN STOPPING PROGRESS IS A GOOD THING

A FOCUS ON GIVING TO FOCUSED RESEARCH

Alan Woll

Alan Woll has Parkinson's and his wife, Janice, has Alzheimer's.

"Research is needed and researchers need funding."

Woll gets frustrated that he has many debilitating issues. He falls and Janice forgets. Both do so, easily.

Neurodegenerative diseases are expected to increase by nearly 400% over the next 25 years.

The last drug introduced to treat Parkinson's was developed over 40 years ago. Woll knows a cure is not going to happen today or tomorrow, but he wants to help reduce debilitation now.

With its focused research on neurodegenerative disease and aging, NEOMED is advancing science to be able to stop the progression of Parkinson's.

The Woll family has made a generous commitment to fund high-risk, high-reward neurodegenerative disease and aging research.

Together, the Wolls are helping NEOMED Shine On.

Northeast Ohio Medical University FOUNDATION

*To learn how you can help NEOMED Shine On, call Daniel Blain at **330.325.6261**.*

THE DETERMINANTS **IN THE CABINET**

BY RODERICK L. INGRAM SR.

A blood-soaked sewing thread would dangle from the door knob, nothing attached to its knotted end. On the floor in the opposite corner, the newly extracted tooth would lie, vanquished.

That's how one man managed his dental needs, growing up poor in the South: Tie one end of a string to an open door, the other end to his tooth. Stand away from the door and slam it shut.

Call him old school, call him country, call him crazy… but it worked for him. And although he has health insurance now and lives in a larger urban city in the Midwest, he still doesn't trust health care professionals. You might call the slamming of the door a metaphor for the lack of compassion that he received from health care professionals, early on.

Thread (or pliers), cod liver oil, Epsom salts, prunes, petroleum jelly, salt water, ginger ale, peroxide, rubbing and consumable alcohol—those have long been staples in the medicine cabinets of the poor. The underserved often do not have access to medications, for reasons ranging from store hours and location to the unaffordable price of some of the 13 most commonly prescribed medications (ncbi.nlm.nih.gov/pmc/articles/PMC3517332/). The underserved have limited access to health care and difficulty getting timely appointments. Once (finally!) in the door, they discover facilities that are overcrowded and limited, with insensitive, impersonal and inconsistent service. It's not surprising that many in this population choose to reach into their own medicine cabinets to heal themselves.

"There is evidence that the poor do not obtain care in the same setting, from the same kind of physicians, and with the same ease and convenience as higher-income persons. Instead, the poor—whether on welfare or not—are much more likely to receive care from general practitioners than from specialists, in a hospital outpatient department rather than in a physician's office, and after traveling long distances and waiting substantially longer for care."

That statement comes from a chapter titled "The Impact of Medicare and Medicaid on Access to Medical Care," written by Karen Davis and Roger Reynolds of The Brookings Institution and published in a volume titled *The Role of Health Insurance in the Health Services Sector* by the National Bureau of Economic Research (author/editor: Richard N. Rosett). The report was issued in 1976, 10 years after President Lyndon B. Johnson initiated Medicare and Medicaid. Davis and Reynolds note that public concern over the perceived high cost of these programs almost eclipsed the substantial achievements of the programs in increasing access to medical services by many persons who formerly had to seek charity care or do without much-needed services.

Some 50 years after the implementations of Medicare and Medicaid, how is it that a discussion of the cost of these programs still eclipses their substantial achievements? Why are we still asking exactly the same questions?

INCREASING ACCESS TO MEDICAL CARE

Signed as amendments to the Social Security Act on July 30, 1965, Medicare and Medicaid were established to provide

hospital and other health coverage to almost all Americans aged 65 or older, and to provide states with the option of receiving federal funding for providing health care services to low-income children, their caretaker relatives, the blind and individuals with disabilities.

Davis and Reynolds' research asked three major questions:

1. What impact have Medicare and Medicaid had on use of medical services by the poor and elderly, particularly in relation to other persons with similar health problems?
2. What factors account for uneven utilization of medical services by persons eligible for Medicaid?
3. To what extent do socioeconomic and demographic characteristics continue to affect the utilization of health services by the elderly?

Earlier this year, the Henry J. Kaiser Family Foundation reviewed findings from 108 studies on the impact of state Medicaid expansions under the ACA published between January 2014 (when the coverage provisions of the ACA went into effect) and January 2017. The findings were separated into three categories that are similar to Davis and Reynolds' questions. The result is an easily understood and insightful resource organized around Medicaid expansion's impact on coverage; access to care, utilization, affordability and health outcomes; and economic outcomes for the expansion states.

Often absent from summary debates—but arguably just as critical— are facts of the impact that Medicaid has made on medical education. When Medicare and Medicaid were implemented in 1966, there was an explosion of medical universities, residencies and medical professionals, due to the increased demand for community-based medical services resulting from these programs. Northeast Ohio Medical University (the publisher of *Ignite*) was one of several medical universities established in Ohio as a result. With its community base of clinical, pharmacy and higher education partners, NEOMED has produced more than 4,000 Doctors of Medicine (M.D.), Pharmacy (Pharm.D.) and Philosophy (Ph.D.), as well as researchers and other health professionals, since that report of 1976. More than 60 million low-income patients benefit from having access to health care insurance and the health professionals who graduated from such institutions.

A few more key facts from the Kaiser report:

- Teaching hospitals treat a disproportionate share (28 percent) of Medicaid patients, according to the Association of American Medical Colleges (AAMC).
- Medicaid also plays a critical role (approximately $5 billion annually for medical schools) in funding graduate medical education. Most states choose to allocate a portion of their Medicaid budget to fund direct graduate medical education (DGME), indirect medical education (IME) and other special services related to teaching hospitals.
- Due to state budget shortfalls and the prevalence of Medicaid managed care organizations, there are serious concerns that fewer Medicaid funds will be available to train future physicians.

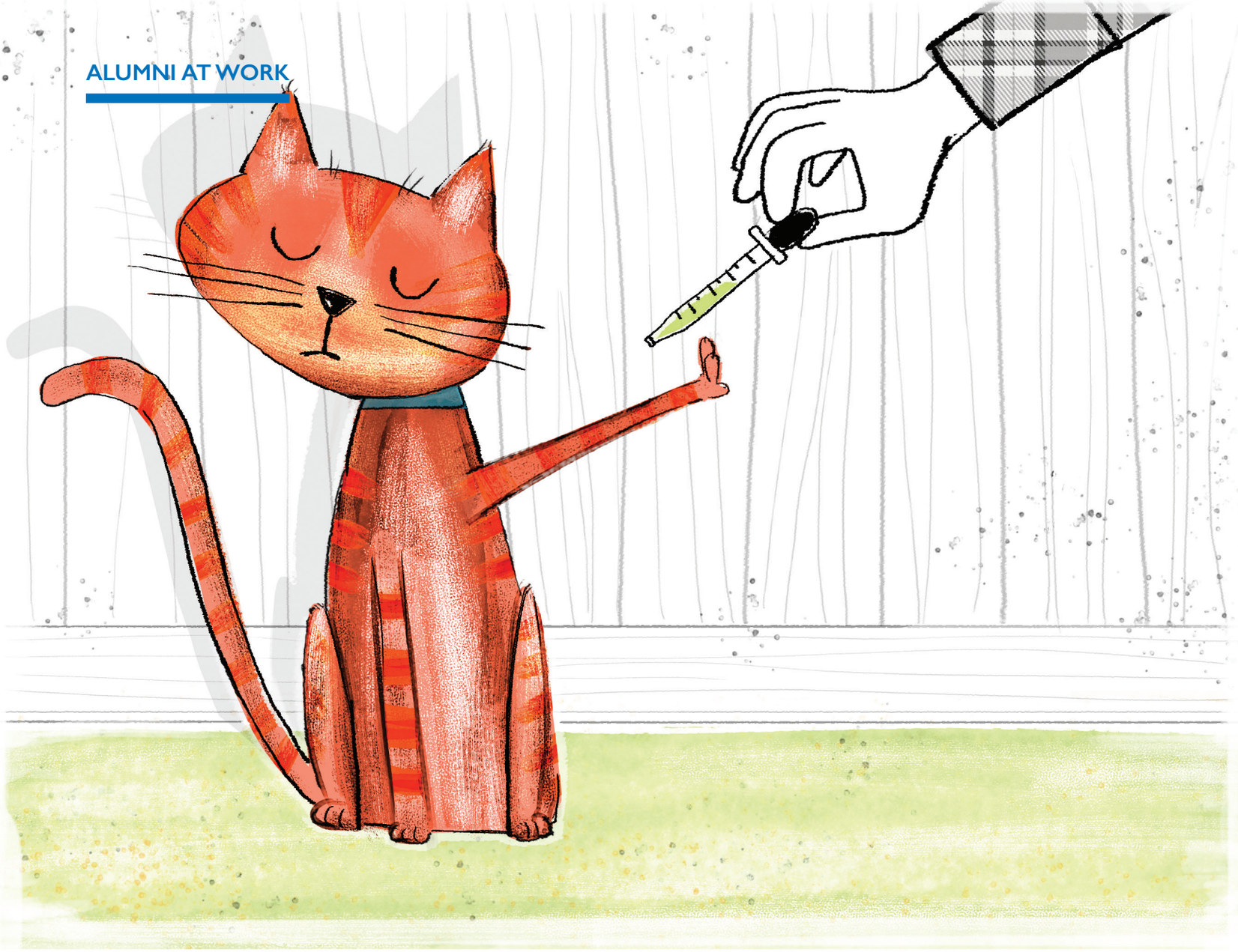
> "There is evidence that the poor do not obtain care in the same setting, from the same kind of physicians, and with the same ease and convenience as higher-income persons. Instead, the poor—whether on welfare or not—are much more likely to receive care from general practitioners than from specialists, in a hospital outpatient department rather than in a physician's office, and after traveling long distances and waiting substantially longer for care."

And by 2025, even if the ACA expansions don't go away, there will be a projected shortage of at least 40,000 physicians (aamc.org/download/426242/data/ihsreportdownload.pdf).

Beyond the facts are troubling questions:

- How can we expect people to understand, use or trust access to health care if it was never made fully available to them or their family?
- Why are those with newfound access to health care frowned upon both when they use it and when they don't?
- Why is health care considered a privilege, not a right (as it is in so many countries)?

After 50 years, if millions of American are still uninsured, underinsured or afraid to use the wellness and medical services that are available to them, we must find additional ways to address what's central to the health issues that affect them – the social determinants of health. Surely the underserved deserve health care that is not dangling by a thread.



A FLAVOR FOR **EVERY PATIENT**

BY ELAINE GUREGIAN

How much do Americans love their pets? More and more each year. In 2016, we spent more than $14 billion on supplies and over-the-counter medication, plus another $15.95 billion on veterinary care. But when pets get sick, it doesn't matter how much the devoted owner is willing to spend on medicine if the pet won't take it—which is not so different than with humans, if you think about it.

"How can I trick my dog into taking his medicine?" That was the most common pet-related question that customers asked Claire Stall, Pharm.D. ('17) when she was a NEOMED student working at Klein's Pharmacy in Cuyahoga Falls, Ohio. Stall is quick to provide just one of the many ways she has learned: If a dog needs the antibiotic Metronidazole, it can be given a formulation with benzoate (a salt) added to reduce the naturally bad taste. (Don't even think of giving the same compound to your cat, though; it's toxic to felines.)

MAKING THE MEDICINE GO DOWN

All business when she talks about compounding medicine—the process of custom-formulating a prescription to the patient's specific needs, whether the patient is human or another species—Stall's face softens like any other pet owner's when asked why she pursued special training in veterinary compounding. "I've always loved animals," she says with a big smile.

A pharmacist needs to consider multiple factors when compounding for animals, much as they would for people, says Stall: Which compounds are safe and effective? Is the patient allergic to the so-called fillers or dyes used in some medicines? Which medications will build up harmfully over time?

The toughest question of all: Can the owner actually persuade the animal to take the medicine?

Stall rattles off a list of preferences that

Illustration: **Dave Szalay**

pharmacists keep in mind when preparing medications for various pets. Parrots love spicy flavors, like cayenne pepper, while smaller birds prefer a fruity taste. Dogs love peanut butter, and a rabbit will accept medicine more readily if it's mixed in with papayas, a favorite food.

Ever since she was a seven-year-old growing up in Cincinnati, begging her parents to get cats, Stall has had a soft spot that she now is working to turn into a niche specialty. "In pharmacy, if you can prove your worth and demonstrate a need, you can specialize," says Stall, who earned her undergraduate degree at Ohio State University. Heart, stroke, neurology, infectious disease, pediatrics, bariatric surgery, veterinary medicine…the possibilities are endless.

SEEKING SPECIALIZED TRAINING

Stall says there's a niche for pharmacists with expertise in compounding for animals, because there are few FDA-approved medicines readily available for them and people increasingly treat pets like members of the family. As more people spend more money on their pets, Stall anticipates there will be a need for the skills she acquired in the Veterinary Pharmaceutical Compounding Course she completed from the Houston-based Professional Compounding Centers of America (PCCA). She is the first student from NEOMED's College of Pharmacy to take such training.

For a Post-Graduate Year One residency, Stall is now working in Lexington, employed by the University of Kentucky as part of the American Pharmacy Services Corporation, a membership umbrella for 400 independent pharmacies. She's working for one pharmacy through the group. After the residency, she wants to return to Ohio to work at a community pharmacy. Her long-term career goal: to save enough money to make a significant contribution to an animal shelter.

There's a lot of talk about personalized medicine lately: "We've become so used to everything being personalized that nobody wants a 'one size fits all' answer,'" says Stall. Compounding medicine is the ultimate example—a return to pharmacy's roots, and an example of the old becoming new. Whether it's identifying the right formulation for a pet or coming up with the best ways to serve the humans in her community, this newly minted pharmacist is eager to find answers that are to each patient's taste.

DID YOU KNOW?

1. **Which of the following are toxic to canines?**
   A. Chocolate **B.** Members of the allium genus *(chives, garlic, leeks, onions)* **C.** Coffee and caffeine **D.** Macadamia nuts **E.** A and B **F.** A, B, and C **G.** All of the above

2. **True or False:** The kidneys of canines and felines process drugs much faster than humans, making the half-life of drugs shorter than in humans.

3. **True or False:** NSAIDs and acetaminophen are safe to use in felines.

4. **Which of the following animals lack the ability to vomit? Select all that apply.**
   A. Cat **B.** Horse **C.** Rabbit **D.** Dog

5. **True or False:** Pharmacists can offer advice to owners regarding the use of over-the-counter products in animals.

Answers: 1. – G. All of the above; 2. – True; 3. – False; 4. – B. Horse and C. Rabbit; 5. – False

POETS THRIVE AT NEOMED

NEOMED holds an annual poetry competition named for the late American physician-poet William Carlos Williams, whose poetry continues to be taught in college classes. Each year, the contest draws medicine students from across the country who are interested in connecting the humanities with medicine.

This year's top winners were from Rutgers-Robert Wood Johnson Medical School, New Jersey; Drexel University College of Medicine in Pennsylvania; and the University of Texas Southwestern Medical School. They gathered with NEOMED students to celebrate and hear Ohio Poet Laureate Amit Majmudar, M.D. ('03) read from his work.

Candice Mazon (second place) is beginning her third year at Drexel University College of Medicine. Born in the Philippines and raised in New Jersey, she took courses in women and gender studies along with cell biology and neuroscience at Rutgers University. She hopes to someday work with underserved populations within the realm of women's and reproductive health. She also aspires to write 100 poems before graduation.

13 BODY PARTS

CANDICE MAZON

Inspired by Wallace Stevens' poem "13 Ways of Looking at a Blackbird"

I.
Caterpillars have made
a home in my stomach,
but they never quite make it out of their cocoons.

II.
My neck is a history book;
it has a tendency to look back.

III.
My eyes are two moths
always circling another person's light,
hypnotized by their glow.
Sometimes, I forget that I can close them.

IV.
My skin is Ellis Island—
everyone I meet
has left their fingerprints.
Do I only serve as a transition?

V.
In the middle of the night,
my lungs become a jukebox,
inhaling
and exhaling
to the rhythm of songs
no one listens to anymore.

VI.
I carved every curve
of my body
from an olive branch.

When I showed it to people,
some hit the ground running
when they confused it for a weapon.

VII.
But these bones are made of clay;
an unfinished statue.
I still have my flaws
but I'm getting closer
to who I'm supposed to be.

VIII.
My scars are renovations—
they only add value to the home.

IX.
My legs are matchsticks,
ready to burn bridges
made up of unkempt promises.

I'm not afraid to walk away
anymore.

X.
My head is a soldier,
my first line of defense.

It's knee-deep in the trenches
fighting for some dream,
fighting for survival.

XI.
My mouth is a freight train.
I'm sorry if I'm not silent
but I have places to go.

XII.
My hands are open wide
like a door on its hinges.

Yes, you can come in.
You can stay as long as you want to.

XIII.
My heart is the North Star.
Every beat is a step forward—
I have been following it for miles
hoping it leads me to heaven.

I am lost.
But I refuse to stop walking.

DELIVERING THE **NEWS**

BY JARED F. SLANINA

Your father's cancer has spread, and there is nothing we can do besides help make him comfortable.

The injuries sustained by your son during the car accident were severe. We were not able to save him.

Your newborn has a severe heart defect, and she may not make it through the night.

Health care professionals have to deliver some of the worst news people can ever receive. So how do aspiring physicians and others prepare for the daunting task of just saying it, straight up? They practice. At NEOMED's Wasson Center, Standardized Patients (SPs)—some professionally trained actors, others community members who have learned on the job—take the roles of patients so that students and other trainees can learn to deliver bad news along with the good. The Center carefully selects, supports, trains, and debriefs these who role-play and provide feedback.

John Ferris came across an ad seeking SPs, as they are known, when he was looking for a new part-time occupation that would be helpful to his community. For fun, the retired pastor gives annual one-man performances of Charles Dickens' *A Christmas Carol*. He's such a good actor that students often believe that he is married to whatever SP is playing his spouse that day.

Ferris's roles include a patient who smokes and drinks far too much. Students must first draw him out to determine his daily consumption of cigarettes and alcohol, then explain the dire consequences of continuing. Another role: a patient with an inoperable condition who has four months to live. As Ferris role-plays, he watches to see if the students express genuine concern. "Do they offer a handshake? Do they make eye contact? Do they have a warm demeanor?" He's there to make tweaks like suggesting the students speak more slowly or make more eye contact.

NURSE TURNED PATIENT

Janice Colvin thought she was volunteering when she signed up more than 20 years ago to become a SP after spotting a poster at a local YMCA. She soon learned it was a paid position, and has become one of the Wasson Center's longest-tenured SPs. Colvin's acting resume is limited to the non-speaking role of an angel for a church play. However, Colvin's long career as a nurse gives her a wealth of experience in dealing with patients.

In one scenario, Colvin plays a woman who allows her grandson to go for a bike ride alone to a nearby park. On the way, the child is struck by a car and rushed to the hospital, where he dies. Someone has to break the news to the grandmother and reassure her that she is not to blame for his death. The task makes students nervous, and that's exactly why practicing is helpful, says Colvin.

SPs can help teach students how to communicate with patients from a multitude of socioeconomic, racial, religious and sexual backgrounds or orientation. Another of Colvin's more challenging roles is that of a nurse who makes derogatory statements about a patient. Through the scenario, she helps the students discourage and prevent bias among people on their health care team. This role seems like a stretch for Colvin, who exudes a genuine warmth that no doubt served her well during her professional career—much of which was spent caring for homeless veterans. It's Colvin's caring attitude that has guided her to play a SP for so long. Like Ferris, she feels gratified by working as a community member to help improve the health care system.

"I've heard students say that these experiences in the Wasson Center have changed them for the better," Colvin says. "That's what it's all about—students learning about compassionate care, and learning to do the small things that will ultimately make a big difference for the patient."

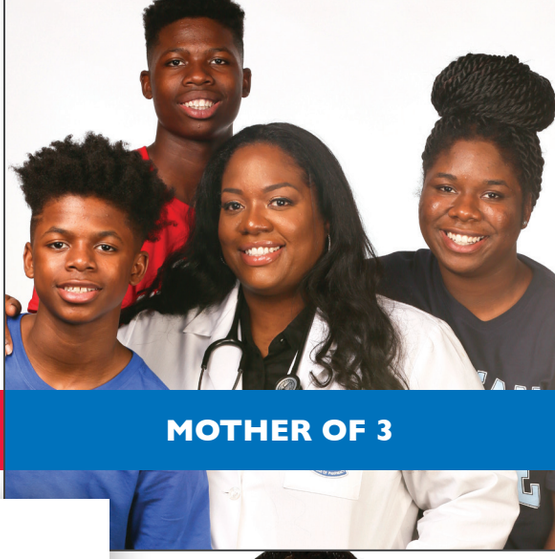
ABOUT THE **WASSON CENTER**

- Each year, prepares more than 8,000 people—including students and working physicians, pharmacists, nurses, police, emergency first responders and mental health/crisis management professionals—from educational institutions, government agencies, social service organizations and businesses across Northeast Ohio to work with patients
- Hires 400 community members as freelance Standardized Patients

For more information regarding Standardized Patients or the Wasson Center, contact Michele Rosenberger, assistant director of the Wasson Center, ***330.325.6747*** *or* ***mr@neomed.edu****.*

ICONOCLAST

BORN AND RAISED IN PUERTO RICO



MOTHER OF 3

I AM DIVERSITY

As soon as someone defines me, they miss a chance to get to know who I am. Don't get me wrong, I am uniquely defined, but it's not for one to say.

Don't celebrate me for being in, or denigrate me for my skin or relegate me to my kin, just appreciate me for what's in — side me.

Impressed by the him or her, open to the expressed of one's own gender … for all people, I am a defender. Proud of my origin, experienced in the now and then, aged to perfection, I am but a reflection.

Of rife and ideology, of strife and points of view to the, of life in a democracy, so I've … a voice that's free. I'm wealthy though needy I seem, I'm poor though rich I gleam, I am happy though I still dream.

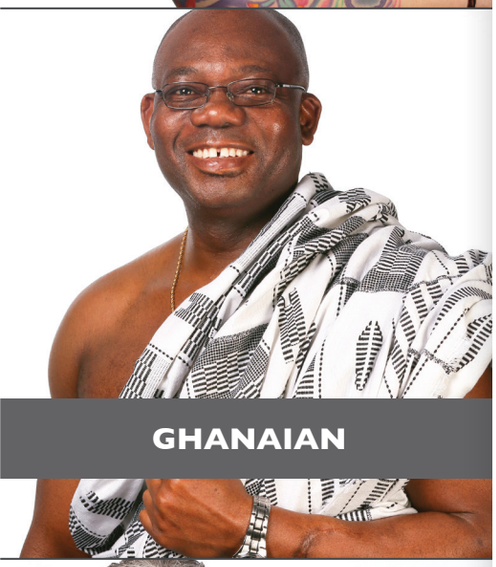
My faith I do believe in, no haste to judge one's creed when, science is their discipline. From deists to theists and everyone in between is, meant for us to COEXIST.

I am abled with just one leg … Read rapidly, right to left instead … I am not always happy, often sad actually … so why care about inclusivity?

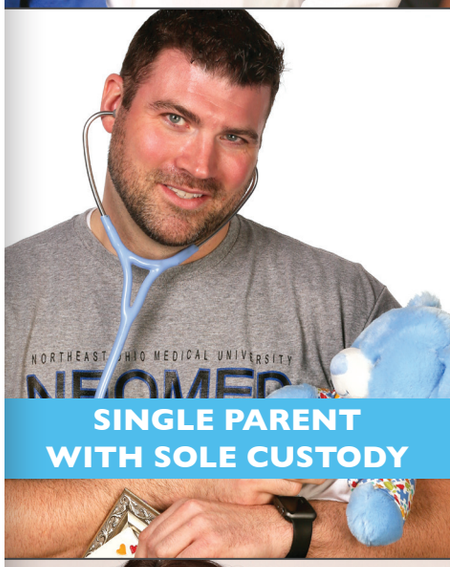
It's got to be …

I am diversity.

— Roderick L. Ingram Sr.



GHANAIAN



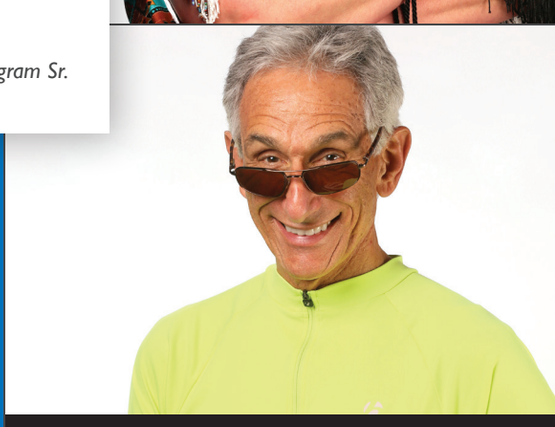
SINGLE PARENT WITH SOLE CUSTODY

MIDDLE EASTERN

NATIVE AMERICAN

ORPHAN FROM ROMANIA

To learn more about I AM **DIVERSITY**, visit **neomed.edu/iamdiversity.**



SEPTUAGENARIAN

TASTES LIKE **HOME**

BY ELAINE GUREGIAN

There's no need for "organic" labels on produce in the capital city of Armenia. Whether you shop in the markets of Yerevan or your relatives deliver grape leaves from their gardens in the country, you know everything is free of chemicals, says Ashot Minasyan.

The ancient city of Yerevan, founded in 782 B.C., rose in the Southern Caucasus Mountains. Borders have shifted along with political forces over the centuries, but since 1991 and the breakup of the Soviet Union, the Republic of Armenia has been independent, bordered by Georgia, Azerbaijan, Iran and Turkey.

Armenians take pride that its landmark Mount Ararat (currently part of Turkey), is known as the place where Noah's Ark landed. Legend has it that the first thing Noah did when he got off the ark was to plant a grape vine, says Minasyan. He's speaking in the kitchen of the apartment he shares with his wife, Victoria Gevorgyan, College of Medicine Class of 2018, as she demonstrates how to prepare tolma—a savory stuffed vegetable preparation of ground beef and rice that's at home wrapped up in cabbage, grape leaves, peppers, zucchini, tomatoes or eggplant.

The mint, oregano or basil seasoning (choose your favorite, and add more if you're cooking with fresh herbs) lend typical Armenian flavors. Make just one veggie or a variety of them for a big spread, the way Gevorgyan's grandmother likes to prepare tolma for special family dinners back home. After dinner, the adults might enjoy a taste of cognac, another regional specialty.

As the couple talks, their 10-month-old son, David, plays with his visiting grandfather while an Armenian cooking show runs on the television in their apartment. It's important to the couple, both born in Yerevan, to teach David his heritage as he grows up in Ohio.

"We're happy to be here and we enjoy the community. People here appreciate diversity," says Gevorgyan. "They want to learn about each other's cultures."

NEOMED's focus on serving the underserved also appeals to the couple. Health care is scarce and costly in Armenia. One result has been a high rate of eye disease, particularly cataracts, which could be prevented or cured with better access to care. Having observed this widespread problem influenced Gevorgyan in her goal to become an ophthalmologist. Minasyan works in the cardiovascular research lab of Charles Thodeti, Ph.D., at NEOMED. He earned an M.D. in Armenia and is studying to take the STEP 2 tests so that he can continue on to complete a residency and practice medicine in the United States. He knows of people who travel each year to serve those in need of care, and hopes one day to do that, too.

STUFFED PEPPERS (TOLMA)

Serves 4-5 people

Ingredients:

8 bell peppers *(may also use tomatoes, zucchini, eggplant, grape leaves or cabbage leaves)*

1 lb. ground beef, turkey or chicken

½ cup long grain rice, rinsed and drained

½ onion, finely chopped *(substitute onion powder if you like)*

¼ cup fresh flat-leaf parsley

1 medium ripe tomato, finely chopped

3 tablespoons tomato paste

½ teaspoon dried and crushed mint, or oregano *(substitute 1 teaspoon of basil if you like)*

¼ teaspoon cayenne pepper *(optional)*

1 small garlic clove, minced

Add salt and pepper to taste

Directions:

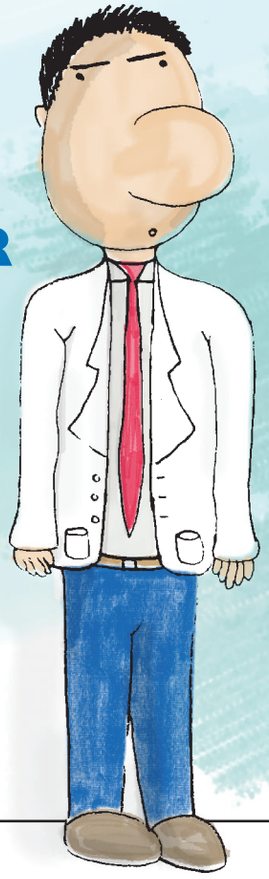
1. Wash the peppers. Cut off the tops and remove seeds. Set aside. *(If you substitute tomatoes, save the part that you scoop out and add it to the liquid in step 4.)*
2. Mix the meat, rice, onion, parsley, garlic, cayenne, chopped tomatoes, and salt and pepper in a large mixing bowl. Combine thoroughly.
3. Stuff the cored peppers with meat—do not stuff all the way to the very top. Leave about ¼ of an inch from the top, as the rice will expand while cooking and it will overflow if filled higher.
4. Arrange the stuffed peppers in a large pot. Pour the remaining tomatoes over the top. Add the tomato paste, mint, basil or oregano and mix it in warm water so there is approximately 2-3 inches of liquid in the bottom of the pan.
5. Cover and bring to a boil. Reduce heat and allow to simmer, covered, for about 45 minutes, or until the peppers are tender.

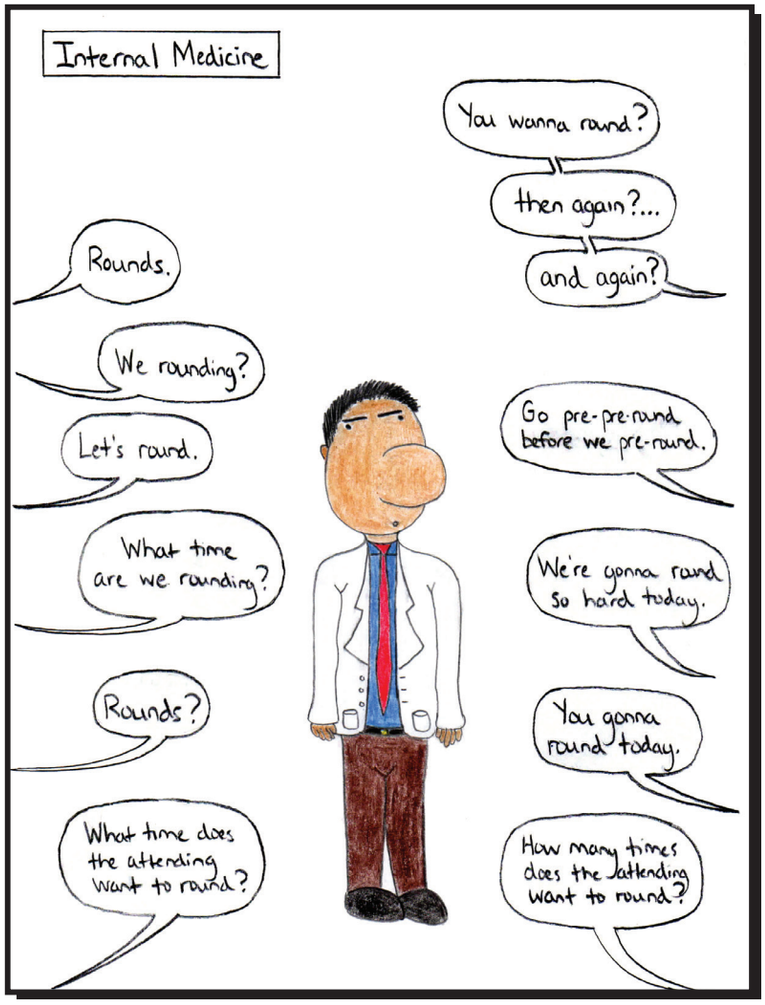
Photos: **Lew Stamp**

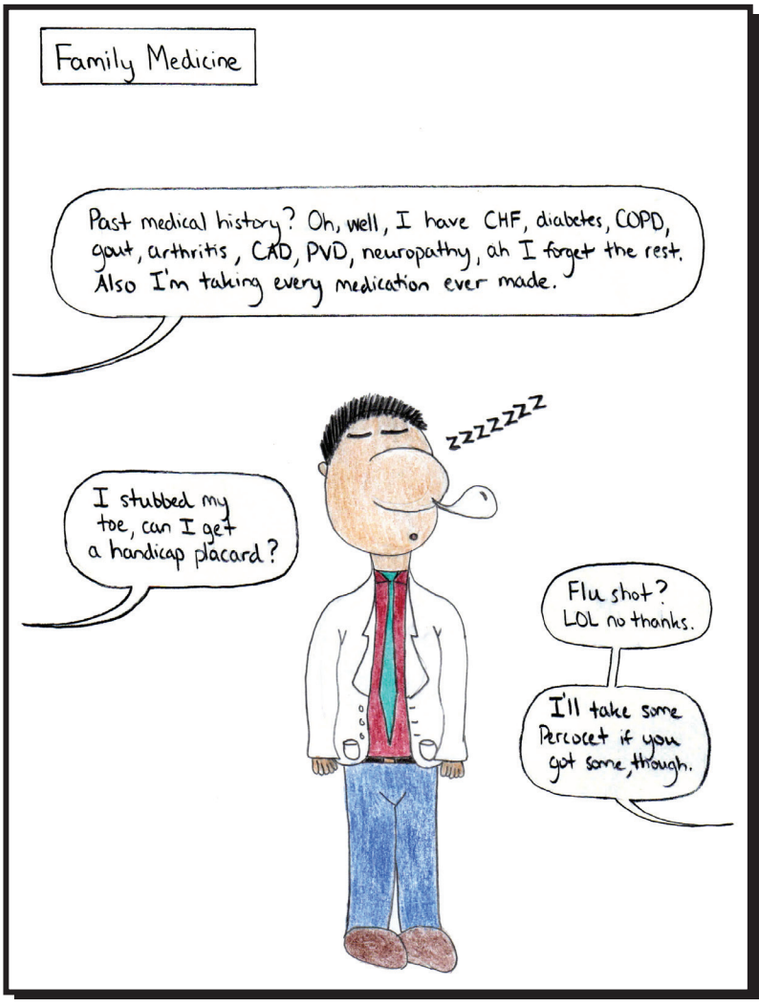
A JOURNEY THROUGH **THIRD-YEAR MEDICINE**

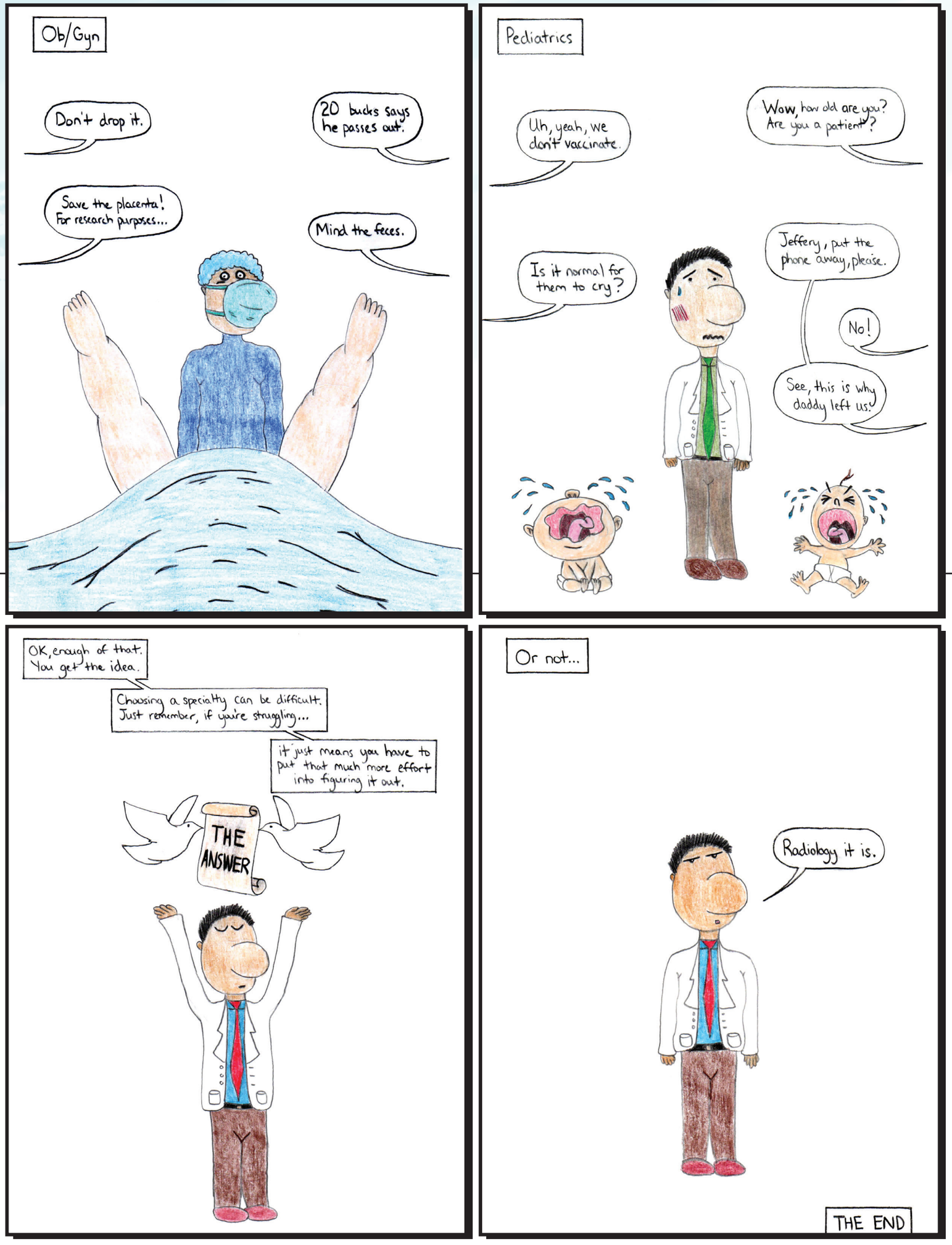
BY MANSUR ASSAAD, M.D.

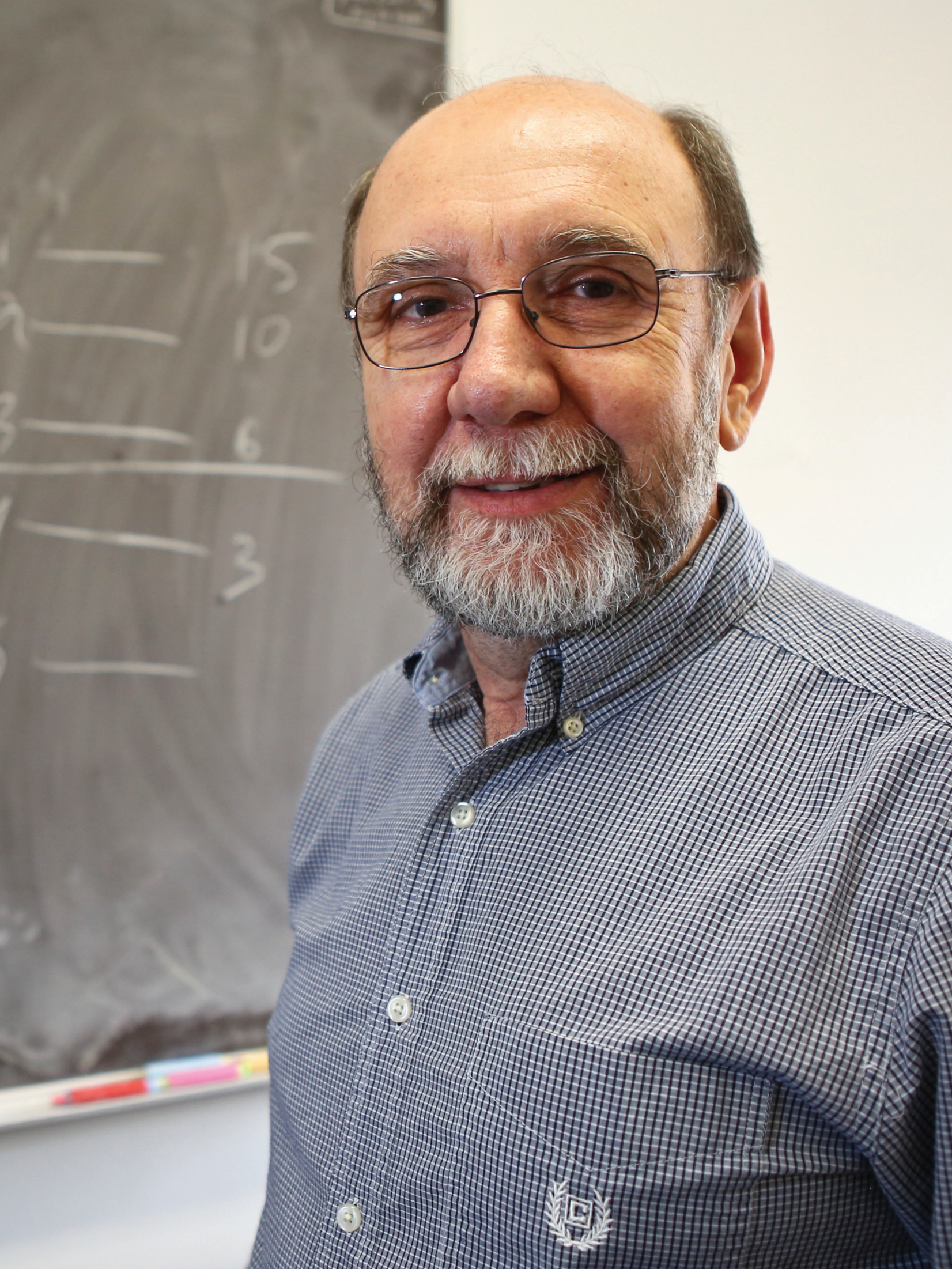
Drawing cartoons in NEOMED's Graphic Medicine class helped Mansur Assad ('17) power through to graduate from the College of Medicine.








Ob/Gyn
Don't drop it.
20 bucks says he passes out.
Save the placenta! For research purposes...
Mind the feces.
Pediatrics
Uh, yeah, we don't vaccinate.
Wow, how old are you? Are you a patient?
Is it normal for them to cry?
Jeffery, put the phone away, please.
No!
See, this is why daddy left us.
OK, enough of that. You get the idea.
Choosing a specialty can be difficult. Just remember, if you're struggling...
it just means you have to put that much more effort into figuring it out.
THE ANSWER
Or not...
Radiology it is.
THE END



SILENCING THE **WHISPER**

BY ELAINE GUREGIAN AND SAMANTHA HICKEY

Imagine the sound of a mosquito buzzing in your ear, or a car horn honking nonstop. For people living with tinnitus—a ringing sensation caused by hyperactivity in the brain—such incessant noise is a frustrating reality often associated with anxiety and depression. Research by Alexander Galazyuk, Ph.D., associate professor in the Department of Anatomy and Neurobiology at NEOMED, is now in a pipeline to the marketplace, where it could lead to a quieter and more peaceful future for many.

The REDIzone® at NEOMED was established to facilitate collaborations among its researchers, private companies and entrepreneurs, such as R.K. Khosla. Elliot Reed, J.D., M.B.A., program manager and entrepreneur in residence at the REDIzone®, paired Khosla with Dr. Galazyuk as a means of supporting the transfer of Dr. Galazyuk's discovery from the lab into a new commercial drug. Also guiding Dr. Galayzuk (pronounced GAH-lah-zhuk) on the steps toward commercialization is Maria Schimer, general counsel and chief technology transfer officer at NEOMED.

Although one in 10 people (including Khosla) live with tinnitus, also known as "The Devil's Whisper," no FDA-approved treatments exist, says Dr. Galazyuk. "The process of finding a remedy for tinnitus has taken this long because every brain is different from another, making it hard to find one clear signature of the condition," he explains. "Tinnitus is complicated to study because it affects more than just the auditory system. Many parts of the brain are hyperactive and affected as well."

Not only is tinnitus deeply disruptive; it's expensive. The Department of Defense spends about $2 billion each year on tinnitus compensation to veterans.

WHAT IS TINNITUS?

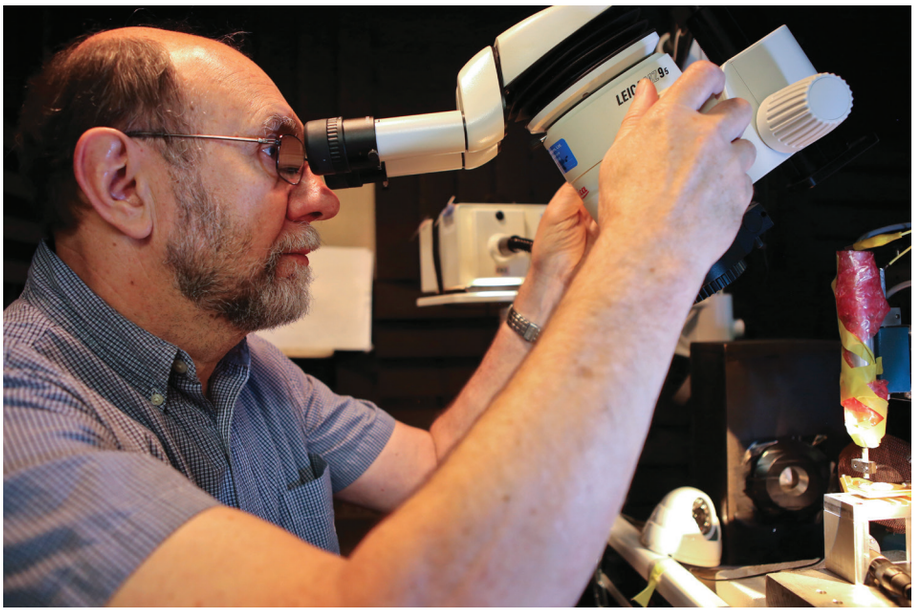
Tinnitus results from damage to the ear from exposure (whether steady or intermittent) to loud sounds—anything from hearing missiles explode in war zones to driving loud vehicles, like lawnmowers, or listening a rock concert without ear protection. After damage, reduced auditory information is sent to the brain, which compensates by turning "amplification" up, leading in turn to brain hyperactivity or elevated spontaneous activity. Such hyperactivity generates phantom sound sensation—the annoying noise of tinnitus.

More than 100 years ago, scientists discovered that after hearing a loud sound for about one minute, patients with tinnitus experience about one minute of quiet, known as residual inhibition of tinnitus. Using funding from the National Institutes of Health, Dr. Galazyuk and his team of graduate and post-doctoral

Photo: **Lew Stamp**

FILING A UTILITY PATENT IS "LIKE DRIVING A STAKE INTO THE GROUND, ESTABLISHING THAT **WE HAVE AN INTEREST IN DEVELOPING THIS DRUG FOR A NEW USE.**"

— Maria Schimer



student researchers have discovered a brain mechanism responsible for residual inhibition. This discovery helped them to replicate the phenomenon with a drug first developed by pharmaceutical company Eli Lilly.

WORKING AGAINST THE CLOCK

As a NEOMED employee, Dr. Galazyuk was required to disclose his discovery to the University when he realized he had discovered a non-obvious and novel use of the drug. A clock has been ticking since Galazyuk's team filed a utility patent to that effect, establishing that Dr. Galazyuk would reposition the drug. "It's like driving a stake into the ground, establishing that we have an interest in developing this drug for a new use," says Schimer.

The FDA requirements are tough. Fewer than one in a thousand new drug candidates obtain market clearance. But Dr. Galazyuk's treatment has a substantial advantage, because it was already demonstrated to be safe in early (phase 1) clinical trials. Having passed the phase 1 human safety trials, the drug's next test is phase 2 (known as proof of concept), which requires 20 to 30 people with tinnitus to be tested using varying doses of the drug. If that is successful, next comes phase 3: a clinical trial of between 3,000 and 5,000 people. Both phase 2 and phase 3 are expensive, costing millions to implement, which is why investors such as R.K. Khosla are so critical to the research process. Following successful results from phase 3, the drug would be submitted to the FDA for approval as a treatment for tinnitus.

As research continues, Khosla is researching potential drug manufacturers and places for clinical trials, per an agreement with NEOMED. This high-risk, high-reward project would pay off for the investor and NEOMED if the FDA approved it for its new, much-needed use.

Getting through phases 2 and 3 can take years: Consider the successful case of Gary Niehaus, Ph.D., a NEOMED researcher whose patent on a process to more quickly detect pathogens in food recently came to fruition, more than a dozen years after NEOMED's first meetings with research partners at Kent State University. There's still a long road ahead of Dr. Galazyuk and his team, but three years of trials doesn't seem like much when you think about how long people with tinnitus have been waiting for the noise to stop.

The Research, Entrepreneurship, Discovery and Innovation Zone (REDIzone®) is located in The Timken Foundation of Canton Innovation Corridor on the NEOMED campus. The University seeks collaboration with companies in its research focus areas: Community-Based Mental Health, Hearing Research, Heart and Blood Vessel Disease, Musculoskeletal Research, and Neurodegenerative Disease and Aging.

YOU ARE INVITED

United Way of Portage County
Annual Campaign Kick-off Event
October 3, 2017

LIVE UNITED

Join the United Way of Portage County as its 2017 Annual Giving Campaign is launched at the NEW Center, located on Northeast Ohio Medical University's campus! This event will feature food, sport themed fun and activities, and showcase the work being done to impact our community through the generous contributions from Portage County residents!

NEW Center

Tuesday, October 3, 2017

4211 St. Rt. 44 Rootstown, OH 44272

11:30 a.m. – 1:30 p.m.

RSVP: shawnab@uwportage.org or 330.297.1424

Northeast Ohio
MEDICAL UNIVERSITY

The NEW Center
at Northeast Ohio Medical University

United Way

United Way of Portage County

1984

Francis Papay, M.D. was elected as a National Academy of Inventors Fellow for his lifetime achievement and leadership in innovation and scientific discovery. He serves as the chairman of the Dermatology and Plastic Surgery Institute and section head of Craniofacial Plastic and Reconstructive Surgery at the Cleveland Clinic. Dr. Papay recently co-directed the hospital's first total face transplant, performed on a woman who had suffered severe damage from a gunshot wound. During the 31-hour surgery, 100 percent of the patient's facial tissue was replaced. NEOMED alumnus Eric Kodish, M.D. ('86) also served on the transplant team, which was composed of more than a dozen surgeons and specialists.

1985

Fred Marquinez, M.D. was presented the 2016 Distinguished Service Award by the University Hospitals Portage Medical Center Foundation. Dr. Marquinez was also recently commissioned as a Major in the United States Air Force, Ohio Air National Guard.

1988

Ronald Rhodes, M.D. was named chief academic officer for Mercy Health in Youngstown, Ohio.

1993

Carol Blanchong Sutliff, M.D. died July 8 at the age of 49. A pediatric oncologist at Nationwide Children's Hospital in Columbus, Dr. Blanchong was dedicated to her church and volunteering at her community's Ronald McDonald House and at Nationwide. Following her time at the University, Dr. Blanchong completed a residency at The Ohio State University Hospital and Nationwide Children's Hospital, followed by a three-year fellowship at Duke University, The Ohio State University and Nationwide Children's Hospital.

Teresa Wurst, M.D. was one of three physicians recently inducted into the Hippocrates Honor Society at Aultman Health Foundation. The society annually inducts physicians who display above-average accountability, altruism, excellence and humanism. Dr. Wurst is a family practice physician, teaching faculty member for Aultman's residency programs and medical director of the Hartville Migrant Clinic. At the induction ceremony, Dr. Wurst was highly praised for her ongoing dedication to the Hartville Migrant Clinic.

1994

Edward Pyun, M.D. was named medical director of OSF Healthcare in Peoria, Illinois.

1995

Tony Schuster, M.D. was named vice president of physician services for Mease Countryside and Mease Dunedin hospitals in Tampa, Florida.

1997

Meera Atkins, M.D. was appointed as chief medical leader at CoreSource in Lake Forest, Illinois.

1999

William Hartmann III, M.D. led clinical teaching for the first inpatient rotation of University of Cincinnati psychiatry residents at the Lindner Center of HOPE, a mental health center in Mason, Ohio, in 2016.

2005

Lisa Stoneking, M.D. was named program director of emergency medicine at Banner-University Medical Center South, formerly University of Arizona Medical Center-South Campus, located in Tucson.

2013

Emily George, M.D. was named to *Crain's Cleveland Business'* 2017 "Twenty in Their 20s" list of young people making a difference in Northeast Ohio. As a NEOMED student, Dr. George demonstrated a commitment to helping the underserved by starting OutReach, a student-run organization dedicated to serving medically underserved residents in Portage County. Dr. George's dreams came to fruition when the organization opened the SOAR Student-Run Free Clinic in September 2016.

In April, alumni and friends gathered in Phoenix to reconnect. Adults pictured from left to right include: (Front row) Roshini Bagai, Rajesh Bagai, M.D. ('00), Artthapol "Tom" Tanphaichitr, M.D. ('98), Sara Tanphaichitr, Vikram B. Singh, M.D. ('03). (Back row) Michael Knapik, Bhavin Vyas, M.D. ('04), Alumni Association President Mark Hostettler, M.D. ('84), Guneet Mumick.

YOU ARE INVITED!

ALUMNI ASSOCIATION RECONNECT • **A DAY OF FUN!**

10.7.17

ALUMNI **REUNION** & **AWARDS** DINNER

FAMILY SOCIAL CONNECT

This new event was added for families!

Reconnect with a Who's Who of Fellow Health Professionals

RSVP now at **neomed.edu/alumni**.
Contact Craig Eynon at **ceynon@neomed.edu** or **330.325.6663**.

Ohio Poet Laureate Amit Majmudar, M.D. ('03) engaged students at NEOMED'S 35th Annual William Carlos Williams Poetry Competition with "Resistance Rebellion Life: 50 Poems Now," and other collections of his poetry.

One of Many Reasons to Reconnect …

After leading disaster responses to the 2004 Indian Ocean tsunami, the 2010 Deepwater Horizon oil spill and the 2011 Fukushima nuclear power plant, as well as contributing to the responses for the 2001 anthrax attacks, the 2009 H1N1 influenza pandemic and 2011 earthquake in Haiti, Scott Deitchman, M.D., ('84) retired from the Centers for Disease Control and Prevention (CDC) in 2017. Now a principal at Gordon & Rosenblatt, LLC, he's helping hospitals and other large campuses prevent disease transmission. **ANOTHER NEOMED GRADUATE WHO IS DOING AMAZING THINGS.**

NEOMED has 4,131 alumni representing all 50 states plus Canada and the U.S. Virgin Islands. Fellow alumni hail from over 300 undergraduate universities, are employed by nearly 200 health care institutions and pharmacies, and practice in more than 50 fields of health care.

Reconnect with a **Who's Who** of **Fellow Health Professionals**

Visit **neomed.edu/alumni** and check out Reconnect! to update your information and receive the following benefits:

- Keep in touch with fellow classmates.
- Receive access to all registered NEOMED alumni for personal/business networking.
- Get invitations to NEOMED events in your area.
- Receive the monthly alumni e-newsletter and our daily or weekly University newsletter (The Pulse).

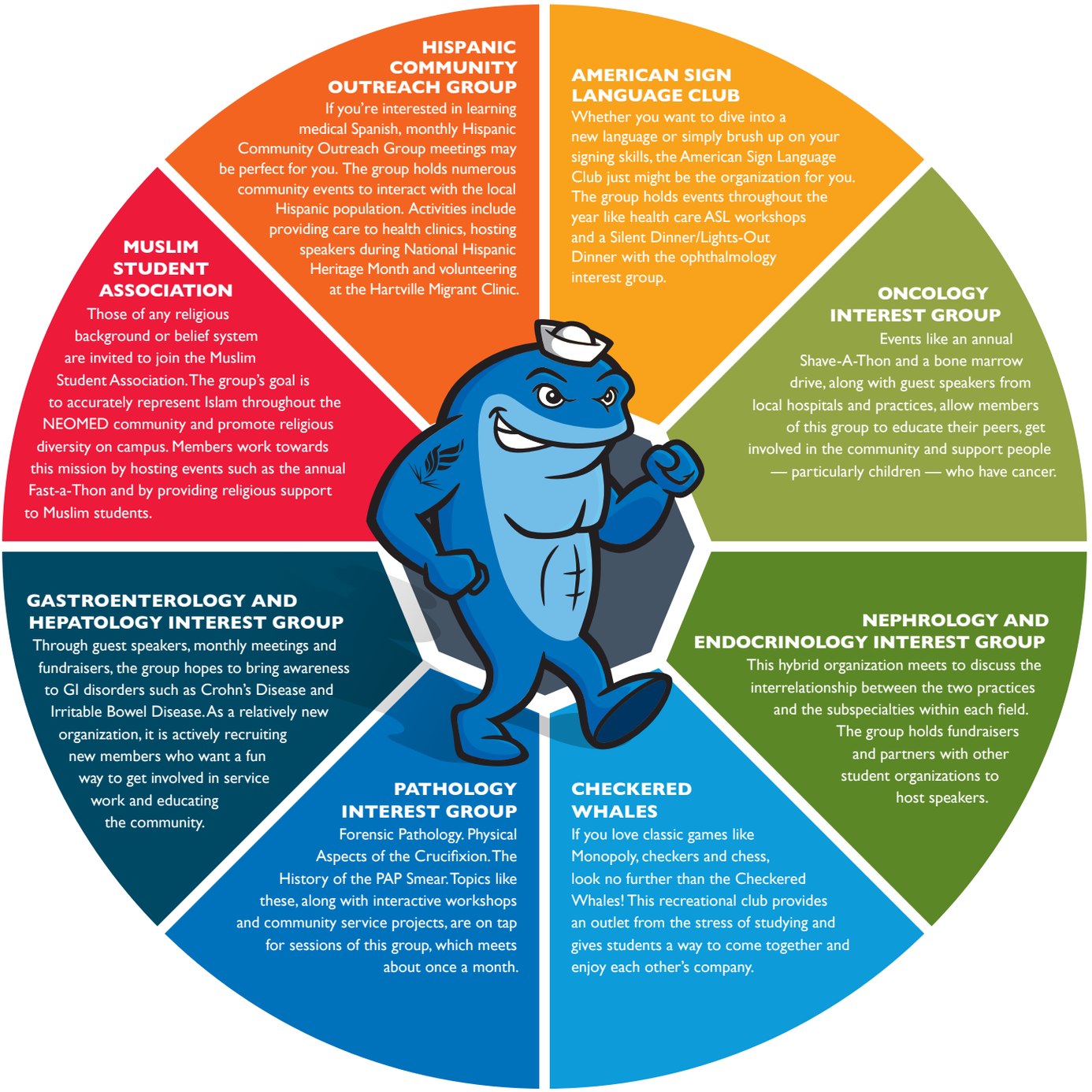
Check out "Get Involved!" to see the full menu of options.

NORTHEAST OHIO MEDICAL UNIVERSITY
ALUMNI ASSOCIATION

STUDENT **ORGANIZATIONS**

BY GABRIELLE BILTZ

Reducing health disparities and advancing social justice are just two of the goals of the many student organizations on the NEOMED campus.



For more information on student groups, contact Student Affairs at **330.325.6735** or visit **neomed.presence.io**.

Gabrielle Biltz is a 2017 graduate of Bio-Med Science Academy and a former intern in the NEOMED Office of Public Relations and Marketing.

Clouds of vibrant colors burst in every direction as students showered one another with powders and water to welcome spring and new beginnings. Holi, "The Festival of Colors," is an ancient Indian celebration marking the end of winter and the triumph of good over evil. The celebration by the NEOMED chapter of the American Association of Physicians of Indian Origin brought a little piece of India to campus.

– Samantha Hickey

Photos: **Chris Smanto**

Northeast Ohio
MEDICAL UNIVERSITY
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STUDENTS

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COMMUNITY **HEALTH**

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THE **CAMPAIGN** FOR
NORTHEAST OHIO MEDICAL UNIVERSITY

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