

Columbia Medicine

Columbia University Vagelos College of Physicians & Surgeons

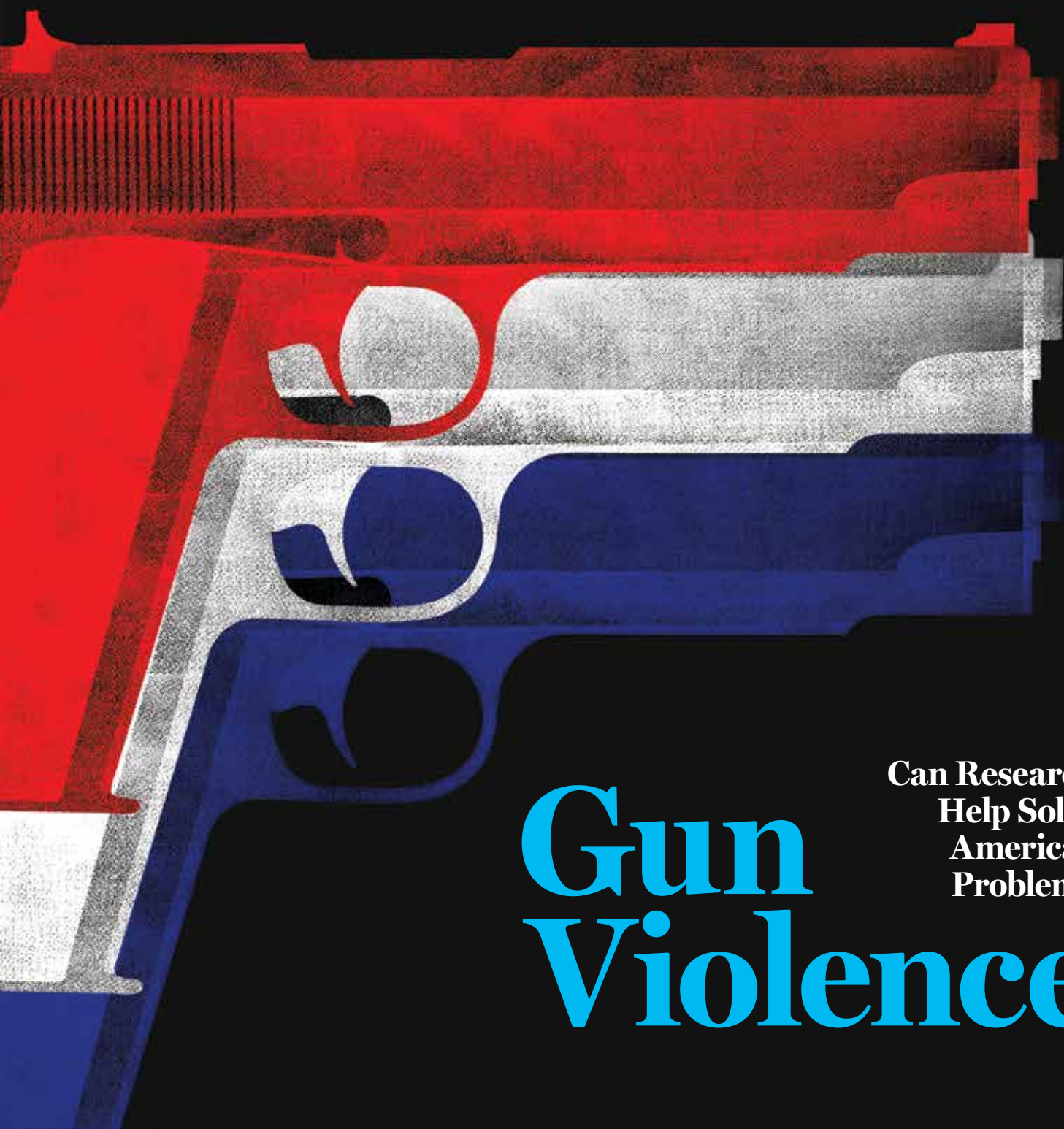
FALL/WINTER 2022

A Digital Revolution

Mining patient data to
improve outcomes

Social Justice

Today's students on the role
of medicine in society



Gun Violence

Can Research
Help Solve
America's
Problem?



Dear Readers,

As I approach the close of my first year as dean of VP&S, I'm struck by the enormous privilege of serving in this position and the pleasure it has been to get to know many of you. This is an exciting time in the college's history and an auspicious moment to be part of the Vagelos community. We have turned our attention to reimagining the curriculum, finding deeper engagement with our Northern Manhattan community, improving support for our clinicians, and expanding our reach to better serve communities around the nation and world. The stream of medical breakthroughs produced by our faculty is a constant source of amazement. And our students—who are as exceptional as ever—are now more diverse than ever: 31% of the Class of 2026 belongs to groups underrepresented in medicine, and that number has grown year over year for five years running.

What ultimately draws these outstanding young people to VP&S differs for each individual, though I believe there is a universal bond created by joining a medical school deeply engaged with its surrounding community, melding medical practice with a commitment to public health to provide holistic care for patients, families, and neighborhoods. Students also benefit from the engagement and generosity of an alumni community deeply invested in their success, with so many of you lending your support to students following in your footsteps. This is an alumni network like no other, because even when our graduates leave our campus, they rarely leave our community.

Each day that I step onto this campus is a reminder of why I, like many of you, chose medicine, and my conversations bring home the defining qualities that set VP&S apart. In the pages of this issue, you will find stories that drive home this point, describing how medical research is informing creative solutions to gun violence, how data patterns revealed by biomedical informatics can tailor treatments to patients' needs, and how our students—as they have for generations—are confronting societal injustice and ingrained inequity. Each story is a testament to what makes this medical school unique: We aren't just training good doctors; we are training good people. I hope you enjoy this issue of *Columbia Medicine*, and I look forward to meeting more of you in the year to come.

With best wishes for 2023,

Katrina Armstrong, MD

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Today's VP&S student body is dedicated to thinking deeply about the role of medicine in society, and some students choose Columbia because of the way the medical school promotes social justice.



ON THE COVER: Federal funding for programs that promote gun control dried up in 1996, which reduced the number of scientists who conduct gun violence research. Now that federal funding is available again, a Columbia coalition is hoping to encourage a new generation of researchers to find ways to prevent gun violence. Illustration by Brian Stauffer. Article, page 8.

First Lady Jill Biden and Queen of Spain Visit Columbia

Just days ahead of World Cancer Research Day on Sept. 24, First Lady Jill Biden and Queen Letizia of Spain visited Columbia's medical campus to hear about Columbia's strides in cancer research and efforts to address health inequities. Dr. Biden and Queen Letizia, who serves as honorary president of the Spanish Association Against Cancer, share an interest and commitment in fighting cancer and the need for scientific cross-collaborations.

Anil K. Rustgi, MD, director of the Herbert Irving Comprehensive Cancer Center and the Irving Professor of Medicine at VP&S, welcomed Dr. Biden and Queen Letizia to Columbia, where they met with cancer researchers involved in global collaborations. Raul Rabadan, PhD, professor of systems biology and of biomedical informatics, discussed his collaboration with the Spanish National Cancer Research Centre to apply computational approaches to identify high-risk factors for pancreatic cancer.

Chin Hur, MD, professor of medicine and a specialist in cancer screening and gastrointestinal cancer prevention, shared details about the cancer center's partnership with several hospitals in the Dominican Republic to address the increasing rates of cancer deaths in that country.

They also heard from Mary Beth Terry, PhD, a Mailman faculty member and director of the cancer center's community outreach and engagement office, who discussed the National Cancer Institute-funded YES! in THE HEIGHTS program, a summer internship for high school and undergraduate students intended to increase the number of underrepresented and under-resourced youth entering STEM fields. Andrew Lassman, MD, associate dean of clinical trials at Columbia and chief of neuro-oncology, explained the cancer center's efforts to increase participation of underrepresented groups in clinical trials and to increase diversity among clinical researchers.

The visit reinforced President Joe Biden's expansion of Cancer Moonshot, with new goals set to reduce the death rate from cancer by at least 50% over the next 25 years and to improve the experience of people and their families living with and surviving cancer.

"None of us can beat cancer alone," said Dr. Biden at the Sept. 21 visit. "It takes all of us, sharing our best ideas and practices, working together to ease the burden on patients and their families, and creating the kind of care that saves lives. Together, we can give our people the future they deserve, no matter where they call home."



Queen Letizia of Spain and First Lady Jill Biden listen to a presentation by Mary Beth Terry about the YES! in THE HEIGHTS program intended to interest youth in STEM fields.

EILEEN BARROSO

WHITE COAT CEREMONY 2022

The most diverse class in VP&S history was welcomed to Columbia in August at this year's Arnold P. Gold White Coat Ceremony. The 140 members of the class include 31% of students who are underrepresented in medicine; nearly 8% of the incoming students are the first generation in their families to attend college.

The importance of the tradition of cloaking new medical students and affirming their commitment to humanistic practice was emphasized by Katrina Armstrong, MD, when she participated in her first White Coat Ceremony as dean of VP&S. "As you put on your white coat today, I want you to remember that the coat itself symbolizes the deepest tension that exists in medicine, the tension between truth, based in science and limited by our current understanding, and hope, based in humanity and inspired by what could be."

Members of the Class of 2026 continued a tradition begun last year by reciting their own Class Oath. Their words were carefully crafted to update the Hippocratic Oath to better reflect the values they wish to uphold as they enter their medical training.

ABOUT THE CLASS OF 2026

140 students

- 112 MD students
- 14 MD-PhD students
- 10 Columbia-Bassett students
- 2 PhD-to-MD students
- 2 oral and maxillofacial surgery students

74 women/66 men

43 underrepresented minorities (31%)

11 first-generation college students (8%)

7,009 total applications

870 applicants interviewed

49 colleges represented

27 states represented

13 foreign countries represented



MICHAEL DIVITO

CLASS OF 2026 OATH

"We recognize that the privilege of receiving medical training and expertise comes with great responsibilities.

I make this pledge to myself, my classmates and future colleagues, and the individuals and communities I will serve.

I vow to accept my duties humbly but to advocate, advance, and serve boldly.

We acknowledge that long-standing power dynamics, paired with unjust treatment, have created systemic barriers that stratify and marginalize vulnerable populations even today.

I vow to translate this awareness into action by combatting discrimination in medical education and practice.

I promise to question the present and reflect on lessons from history to push the medical field forward and build a more inclusive and uplifting environment for all.

We acknowledge that health is inseparable from intersecting identities and social factors.

I vow to utilize diversity as a powerful asset in medicine by tailoring my care to honor each patient's unique lived experiences.

I will embrace the diversity of my fellow providers and stand with and advocate for my colleagues in order to safeguard and ensure their continued health and well-being.

We affirm that all patients deserve compassionate, equitable care that places their needs, values, and personhood at the center. We further acknowledge that compassion is an action that requires a daily commitment.

I vow to actively listen to my patients, respect the privacy of the physician-patient relationship, and empower patients and their support systems to be equal, informed participants in their care.

I pledge to challenge those around me, regardless of rank or tradition, in pursuit of the highest standard of excellence in patient care.

We commit to promoting agency by listening to and amplifying voices within Washington Heights and beyond.

I vow to champion interprofessional collaboration and bolster infrastructures that support the comprehensive well-being of communities beyond the walls of the hospital.

I vow to honor my role as a health advocate by disseminating accurate information and leveraging my medical expertise to help guide the communities I serve.

We recognize that while the socio-political contexts in which we operate may change, our duty to our patients and their communities remains constant.

I vow to embrace my role as a lifelong learner, looking with open eyes and listening with open ears to meet the demands of medicine's dynamic nature. I promise to practice socially relevant, evidence-based medicine that affirms my patients' autonomy in the face of these changing landscapes.

Let us bow our heads in recognition of the gravity of this oath; we swear to faithfully engage with these ideals and obligations for the ongoing betterment of medicine and humanity."

Dígame Bienvenidos: Getting to Know Washington Heights

Before classes began in August, VP&S and Columbia Dental Medicine students immersed themselves in their new neighborhood through Dígame Bienvenidos, a four-day orientation program that introduces new students to the history, culture, and contemporary issues of the medical center’s local community.

“Dígame Bienvenidos grew out of students’ realization that an understanding of the culture of our community would enable them to provide better care to the patients they will see here,” says program director Ana Esteban Gonzalez, MD, assistant professor of community health in the Center for Family and Community Medicine.

Forty students participated in this year’s program, led by second-year VP&S

students Kishan Bhatt, Mansi Shah, and Gabrielle Wimer.

“Many first-year students have never lived in New York City and know little about the city’s health care system,” says Ms. Wimer. “Focusing on the context in which they will serve—and how they can advocate to improve the system—was a great way to set the stage for the start of their medical and dental education.”

During the week, students met Maria Lizardo, executive director of the Northern Manhattan Improvement Corporation, and discussed community activism and advocacy. A walking tour of Washington Heights and a visit to the Hispanic Society Museum helped the students learn about the neighborhood and its residents.

Students also volunteered at a food pantry and visited the 175th Street Greenmarket to learn about the neighborhood’s food ecosystem. In the evenings, students enjoyed local cultural activities.

“Medical and dental students go through a rigorous curriculum,” says Ms. Shah, “but providing compassionate and empathetic care requires understanding aspects of people’s health and lived experience that can only be fully understood outside of the classroom.”

“All of the students who participated brought so much enthusiasm and thoughtfulness to our events,” adds Mr. Bhatt, “and the experience should help everyone develop lifelong skills that will be important wherever they end up working in the future.”

News in Brief



Rosa Lee

Rosa Lee, MD, who led the implementation of a new mission-driven curriculum at the City University of New York School of Medicine, joined VP&S in August as senior associate dean for curricular affairs. She will help develop a curriculum that ensures a student-centered approach to learning and builds on inclusivity and anti-racism efforts that reflect societal and patient

needs as well as strong scientific foundations.

Jean-Marie Alves-Bradford, MD, associate professor of psychiatry at CUMC and the inaugural director of psychiatry’s Office of Equity, Diversity & Inclusion, has joined the VP&S Office of Education as the first associate dean for medical school professionalism in the learning environment.



Jean-Marie Alves-Bradford

She will lead VP&S efforts to design and implement training programs for departments, clerkships, and courses related to student mistreatment issues.

An essay by Paul Lewis’24 earned honorable mention in a contest sponsored by the American Medical Student Association and the American Board of Internal Medicine Foundation. Future physicians were invited to submit essays about how they built, lost, or restored trust in a health care setting.

VP&S scientists have joined a regional consortium of academic and industry partners to accelerate the development of new drugs that target SARS-CoV-2, other coronaviruses, and viruses that could lead to future pandemics. The new consortium,

called the Metropolitan AntiViral Drug Accelerator, is funded by a five-year, \$108 million grant from the Antiviral Drug Discovery Centers for Pathogens of Pandemic Concern program of the NIH. The consortium includes researchers from Memorial Sloan Kettering Cancer Center, Rutgers University, Merck & Co., the Tri-Institutional Therapeutics Discovery Institute, Takeda Pharmaceuticals, and Aligos Therapeutics. VP&S participants are David Ho, MD, director of the Aaron Diamond AIDS Research Center and a leading COVID-19 researcher; Stephen Goff, PhD, the Higgins Professor of Microbiology & Immunology; Alejandro Chavez, MD, assistant professor of pathology & cell biology; and Lawrence Shapiro, PhD, professor of biochemistry & molecular biophysics.

Clinical *advances*

In Inherited Colorectal Cancer, Treatment Includes Emotional Support

Having a rapport with kids is not something that immediately comes to mind when thinking of a colorectal surgeon, but when treating hereditary colon cancer, it's a critical part of the job.

"Before I was even a doctor, I had an instant bonding with kids," says James Church, MD, director of the Hereditary Colorectal Cancer Center in

the Department of Surgery. "I know how to relate to children even though I'm not a pediatric surgeon."

Before exiting retirement to join the team at Columbia in 2021, Dr. Church spent 30 years at the Cleveland Clinic, building and leading one of the most reputable colorectal divisions in the world. One of his previous mentees, Ravi P. Kiran, MD, now chief of the Division of Colorectal Surgery at Columbia, convinced him to move to New York to pass on his vast expertise to a new generation of surgeons.

About 5% of people who develop colorectal cancer have inherited gene mutations that cause the disease. The two most common inherited colorectal cancer syndromes are Lynch syndrome, which develops into cancer with relatively few polyps, and familial adenomatous polyposis, or FAP, carriers of which develop hundreds or thousands of polyps in their colon.

During his tenure at the Cleveland Clinic, Dr. Church oversaw a registry of families with hereditary colorectal cancer that allows coordination and integration of care for affected adults and children in all stages of disease.

For people with FAP, surgery to remove the colon is inevitable; there are simply too many polyps to remove successfully with colonoscopy. He has treated some of the trickiest, most difficult cases, sometimes caring for four generations of a single family.

For young patients and their parents, surgery can be scary to contemplate. "To take a 13-year-old child, remove their colon and rectum, give them a bag, and send them off to school—that's not good," says Dr. Church. "Our first priority is to prevent death from cancer. But very close behind is the priority to maintain as normal a quality of life as possible."

Dr. Church emphasizes critical emotional and psychological support for families with hereditary colorectal cancer. "Every year, you're undergoing sev-



BETTY IMAGES

eral checkups, colonoscopies, and scans,” he says, “but you are always worried that you’re going to get cancer at some point.”

In 2019, Dr. Church and his daughter, Emma Wood, PsyD, co-authored a study about the mental health effects of FAP. They found that mental health symptoms were present in about 70% of patients surveyed; 6% had dealt with suicidal thoughts. But only 10 out of 100 patients

had been offered psychological help at any point during treatment.

“These patients go through terrible anxiety, and it’s unrecognized and untreated by doctors,” says Dr. Church. After completing the study, he hired a psychologist to join the Cleveland Clinic team that managed FAP patients. This treatment model became the blueprint for the program he is building at Columbia, too.

“Being compassionate is not a weakness,” Dr. Church wrote in a column for the journal *Diseases of the Colon and Rectum*. “It is as much a part of the care of sick people as antibiotics, chemotherapy, and surgery.”

For more information or to make an appointment, call (212) 342-1155 or visit <https://columbiasurgery.org/colorectal/columbia-hereditary-colorectal-cancer-center>.

Treating Difficult Cases of Hypertension: AHA Comprehensive Hypertension Center Designation

Certification of the Columbia Hypertension Center as an American Heart Association Comprehensive Hypertension Center is official recognition that Columbia is a leader in the care of patients with high blood pressure.

The Columbia Hypertension Center is one of only 17 centers in the country to receive the certification and the only one in the

New York City metropolitan area. The center is led by internist Ian M. Kronish, MD, associate professor of medicine; cardiologist Daichi Shimbo, MD, professor of medicine; and nephrologist Jai Radhakrishnan, MD, professor of medicine.

The center offers patients with complex or difficult-to-treat cases of hypertension, or those who are difficult to diagnose, the most up-to-date diagnostic and treatment strategies based on the latest proven scientific research.

Centers seeking AHA certification undergo an intensive review by specialists in hypertension. Certified centers must be recognized as referral centers for complex cases and cases caused by other health conditions and have facilities and personnel able to assess and evaluate complicated hypertension problems.

Almost half of adults in the United States have high blood pressure, and many don’t know it. And some 40% of people diagnosed with hypertension do not have their blood pressure under control.

Most patients at the center have uncontrolled hypertension that needs better management. In many people, blood pressure can be controlled by adopting a healthy lifestyle—eating a healthy diet, losing weight, and increasing physical activity. Most patients also need medication to lower blood pressure.

Measuring blood pressure accurately is the first step in providing the right care. “Blood pressure problems are easily misdiagnosed,” Dr. Shimbo says. “Blood pressure is easy to measure but not easy to measure accurately.”

Part of the problem lies with blood pressure devices. Many devices, even those commonly used by health care providers, have not been validated for accuracy. In addition to using validated devices in the office, Columbia’s center provides patients with ambulatory or home monitoring devices to measure blood pressure. This includes home blood pressure devices that automatically transmit blood pressure numbers into a patient’s electronic



GETTY IMAGES

health record. The data allow clinicians to make better decisions about how much medication patients need.

“Out-of-office blood pressure may be substantially different from blood pressure measured in the office,” Dr. Shimbo says, “and people who only have high blood pressure in the office—also known as white coat hypertension—may not need the same treatment as those with sustained high blood pressure both inside and outside the office.”

When a patient is diagnosed with high blood pressure, the next step is determining the cause. Some hard-to-treat cases are caused by other medical conditions, including kidney disease, thy-

roid abnormalities, and sleep apnea. The Columbia Hypertension Center can perform all the tests needed to pinpoint the cause and administer the right treatment, whether it requires medication, surgery, or an alternative intervention.

Patients who suspect they have high blood pressure, who were recently diagnosed and want to learn how to control it, or who have high blood pressure that is not well controlled can contact the Columbia Hypertension Center at (212) 342-1273 or request an appointment online through columbiadoctors.org.

Relief for Trigeminal Neuralgia Pain

For people with trigeminal neuralgia, a passing breeze can be a threat. Even the lightest stimulation of the face can spark episodes of excruciating pain and muscle spasms in the face, jaw, and forehead.

Patients describe it in similar ways: like being stabbed, electrocuted, or hit by lightning. The pain comes and goes with no warning and occurs for seconds or minutes, hundreds of times a day.

“You can’t imagine how many people are in their beds right now in agony, losing days to this pain, and living like this for years,” says neurosurgeon Raymond Sekula, MD, an expert in treating trigeminal neuralgia who joined Columbia from the University of Pittsburgh in February 2022.

Not surprisingly, studies show that patients experience depression, social isolation, and sometimes suicidal thoughts, making it among the most debilitating medical conditions.

Dr. Sekula is one of the most experienced neurosurgeons in the United States who perform microvascular decompression, or MVD, a minimally invasive brain surgery to reduce or stop craniofacial pain. He has performed thousands of the procedures over the past 15 years.

Most cases of trigeminal neuralgia are caused by compression of the trigeminal nerve by an adjacent blood vessel near the brainstem. MVD relieves pressure on the trigeminal nerve by relocating the blood vessel away from the nerve entirely or by

placing padding between the blood vessel and the nerve to separate the two. It’s a delicate operation that requires the neurosurgeon to drill a hole in the skull just behind the ear and work through a 3-inch-deep hole about the width of a pencil to pry apart the nerve and vessel, which are usually tightly tethered together.

More people could benefit from microvascular decompression, but Dr. Sekula says that the extraordinary pain of trigeminal neuralgia is often dismissed as stress or not worth the risks of brain surgery. Medications are usually tried first, but in Dr. Sekula’s experience, the pain returns. Patients often experience remissions of the pain, which can last for months. Over time, however, the remissions grow shorter, and the severity of the pain attacks worsens.

Most patients are desperate to try anything to get relief, regardless of risk, Dr. Sekula says. But after years of analyzing data from his patients, he knows that surgery does not work for everyone. His rating system, published in 2019 in the journal *Neurosurgery*, scores candidates between 1 and 5, based on types of symptoms, response to medication, and degree of vascular compression. About 90% of patients who score a 5 experience long-term pain relief from MVD, but the odds of long-term relief decline with lower scores.

For patients who are not candidates for decompression surgery and are unable



to get relief from other treatments, Dr. Sekula’s NIH-funded lab is looking for solutions. By analyzing differences in trigeminal nerve and sciatic nerve pain, the lab has found that the trigeminal nerve responds differently to injury than the sciatic nerve, and researchers are using that information to design better drugs.

“These people will live in agony unless there’s some way we can intervene,” says Dr. Sekula. — Sara Pepitone

For information, call (212) 304-7190 or visit www.neurosurgery.columbia.edu/patient-care/specialties/facial-pain-and-spasm-center-excellence.



COALITION AIMS
TO CREATE A NEW
GENERATION OF
GUN VIOLENCE
RESEARCHERS

STOPPING GUN VIOLENCE

BY ALEXANDER GELFAND

ILLUSTRATION BY BRIAN STAUFFER
PHOTOGRAPHS BY JÖRG MEYER

he problem of gun violence in America can at times seem utterly intractable.

The horrific frequency of mass shootings (almost 300 in the first six months of 2022, according to the Gun Violence Archive), the tragic daily toll of firearm-related deaths (124 per day on average, according to the CDC), and the inability of politicians to implement effective gun control measures have had devastating personal consequences for individuals and families and pose a significant public health challenge for the nation.

The CDC reports that firearm-related injuries rank among the five leading causes of death for people ages 1 to 44 and are now the leading cause of death for children and adolescents, killing more people ages 1 to 19 than car accidents, drug overdoses, or cancer.

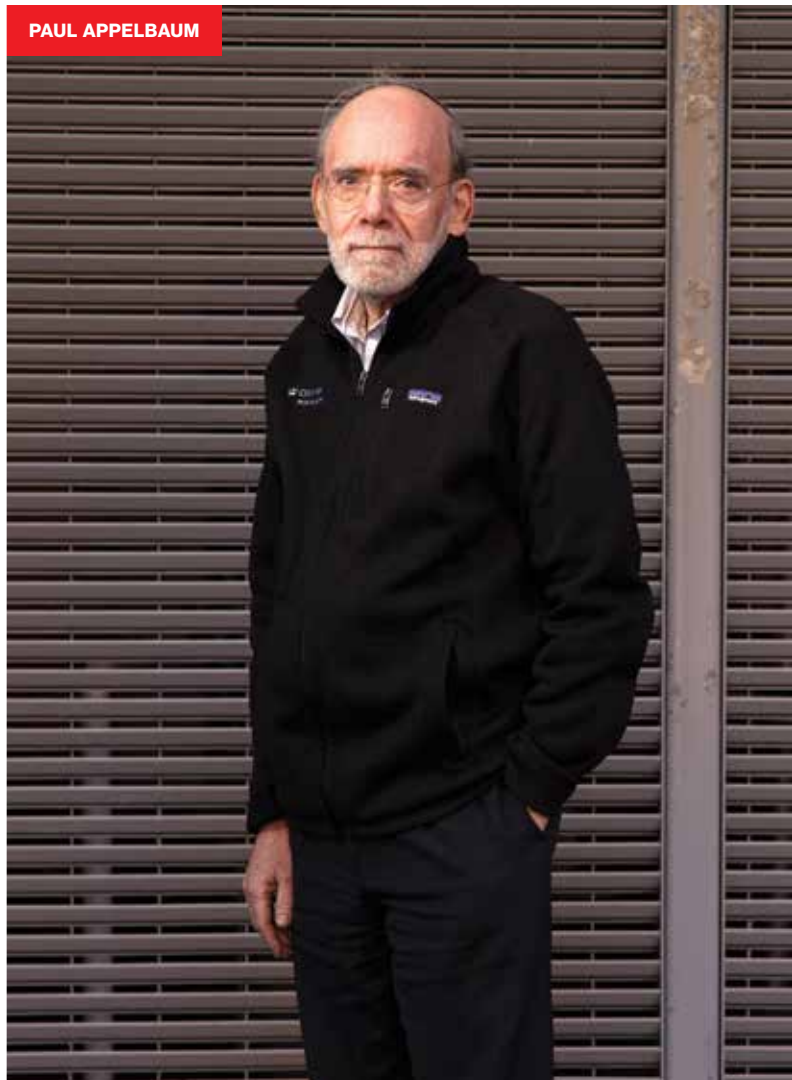
But for epidemiologist and gun violence expert Charles Branas, PhD, the Gelman Professor of Epidemiology and chair of the Department of Epidemiology in the Mailman School of Public Health, the scope and recalcitrance of the problem only heighten the urgency of answering one basic question: “What do you do about it?”

Toward that end, in 2020 Dr. Branas helped launch the Columbia Scientific Union for the Reduction of Gun Violence, or SURGE, a coalition of faculty, students, and alumni from across the university dedicated to finding creative scientific solutions to gun violence.

The need for such interventions is especially pressing given the difficulty of enacting gun control at the state and national levels, despite research by Dr.



CHARLES BRANAS



PAUL APPELBAUM

Branas and others showing that stricter gun control laws do in fact reduce gun violence. (The bipartisan gun safety legislation passed by Congress in June supports some existing evidence-based measures, but in limited fashion.)

Efforts to find solutions have been hindered by a lack of government funding for scientific research into gun violence. Federal funding dried up in 1996 after Congress passed the Dickey Amendment, which barred the CDC, and later the NIH, from spending money to promote gun control and dissuaded many young scientists from pursuing careers in gun violence research.

Recently, however, SURGE and other groups persuaded Congress to renew federal funding. And Dr. Branas hopes that fresh grants from the CDC and the NIH, coupled with opportunities for networking and collaboration provided by SURGE, will encourage a new generation of researchers to develop innovative, evidence-based interventions to prevent gun violence.

Dr. Branas sees signs that this is already happening.

Junior faculty, including Ashley Blanchard, MD, a pediatric emergency physician at VP&S, are investigating novel interventions with the support of fellow SURGE members. And the coalition is helping senior faculty like Dr. Branas and Paul Appelbaum, MD, the Elizabeth K. Dollard Professor of Psychiatry, Medicine and Law, engage with like-minded colleagues from a variety of disciplines. Other SURGE members are from Columbia's schools of law, nursing, and social work and from Teachers College and Barnard College.

"I remember walking into the room during our first meeting and just being in awe that there was this larger campus consortium of people interested in doing this type of work," says Dr. Blanchard, assistant professor of pediatrics (in emergency medicine). "As a junior investigator, I can't navigate the path to a firearm-related research career without having that mentorship. Having that room, and those groups of people, has really been incredible."

DEEP ROOTS

If SURGE represents a new path to novel solutions to gun violence, it builds on decades of work by VP&S physicians. SURGE member Danielle Laraque-Arena, MD, a pediatrician and professor of clinical epidemiology and pediatrics at the Mailman School and VP&S, helped pioneer place-based gun violence interventions while working at Harlem



DANIELLE LARAQUE-ARENA

A study showed that rehabilitating abandoned buildings and vacant lots, which function as **storage lockers for illegal firearms**, can reduce gun violence by as much as **39%**.

Hospital from 1986 to 2000, a period that coincided with a national spike in gun violence.

During that time, Dr. Laraque-Arena and Barbara Barlow, MD, then chief of pediatric surgery at Harlem Hospital, partnered with city agencies and community members to reduce injury rates among children and adolescents in central Harlem.

Data collected through the Northern Manhattan Injury Surveillance System, a population-based survey developed by the Mailman School to tally severe injuries, indicated that adolescents represented 89% of gun-related deaths. Many of the deaths involved unintentional firearm injuries or individuals caught in crossfire, and the vast majority of fatalities

STOPPING GUN VIOLENCE

occurred before hospitalization, which suggested that only prevention could significantly reduce firearm fatalities among young people in the area.

Dr. Laraque-Arena and her colleagues focused on implementing programs designed to create safe spaces and activities for children and adolescents, including several locations that involved rehabilitating and greening public spaces such as parks and playgrounds. The goal was to reduce the risk of intentional and unintentional injuries alike; an analysis showed that such broad-based, environment-oriented projects did significantly reduce firearm injuries.

Decades later, Dr. Branas tested the power of place-based interventions through citywide experiments conducted in Philadelphia, Detroit, and New Orleans.

Among other things, he and his colleagues showed that rehabilitating abandoned buildings and vacant lots, which function as storage lockers for illegal firearms, can reduce gun violence by as much as 39%.

Dr. Branas is in talks with the parks department and other city agencies to bring similar programs to New York City. Together with SURGE member Sonali Rajan, PhD, an associate professor of health education at Teachers College, Dr. Branas leads a nationwide case-control study of firearm violence prevention tactics and policies in K-12 schools. The study, which is funded by the NIH, will examine 650 schools, comparing the safety measures (metal detectors, active shooter drills, armed school personnel) in place at schools that have experienced shootings with those that have not.

PUBLIC HEALTH EDUCATION

The Mailman School of Public Health offers a three-credit course, “Gun Violence in the United States: Evidence & Action,” through the school’s Department of Epidemiology. The course is one of only a few courses of its kind in the United States.

The course explores the epidemiology of gun violence—which has killed more Americans since 1968 than have died in wars since the country’s founding—and efforts to address the problem.

“Addressing this crisis means solving tenacious public health problems in the realms of science and of politics,” says Charles Branas, who helps to teach the course with Ted Alcorn, founding research director of Everytown for Gun Safety.

The course uses lectures, guest speakers, and discussion to understand the political and legal context that shapes collective actions contributing to gun violence. Students learn about the major drivers of firearm injury, individuals who have influenced the country’s policy response, and the underlying beliefs and behaviors that define America’s relationship with guns. Guest speakers represent local antiviolence organizations, law enforcement, government, and academia and welcome the opportunity to open a dialogue about their work.

Other Columbia schools also offer courses on gun violence. Barnard College offers a course that examines the politics of guns from multiple angles. The law school offers a seminar on the social and legal regulation of firearms. Teachers College offers a course on social policy and prevention.

RIGOROUS SCIENTIFIC APPROACH

Dr. Appelbaum, who has for many years explored the relationship among mental health, gun violence, and gun policy, and Dr. Blanchard bring a similarly rigorous scientific approach to understanding—and preventing—gun violence.

In a series of studies examining the relationships among gun ownership, gun violence, and mental illness, Dr. Appelbaum has debunked the notion, often floated by politicians in the wake of mass shootings, that such events can be prevented by addressing serious mental illness.

“As human beings, we have a natural inclination when we see an act that is incomprehensible to assume that the person who did it must be, in lay terms, crazy,” Dr. Appelbaum says. The data suggest that most of those who commit these acts are not mentally ill. “They’re angry, they’re isolated, they’re frustrated, but they are not suffering from psychosis or other severe mental disorders.”

Dr. Appelbaum points out that the situation is different for suicide. Depression, substance use, and other mental disorders are strong risk factors for self-harm. As a result, efforts to identify and treat people suffering from such disorders can indeed prevent suicides if done effectively.

Nonetheless, he says, the most effective way to prevent gun violence, whether directed at others or at oneself, is to limit access to firearms.

REDUCING ACCESS

Measures aimed at keeping guns out of the hands of high-risk groups include red flag laws that allow the authorities to temporarily confiscate firearms from

individuals who represent a threat to themselves or others; safe storage options, such as gun safes and trigger locks; and child access prevention laws that penalize adults for failing to store firearms safely and allowing children access to them.

Such measures have been shown to reduce firearm injuries and deaths and could play a particularly important role in preventing suicides. Studies show that most people who attempt suicide do so on impulse, moving from decision to action in less than an hour.

“There’s good evidence to show that especially in adolescents, the transition from contemplating suicide to action is very short-lived and transient and therefore utilizes whatever means are easily available,” Dr. Blanchard says.

The extraordinary lethality of guns means that someone who decides to commit suicide and has access to a firearm is much more likely to succeed than someone who does not. Research indicates that acts of suicide involving a firearm are fatal 90% of the time, compared with 13.5% for self-poisoning.

“The gun doesn’t give you a second chance,” says Dr. Laraque-Arena.

As a result, taking firearms out of the equation immediately reduces the likelihood that a suicide attempt will succeed. In keeping with that logic, Dr. Blanchard is conducting a pilot feasibility study of a tablet-based tool called Lock and Protect intended to increase safe storage or removal of guns and other lethal means by parents whose adolescents are at increased risk of suicide.

The tool is being studied in the pediatric emergency department at NewYork-Presbyterian’s Morgan Stanley Children’s Hospital, where Dr. Blanchard and her colleagues often see patients who engage in predictors of suicide such as suicidal ideation and self-harm. The primary goal of the study, which involves experts from the departments of emergency medicine and psychiatry and the Irving Institute for Clinical and Translational Research’s Implementation Science Initiative, is to determine the feasibility of implementing the tool and expanding a trial for a larger emergency department population.

Patients and their parents enroll in the study together. The tool evaluates suicide risk using questionnaires such as the Columbia Suicide Severity Rating Scale and guides parents through the process of identifying the lethal means in their homes (guns, medications, ligatures) and understanding how they can best keep their children safe.



“There’s good evidence to show that especially in adolescents, the transition from contemplating suicide to action is very short-lived and transient.”

The tool was designed to take into consideration factors such as the cost of safe storage and the values of parents, including those who feel strongly about gun ownership. At tool completion, a safety plan is provided to parents to implement at home. Dr. Blanchard and her team follow up with parents at two weeks and with patients and parents at four weeks, with the long-term objective of understanding if the tool helps change home storage of guns and other lethal means.

Lock and Protect is precisely the kind of innovative gun violence intervention that Dr. Branas hoped SURGE would produce, and he is certain that more will be developed as the coalition continues to grow.

“We are two years into this,” he says. “We’ve done quite a bit, but we’re still building.” ❖

BIOMEDICAL INFORMATICS RESEARCHERS
USE BIG DATA, ADVANCED ANALYTICS,
AND PATIENT-FACING APPS TO REDEFINE
WHAT'S POSSIBLE IN HEALTH CARE

BY MERRILL DOUGLAS

A DIGITAL REVOLUTION FOR PATIENTS

SAMPLE T-14-2

SAMPLE E-24-1

SAMPLE B-13-4

SAMPLE A-23-2

An algorithm crunches vast volumes of patient data to reveal that two common drugs, each considered safe, can cause a dangerous heart arrhythmia when taken together. Thousands of women use an app to record their experience with endometriosis, creating a rich database for scientists who study that disease. A chatbot suggests how a person with type 2 diabetes might alter the morning's breakfast to lower his or her blood glucose level.

Those are just a few of the ways in which investigators in Columbia's Department of Biomedical Informatics are applying data and advanced analytics to help transform many aspects of clinical care.

Using digital technologies such as machine learning and artificial intelligence, biomedical informatics extracts knowledge from complex biological data and health care records. "It has to do with collecting data, storing it in databases, managing those databases, and applying algorithms to support decisions of doctors or learn new things about biology or health care," says George Hripcsak, MD, professor and chair of the department.

Biomedical informatics looks at life at every scale, "from atoms to continents," adds Dr. Hripcsak. For example, one of the department's researchers examines the activity of proteins. Dr. Hripcsak has done work at the tissue level. Other investigators focus on populations, comparing the efficacy of different drugs or helping public health organizations improve their services.

Columbia researchers make these discoveries in faculty labs and through initiatives such as Observational Health Data Sciences and Informatics, or OHDSI,

pronounced "Odyssey," an international collaboration for which Columbia's Department of Biomedical Informatics serves as the coordinating center.

GLOBAL REACH

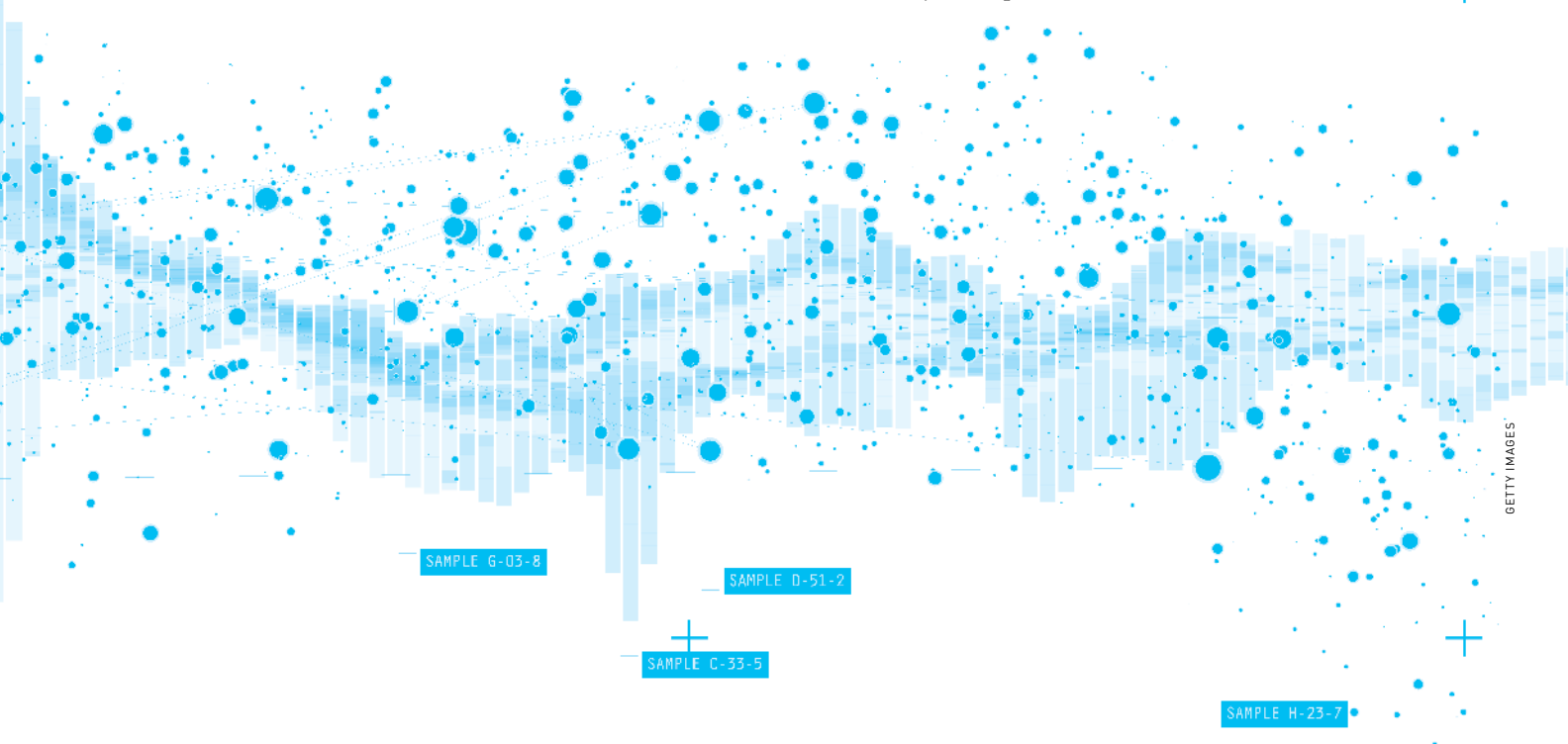
OHDSI applies advanced analytics at a large scale, mining electronic health records from about 810 million patients in 74 countries for new insights, with the goal of improving health care.

Researchers can tap this huge pool of observational data because OHDSI has developed a common data model for EHRs. The database at each institution has its own structure, but when a member researcher puts out a query—say, for data on side effects triggered by a certain medication—results arrive from every source around the world in the same format. "That lets us do studies on hundreds of millions of medical records, which normally would have been limited to a smaller sample and a smaller geography," says Dr. Hripcsak.

High-powered software analyzes those millions of records with dazzling speed, revealing patterns and cause-and-effect associations that could not emerge in clinical trials or from smaller observational samples. For instance, when Dr. Hripcsak's lab studied 57 hypertension drugs to measure their efficacy and possible



George Hripcsak



side effects, advanced analytics let the researchers test a half-million hypotheses in about three months. “Usually, you’ll spend six months to a year carrying out one study—for one hypothesis, not half a million,” he says.

The lab of Noémie Elhadad, PhD, associate professor of biomedical informatics, uses patient records from OHDSI to study equity in health care. The aim is to learn how factors such as race, gender, and age affect the diagnoses patients receive and how soon they receive them.

Scientists have already done much work in this area—for example, finding that doctors take longer to diagnose some specific conditions in women than in men, says Dr. Elhadad. Advanced computing lets her lab take the research further. “We’re looking at 150 million patients and at every disease we can get our hands on.”

One finding to emerge so far is a large gender divide across a wide range of chronic conditions, where women obtain a diagnosis later than men on average, as well as large racial divide in types of mental health diagnoses assigned to patients. “Black patients are more likely to be diagnosed with stigmatizing conditions, such as substance use disorder,” Dr. Elhadad says. “White patients are more likely to be diagnosed with anxiety, depression, opioid addiction but less with illegal substance use.”

A DANGEROUS PAIR

Large patient databases also help researchers uncover situations where otherwise-safe medications pose health risks. That’s the emphasis in the lab of Nicholas Tatonetti, PhD, associate professor of biomedical informatics.

One of Dr. Tatonetti’s major interests is drug interaction. Clinical tests required by the U.S. Food and Drug Administration should ensure that no drug that comes to market causes dangerous side effects. But tests on single drugs can’t address what might happen when a patient takes two drugs in combination.

Take ceftriaxone, an antibiotic often given to hospital patients, and lansoprazole, a widely used proton pump inhibitor used to treat gastrointestinal problems. Neither of those drugs is known to cause the heart arrhythmia called prolonged QT syndrome, which sometimes leads to more dangerous arrhythmias. But when Dr. Tatonetti’s lab analyzed thousands of patient records and many thousands of drug pairs, the algorithm raised a red flag on ceftriaxone and lansoprazole. Patients who took both at the same time seemed to run a higher risk of developing prolonged QT syndrome.

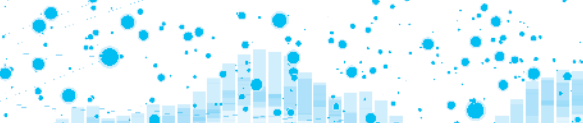
To substantiate that finding, the lab studied the drug pair further by collaborating with pharmacology researchers. First replicating standard tests on the individual drugs, researchers confirmed that neither drug impacts the hERG potassium channel, which helps to regulate heart rhythms. “But when you combine the drugs, we see a big effect on the channel, an effect that triggers prolonged QT syndrome. We’re seeing very strong evidence that this is a causal relationship,” says Dr. Tatonetti.

One major source of data for this work is NewYork-Presbyterian Hospital and its large collection of EHRs. Dr. Tatonetti also uses databases that track molecular



TIMOTHY LEE

Nicholas Tatonetti



activity, such as genetic databases available through biobanks.

“It’s critical to have not only a lot of data, but a diverse, rich data set,” Dr. Tatonetti says. “It enables us to apply machine learning and AI in a way that can correct for confounding biases and other factors and allow these signals, which have otherwise been overlooked or just not observed, to come through.”

By publishing papers and publicizing his lab’s findings, Dr. Tatonetti hopes to alert physicians to the risks posed by certain pairs of medication. “When the effects can be quite severe, as with the prolonged QT interval, there could be patients’ lives in the balance,” he says.

INSIGHTS FROM PATIENTS

Along with the trove of data that EHRs and other sources provide, biomedical informatics research at Columbia also uses data that patients contribute themselves to research. That’s what’s happening in Phendo, a study in Dr. Elhadad’s lab that uses a mobile app to gather data from patients around the world who suffer from endometriosis. Since endometriosis isn’t well understood, and the medical community has no clear guidelines for treating it, Dr. Elhadad created a scientific resource based on patient experience. “The primary goal is to have a registry of patients and their day-to-day symptoms, the types of treatments they’re using—supplements, exercise, food that triggers symptoms—anything they can tell us about the disease and how their experience of disease changes from one day to the next,” she says.

Since 2017, about 15,000 women have contributed data to PHENDO, providing new insights into the nature of endometriosis. Contrary to traditional wisdom, this is not a disease of painful menstruation only, Dr. Elhadad says. In some patients, endometriosis causes gastrointestinal problems or generalized chronic pain. “The data are confirming the suspicions of a lot of researchers that the primary source is inflammatory in nature.”

Besides working to better understand the disease itself, Dr. Elhadad and her team are trying to learn how patients might better manage their own symptoms. This is a complex mission: Strategies that work well for one patient might be useless for another. So Phendo collects data on methods that individual patients try—such as exercise and changes to their diets—and patients report on what did or didn’t work.



Noémie Elhadad

JÖRG MEYER

“Similar to precision medicine, we can re-stratify and tailor recommendations that are focused on the characteristics of the individual.”

In a simpler world, researchers could take strategies that worked for one patient and recommend them to others with similar characteristics—perhaps grouping women by age, ethnicity, or medical history, among other factors. That’s not possible with endometriosis. “We don’t know yet what it means to be a patient similar to another patient,” Dr. Elhadad says. “Physical exercise helps some patients tremendously with pain. For others, it exacerbates their symptoms.”

Dr. Elhadad’s lab is using an AI-based technology called reinforcement learning to develop self-management strategies one patient at a time. “It learns what happens to a patient as a result of different actions and determines which are the best actions to bring the patient closer to a goal such as reduction of pain or fatigue,” she says.

DIGITAL DECISION AIDS

Rita Kukafka, DrPH, also uses bioinformatics to help tailor health care strategies to patients' individual needs. Much of her recent work focuses on the risk women run of developing breast cancer.

Health care providers typically offer services and guidance about breast cancer at a population level, rec-

ommending, for example, that all women in a certain age range get annual mammograms. "But when we dig deeper, we realize that not all women are the same," says Dr. Kukafka, professor of biomedical informatics at VP&S and professor of sociomedical sciences at the Mailman School of Public Health. "Similar to precision medicine, we can re-stratify and tailor recommendations that are focused on the characteristics of the individual."

Dr. Kukafka's lab is developing internet-based tools to educate a woman and her health care provider about that woman's particular risks and help her decide how to mitigate that risk—perhaps by getting more frequent mammograms, using other forms of screening, under-

going genetic testing, or taking "chemo prevention" pills. The researchers also provide "preference solicitation," an exercise that helps a woman weigh various strategies in light of her own needs and desires.

To determine the chances that a woman will develop breast cancer, the lab uses several well-established models that look at factors such as age, race, ethnicity, family history, history of breast biopsies, and breast density. The researchers then use decision support tools—interactive, digital teaching aids—to help a woman understand what her risk level means and how she might protect herself.

For instance, a recent study on genetic testing uses interactive games. "If a woman has a 20% risk, she would play something like a Pac-Man game and keep hitting this Pac-Man until she sees what 20% looks like," says Dr. Kukafka. "The goal is to improve the accuracy of her risk perception."

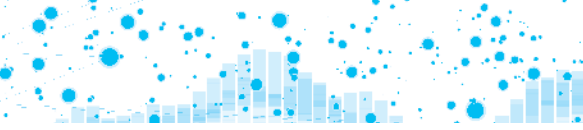
The decision aid then explains how genetic testing works and how it might help. Each woman chooses how to receive that information. She can pick an "information-dense" format—a PowerPoint presentation—or an "information light" format—a cartoon in English and Spanish about a woman who goes through the genetic testing experience.

In testing and refining digital decision aids, the lab doesn't necessarily measure success by the number of women who opt for genetic testing or other strategies, says Dr. Kukafka. A woman might have sound reasons for not choosing a certain proce-

"We use data and machine learning to give suggestions, but we're also engaging people in being reflective, thinking about what went well and what didn't."



Rita Kukafka



dures at a particular time in her life. “The primary outcome is informed decision making, not uptake,” she says.

CHATBOTS FOR HEALTHIER MENUS

Type 2 diabetes is another area in which bioinformatics could help patients by serving up well-tailored health management strategies.

“People’s blood glucose levels have dramatically different responses to nutrition,” says Lena Mamykina, PhD, associate professor of biomedical informatics. Dr. Mamykina’s lab is testing a system that uses machine learning to discover how diabetes patients can reduce their blood glucose levels with customized adjustments to their meals and physical activity, using an AI-powered chatbot to coach them toward better health.

Launched in 2019 and funded by the National Institute of Diabetes and Digestive and Kidney Diseases, a clinical trial recruits diabetes patients through federally qualified community health centers in New York. The not-for-profit Clinical Directors Network collaborates on the project.

Participants in this trial log their meals and blood glucose levels and use FitBit to track physical activity. Machine learning software analyzes the data to determine how an individual’s meals and activity affect blood glucose. Then T2 Coach, an app developed in the Mamykina lab, uses a chatbot to engage with the patient via mobile phone text messages. Together, patient and chatbot set health goals and discuss ideas for reaching them.

The bot might say, “I noticed that you often have high blood glucose levels after dinners,” Dr. Mamykina says, and “I also notice that many of your dinners have more than three servings of carbohydrates.” It would then suggest ways to create meals with fewer carbs.

“These suggestions are specific to the individual,” says Dr. Mamykina. A different patient might get suggestions about adding protein to breakfast.

When the patient records the contents of a meal they are about to eat, the bot asks whether this meal will help the patient meet their health goals. “If they say yes, it will tell them, ‘Great job!’ If they say no, it will ask what got in the way and then ask what they can do differently tomorrow to avoid that barrier.”

The goal of this human-machine partnership is to keep patients in control of their experience, Dr. Mamykina



Lena Mamykina

JÖRG MEYER

says. “We use data and machine learning to give suggestions, but we’re also engaging people in being reflective, thinking about what went well and what didn’t.”

Beyond this project, the subject of human interaction with virtual coaches and assistants offers many opportunities for research, says Dr. Mamykina. Experience with products such as Apple’s Siri and Amazon’s Alexa helps people understand the benefits—and the limits—these technologies offer in the consumer realm. Designing AI-powered assistants to meet the demands of health care is even harder, she says. “When Alexa makes a mistake, somebody just gets annoyed. When our chatbots make a mistake, that may mislead people into making bad choices that could impact their health. The upside is compelling. With well-designed digital health tools, health coaching may become available to those most in need—individuals in medically underserved communities with limited access to health experts.” ♦



ADRIAN THOMPSON'25



GABBY WIMER'25

“ADMIRABLE AND INSPIRING

BY SHARON TREGASKIS

**STUDENTS PROMOTE
ANTI-RACIST HEALTH CARE**

PORTRAITS BY JÖRG MEYER



CAMERON CLARKE'24



ANNA ROSE'24

G”

Second-year student Adrian Thompson’25 cast his net wide when he applied to medical school. He had a bachelor’s degree in biochemistry with excellent grades, an MCAT score in the 99th percentile, and two years of research experience developing small molecule tracers to study neural circuitry in larval zebrafish. He filed 25 medical school applications. “I wanted to maximize my options,” says Mr. Thompson.

Throughout his application process, the role of medicine in promoting social justice was at the top of his mind. “Given the events of 2020 and, really, just living as a Black man in America, I see my role in medicine first and foremost to care for people in need. I cannot neglect the health disparities, especially in terms of disparate access to advances like telehealth and the differences in quality of care based on whether a person has public or private health insurance coverage,” says Mr. Thompson. “Even when I was looking into schools, anti-racism and health equity were at the top of my list.”

While researching VP&S, Mr. Thompson was particularly struck by the Equity and Justice Fellowship,

launched in 2020 to engage students in developing anti-racist curricula. And he appreciated how current students and faculty talked about the school’s role in Washington Heights. “That was something I would want to embody as a value: in addition to treating patients in the clinic, how you relate to the community around you.” After several months of deliberation, Mr. Thompson chose Columbia’s medical school.

VP&S prizes a student body that thinks deeply about the role of medicine in society, says Vice Dean for Education Monica Lypson, MD. “We recruit the most thoughtful, inspiring, humanistic students to become physicians with the Columbia moniker.” It should come as no surprise, she notes, that VP&S students aren’t shy with their criticism—or their calls to action. “It is our students who are leading us in ensuring that we stay true to the calling of our profession, which is to take care of all and meet the needs of all, no matter how they come. In that way, I find the work of our students incredibly admirable and inspiring—and quite frankly, they’re right to demand that we do better.”

Consider, for example, the work of VP&S students—including Mr. Thompson—in White Coats for Black Lives

(WC4BL), a non-hierarchical, Black student-led organization with chapters at medical schools in Canada, Grenada, and the United States. At Columbia, WC4BL has led campaigns to promote better health care for people affected by the carceral system, revamp the allocation of state funds for safety-net hospitals, extend health coverage for all New Yorkers, and eliminate the de facto segregation of health care based on patients’ insurance status.

“The challenges that exist for medicine overall are larger than Columbia,” says WC4BL member Cameron Clarke’24, a Rhodes Scholar who came to VP&S by way of a policy and research fellowship with Planned Parenthood and an internship in the office of New Jersey Sen. Cory Booker. “One of the things that we’ve tried to do as an organization is that while we’re critical and always engaging with Columbia—because we have this affiliation with this medical school—we’re constantly working at levels above and beyond Columbia,” says Mr. Clarke. “We’re working with other medical schools across New York state, with statewide physicians groups, and with city and state officials. We’re constantly engaging at all these different levels to address the disparities we’re seeing.”

Among the priorities for students in the Columbia chapter of WC4BL is support for New York state legislation, including the New York Health Act (nyh-campaign.org), which would provide comprehensive health care for every New Yorker, and the Indigent

later working in Amman, Jordan, and Quetzaltenango, Guatemala, she saw opportunities for systemic change far afield and close to home.

As part of a group that chose VP&S as the pandemic roiled New York City and underscored the pervasive health effects of systemic racism, Ms. Wimer says she and her classmates share a unique bond. “Starting medical school in the midst of COVID definitely impacts how people understand medicine.” For evidence, she points to her own election as president of the Class of 2025. “When I was running, I was explicit that anti-racism and anti-racism initiatives at Columbia were very important to move medicine forward. I think by voting for me, my classmates endorsed that perspective.”

Julia Iyasere’08 is an assistant professor of medicine at VP&S and executive director of the Dalio Center for Health Justice at NewYork-Presbyterian. She works regularly with WC4BL members—including Ms. Wimer and Mr. Thompson—in their shared work with the NYC Coalition Against Segregated Care, which also includes representatives from Mount Sinai, NYU, and Weill Cornell.

“Engagement from the student body has always been high at Columbia, whether it was regarding the clinical rotations or awareness of sociopolitical issues and their influence on medicine and medical education,” says Dr. Iyasere, who was active during her medical school years in the Black and Latino Student Organization. “I don’t think the level of engagement by the students has changed over the years—the topics for discourse have evolved, keeping pace with the social and cultural movements of our time.”

Current students credit community members for helping them focus their energies. “Figuring out ways to better integrate with and support the community is a challenge,” says Ms. Wimer, who is mixed race. “I’m a medical student from out of town and I look white—there’s a separation. In WC4BL we talk a lot about how we want to see justice in health care, but we also know that it can be problematic to be the ones representing what we think community interests are without being part of that community.”

The students have been proactive about acclimating to Washington Heights and building institutional knowledge as they campaign for change. They’ve developed shared Google files, instituted peer mentorship, and used videoconferencing to bridge the gaps, whether welcoming geographically distant incoming students or finessing pandemic-imposed quarantines and isolation. Those same strategies compensate for the arc of training, when third-year clinical rotations pull many students away from their social justice pursuits. “It’s

“If you’re not thinking about what they’re going through, beyond that injury or illness in that moment, you’re missing so much opportunity to work together to improve people’s lives.”

Care Pool reallocation (nysenate.gov/legislation) to ensure that tax-funded support reaches poor and uninsured patients at safety net hospitals. “We ask that you use your position as members of this community or as VP&S alumni to reaffirm your support for equitable care,” says WC4BL member and VP&S Class of 2025 President Gabby Wimer.

Like Mr. Thompson and Mr. Clarke, Ms. Wimer came to medical school with an advocacy mindset, an ethic rooted in her earliest memories. “Most of my family on the Haitian side are doctors or they work in health care, and I grew up hearing about health inequities globally.” As an undergraduate in Chicago and



a very disjunctive process—it interrupts the continuity and sustainability of the movements,” says Mr. Clarke.

During her first two years at VP&S, WC4BL member Anna Rose’24 gathered background information for the segregated care campaign, collecting insights from WC4BL alumni, VP&S faculty, administrators of NewYork-Presbyterian’s Ambulatory Care Network, and other stakeholders. The resulting teach-in, Segregated Care 101, laid the groundwork for ongoing conversations with advocates and administrators. “As physicians, we have such a unique privilege in getting to know people at really vulnerable moments and getting real insight into people’s struggles,” says Ms. Rose. “If you’re not thinking about what they’re going through, beyond that injury or illness in that moment, you’re missing so much opportunity to work together to improve people’s lives.”

While Ms. Rose has eased out of day-to-day involvement with the segregated care campaign during her clinical rotations, Mr. Thompson and his classmates have continued the work. Dr. Lypson considers such handoffs, and the breadth of other activities medical students pursue as they advocate for change, vital professional development opportunities. “We want students to create a professional identity that allows

them—when it’s time to look for residency, fellowship, and their future training—to bring their full selves to that process,” she says. “What they’re showing and actively demonstrating is their leadership skills, their ability to create a coalition.”

This year, Mr. Thompson has expanded his involvement in the VP&S recruitment and admissions process—with a focus on increasing representation of medical students who grew up in Washington Heights. As a member of WC4BL, he is working with classmate Jeremiah “JD” Douchee’24 on Just Care and the Justice System, a project with Trudi Cloyd, MD, assistant professor of emergency medicine, and Robert Fullilove, EdD, associate dean of community and minority affairs for the Mailman School of Public Health. Together, they are developing a year-long educational curriculum and teach-in for Columbia medical and dental students that covers the unique medical and psychosocial needs of detained, incarcerated, and undocumented patients, a disproportionate number of whom are people of color.

“My role is to take care of the patient in front of me and also to address the illnesses in society, which includes racism,” says Mr. Thompson. “Being a physician places me in a position that can hopefully reduce the impacts of racism and reduce disparities.” ❖

In December 2014, VP&S students participated with thousands of students from 70 medical schools throughout the United States in a silent White Coats for Black Lives die-in as part of an effort to address explicit and implicit discrimination and racism and reflect on systemic biases embedded in medical education curricula, clinical learning environments, and administrative decision-making.

Alumni News & Notes

By Julia Hickey Mijangos, Alumni Writer,
and Bonita Eaton Enochs, Editor

1957

See Alumni in Print to read about the latest book by **Henry Buchwald**, emeritus professor of surgery and biomedical engineering at the University of Minnesota. He was PI for the 21-year Program on the Surgical Control of the Hyperlipidemias, the first randomized clinical trial to demonstrate that cholesterol lowering by his partial ileal bypass operation resulted in reductions in cardiovascular disease and prolonged life expectancy. He holds 20 patents for bioengineering devices, including the first implantable infusion pump used in insulin delivery and continuous chemotherapy delivery. Henry, who also has a PhD, served as the Owen H. and Sarah Davidson Wangenstein Chair in Experimental Surgery at the University of Minnesota.

1967

In March 2022 **Gordon Noel** received the Flame Award for Outstanding Teaching, one of three Oregon Health & Science University faculty members chosen by the entire student body. He is emeritus professor of medicine there. In May 2022 he published “Learning the Art of Medicine, a Memoir,” about his years as a medical student, internal medicine resident, endocrinology fellow, and faculty member (see Alumni

in Print). Gordon dedicated his memoir in part to several VP&S faculty, including Andrew Frantz, Hamilton Southworth, Thomas Jacobs, Arthur Wertheim, and Earle Wheaton. He added that it was written “with great respect and gratitude for the Columbia University College of Physicians and Surgeons Class of 1967 and the Department of Medicine residents and faculty members who taught us, many of whom became my colleagues and make cameo appearances” in the memoir.

1974

Stanley Chang, the K.K. Tse and Ku Teh Ying Professor of Ophthalmology and former Edward S. Harkness Professor and chair of the Department of Ophthalmology at VP&S, received the Gonin Medal, an international award given to an ophthalmologist every four years by the International Council of Ophthalmology. Named in honor of Swiss ophthalmologist Jules Gonin, MD, a pioneer in retinal detachment surgery, the medal represents the highest achievement in ophthalmology. Stanley received the diploma for the medal and presented a special lecture at a meeting in Lausanne, Switzerland, in March 2022 and was formally presented with the medal during the virtual World Ophthalmology Congress in September 2022. The medal was



Stanley Chang '74



David Roye '75

established in 1937 by the University of Lausanne and the Swiss Society of Ophthalmology, and the first medal was bestowed in 1941. Among the 21 awardees to date, Stanley is only the fifth American to receive the medal. He also received Ophthalmology Innovation Source's Lifetime Innovator Award for his work in the advancement of vitreoretinal surgery and the pioneering techniques used today. The award was presented in October 2021.

1975

The David Roye, MD, Pride Visiting Medical Student Scholarship was established with a seed gift from **David Roye**. The scholarship will support a rising fourth-year medical student who, before completing medical school, will spend a month under the guidance of orthopedic surgery faculty. Preference will be given to applicants who are leaders/active in the LGBTQ+ community. “The goal,” said David, “is to provide students with understanding and support so that they feel welcome in our community of orthopedic surgery. This scholarship will allow us to attract students who are active in the LGBTQ+ community, to develop their interest, and to recruit these young

leaders to our specialty.” David is former chief of the pediatric orthopedic surgery division.

1978

Jonathan Newmark, a retired colonel in the U.S. Army Medical Corps, composed a chamber opera that received its workshop



Jonathan Newmark '78

premiere at the Operation Opera festival in Spokane, Washington, in June 2022. The opera, “Haber's Law,” is about Fritz Haber, Nobel Prize winner and inventor of chemical warfare, and his wife Clara, a pacifist and the first German female PhD in chemistry. The opera was performed by the Four Corners Ensemble. It probably is the first feminist chemical warfare opera, Jonathan writes, and includes what may be the first musical

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setting of an actual Nobel Prize speech. “While on active duty I taught the story of Fritz and Clara Haber to over 15,000 students over 16 years and on three continents as part of the Army’s instructional team in the medical management of chemical and biological casualties.” Jonathan continues his involvement in the medical chemical defense community as medical advisor to the National Institute of Allergy and Infectious Diseases, which supervises the civilian medical chemical defense program for the United States.



Robert M. Golub '81

1981
Robert M. Golub was promoted to the position of executive deputy editor of JAMA. He also is professor of medicine at Northwestern University Feinberg School of Medicine.

Steven Orland has been installed as the 230th president of the



Steven Orland '81

Medical Society of New Jersey. He has been a member of the society since 1987 and member of its Board of Trustees since 2017, serving on various councils and committees. He is a board-certified urologist with New Jersey Urology, with practices in Bucks County, Pennsylvania, and Mercer County, New Jersey.

1982
See Alumni in Print to read about a book by **John Markowitz**. John is professor of clinical psychiatry at VP&S and a research psychiatrist at the New York State Psychiatric Institute. He has spent decades conducting psychotherapy research to study mood, anxiety, personality, and trauma-related disorders.



P. David Adelson '86

1986
P. David Adelson has joined the faculty of the West Virginia University School of Medicine Department of Neurosurgery. He is also vice chair of the WVU Rockefeller Neuroscience Institute and executive director of the WVU Medicine Children’s Neuroscience Center of Excellence.

1999
Hackensack Meridian Hackensack University Medical Center named **Shahid R. Aziz** director of the division of oral and maxillofacial surgery. In February 2022, Shahid helped cut the ribbon and open the hospital’s new oral

and maxillofacial surgery center, which will offer full inpatient and outpatient oral and maxil-



Shahid R. Aziz '99

lofacial surgical services for children and adults, with a specialty in facial trauma and reconstruction surgery. Shahid is president of the New Jersey Society of Oral and Maxillofacial Surgeons and chair of the Section of Dentistry and Oral Health of the New York Academy of Medicine. He is co-founder and president of the New Jersey-based non-profit Smile Bangladesh, which provides free surgery to children and adults with cleft lip and palate deformities in Bangladesh. Since starting Smile Bangladesh more than 16 years ago, Dr. Aziz has led a small team of surgeons, anesthesiologists, and nurses on 24 surgical missions and has treated more than 1,600 patients. He received the 2017 American Association of Oral and Maxillofacial Surgeons Humanitarian Award for his work in Bangladesh and in global surgery. He has authored or co-authored more than 50 peer-reviewed journal articles and 22 book chapters.

2002
Clara (Holt) Keegan was named the Vermont Family Physician of the Year at the annual meeting of the Vermont Medical Society on Nov. 4 in Stowe, Vermont. She was recognized for her

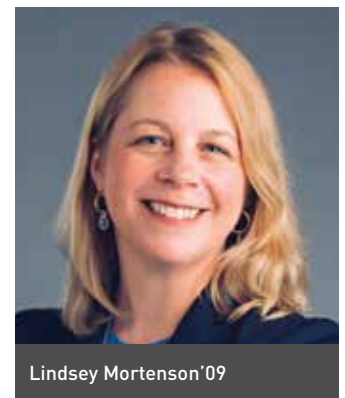
empathetic and compassionate approach to patient care and for her dedication to education in



Clara Keegan, left, with Anne Morris, president of the Vermont Academy of Family Physicians

the area of sexual and reproductive health. Clara is associate professor of family medicine at the Larner College of Medicine and core faculty for the University of Vermont family medicine residency. She lives in Essex Junction, Vermont, with her husband, Mark, and their two teenage sons, Tim and Will.

2009
Student Life at the University of Michigan has named **Lindsey Mortenson** its first chief mental health officer. After serving as



Lindsey Mortenson '09

acting executive director and medical director for University Health Service, she was named associate executive director of University Health Service. In her new roles, Lindsey will supervise the clinical, diagnostic,

and administrative services of University Health Service and counseling and psychological services. Lindsey, clinical assistant professor of psychiatry at UM, completed residency training in adult psychiatry there and served as outpatient chief resident. She received the national psychiatry resident award for excellence in education, teaching, and administration.

2011 PhD/2012 MD

Hasina Outtz Reed received a 2022 Young Physician-Scientist



Hasina Outtz Reed '11 PhD/'12 MD

Award from the American Society for Clinical Investigation.

2011

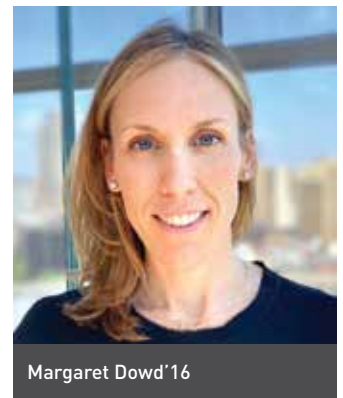
The Idaho Academy of Family Physicians selected **Rebecca Katzman** as the 2022 Idaho Family Physician of the Year. She practices full-spectrum family medicine at a critical access hospital in north-central Idaho.

2015

See Alumni in Print to read about a book co-authored by **Adjoa Smalls-Mantey**. Adjoa, assistant clinical professor of psychiatry at VP&S, also has had work appear on ABC News. After college, she enrolled in Columbia's MD/PhD program in partnership with the NIH/Oxford/Cambridge Scholars Program. She earned a DPhil degree in pathology from the University of Oxford, where she studied HIV immunology, before completing her MD degree at VP&S. She completed a residency in psychiatry at Mount Sinai then



Adjoa Smalls-Mantey '15



Margaret Dowd '16

returned to Columbia as a public psychiatry fellow. She now practices emergency psychiatry at Columbia, Bellevue Hospital, and New York-Presbyterian's Brooklyn Methodist Hospital.

2016

Margaret Dowd, a graduate of the Columbia-Bassett Program, has joined the Bassett Healthcare Network as an attending physician. She started Bassett's Mohs micrographic surgery practice. She also is a VP&S dermatology faculty member and is teaching

current students in the Columbia-Bassett Program.

2017

See Alumni in Print about **Anna DeForest**'s debut novel. Publishers Weekly included Anna among its Writers to Watch list for Fall 2022. Anna is a neurologist and palliative care physician at Memorial Sloan Kettering Cancer Center. Her writing has appeared in the Alaska Quarterly Review, the Journal of the American Medical Association, the New England Journal of Medicine, and the Paris Review.

Remembering Anke L. Nolting, PhD

Anke Nolting, PhD, who retired at the end of 2019 as associate dean and executive director of development and alumni relations at VP&S, died Oct. 12, 2022. She had spent nearly 40 years with the VP&S Alumni Association.

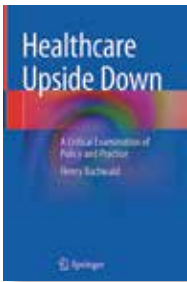
Dr. Nolting's start at Columbia was in VP&S labs. She spent two years in the laboratory of neurologist Malcolm B. Carpenter and two years in Eric Kandel's Center for Neurobiology & Behavior. After joining the VP&S Alumni Association in 1980, she and her team worked with generations of medical students and alumni. The number of professorships and scholarship endowments increased under Dr. Nolting's leadership. Notable among them are five professorships funded by Clyde Wu'56 and the Kenneth A. Forde Diversity Scholarship.

Her work also supported programs in genetics and nurture science, including the Judy Sulzberger'49 Human Genome Center



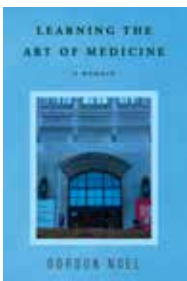
At a March 2006 Alumni Council dinner, Anke Nolting, left, posed with Judith Sulzberger'49, Roy Vagelos'54, and Erin Wilkes'07.

and the Clyde Wu'56 Center for Molecular Biology. She also played a key role in the launch of the Wu Family China Center for Health Initiatives through her partnership and friendship with Clyde'56 and Helen Wu and the extended Wu family.



Healthcare Upside Down: A Critical Examination of Policy and Practice
Henry Buchwald '57
Springer, 2022

Dr. Buchwald has witnessed and experienced changes in health care and its delivery for 60 years, inspiring him to write about the history, historical data, and personal experiences of the health care system. He describes it as a system that “has moved away from caring, first and foremost, for patients.” In addition to examining the changes along the route from medical school to doctor/patient relationship, Dr. Buchwald offers thoughts on how money for health care can be better spent. “I believe the system has been turned upside down to serve the administrators of the system and away from its basic function of offering the best care for patients. All of us are not getting a fair return for what we are paying.”



Learning the Art of Medicine, a Memoir
Gordon Noel '67
Quimby House Press, 2021

Dr. Noel's memoir describes how his Montana upbringing and English literature studies at Harvard made him feel less prepared than many of his classmates to study medicine. He uses humor and honesty to detail stories of his successes and failures throughout training, his time as an Army doctor during the Vietnam conflict, and his years as a teacher and practitioner at what was then Columbia-Presbyterian. It was in the latter role that he gradually realized the struggle between missing out on family life and being a part of a revered institution, with colleagues and patients he deeply cared about. The memoir reveals the journey of finding a balance between being a good doctor and being a good father, husband, and friend.



Brief Supportive Psychotherapy: A Treatment Manual and Clinical Approach
John Markowitz '82
Oxford University Press, 2022

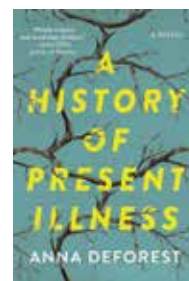
This book by Dr. Markowitz is a treatment manual for brief supportive psychotherapy, a widely practiced but poorly defined, often misunderstood, and unfairly disparaged treatment. This time-limited, affect-focused treatment, which Dr. Markowitz and

colleagues developed more than 30 years ago, has been tested against more common established psychotherapies, including cognitive behavioral therapy and interpersonal psychotherapy. Brief supportive psychotherapy, an emotion-focused, bare-bones treatment based on Carl Rogers' client centered therapy, has proved itself to be a robust treatment in multiple randomized controlled treatment trials. Some therapists previously trained only in cognitive and behavioral approaches have found this affect-focused approach adds a new dimension to their thinking and to their patients' lives. The book shows therapists and patients the importance of emotion as an essential aspect of effective treatment.



Anjali the Brave: All about Vaccines
Adjoa Smalls-Mantey '15
and Maria Abraham
Indies United Publishing House, 2022

Dr. Smalls-Mantey co-authored this picture book geared toward children ages 3 to 8. The book invites readers to take a trip with Anjali and her father to the doctor to get her COVID-19 vaccine shot. There the doctor explains the science behind vaccines, how they work, and the history of the scientists who create them. “The purpose of this book,” says Dr. Smalls-Mantey, “is to help children, parents, and educators understand that even though vaccine shots may be scary, they are important to keeping us safe and healthy.” The book features diverse characters—an Indian child, a father portrayed as a strong caregiver, and a Black female doctor—in roles not traditionally highlighted in a majority of children's books, says the author.



A History of Present Illness
Anna DeForest '17
Little, Brown and Company, 2022

Dr. DeForest, who has an MFA from Brooklyn College, began the novel as her fourth-year scholarly project, reported Publishers Weekly. The book follows a medical student from her first day as a student doctor through anatomy class, a surgical rotation, difficult births, and sudden deaths. Reviews for Dr. DeForest's debut novel have been positive: The New York Times called it “a revelation.” Booklist called the novel “brutal and brave,” describing it as one of the best in the “making of a doctor” genre. Lit Hub listed the novel as one of its most anticipated books of 2022. The publisher calls the novel “a boldly honest meditation on the body, the hope of healing in the face of total loss, and what it means to be alive.”

FACULTY

John M. Driscoll, MD, the Reuben S. Carpentier Professor Emeritus of Pediatrics and chair of the Department of Pediatrics from 1992 to 2007, died Sept. 9, 2022. He joined the VP&S faculty in 1971. As a perinatologist, Dr. Driscoll pioneered treatment for premature and other high-risk infants. He helped establish the NICU at what is now Morgan Stanley Children's Hospital of

New York-Presbyterian and served as the NICU's director from 1973 to 1992. Dr. Driscoll created a neonatal ethics committee at the hospital and served as its first chair. It was one of the first pediatrics ethics committees in the United States.

OTHER FACULTY DEATHS

Mieczyslaw Finster, MD, professor emeritus of anesthesiology, died Sept. 11, 2022.

Blair Ford, MD, professor of neurology at CUMC, died Aug. 25, 2022.

Mark L. Heaney, MD, PhD, associate professor of medicine at CUMC, died Aug. 17, 2022.

Steven R. Isaacson, MD, professor emeritus of radiation oncology (in neurological surgery), died July 24, 2022.

Donald Kornfeld, MD, professor emeritus of psychiatry at CUMC, died July 5, 2022.

Sally Ann Lederman, PhD, retired faculty member in the Institute of Human Nutrition, died in May 2022.

Eugene Pantuck, MD, professor emeritus of anesthesiology, died June 19, 2022.

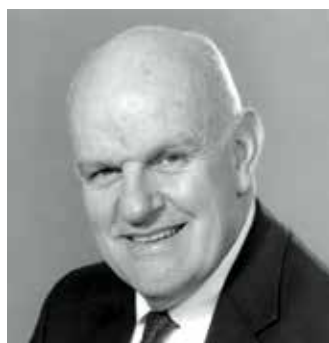
ALUMNI 1950

Elizabeth Crandall, a pediatrician and obstetrician committed to public service for decades in Maplewood, New Jersey, died Jan. 31, 2022, at age 98. Dr. Crandall was one of 17 women in her class. She became a physician for the New Jersey Bell Telephone Company, followed by nearly 30 years at the South Orange-Maplewood School District. She also served as a physician to Our Lady of Sorrows and worked for the South Orange Keep Well Clinic. In the 1970s, she moved into insurance medicine, serving as medical director for the Prudential Insurance Company and later for American International Group. She consulted for several clients, including Bankers Trust. Dr. Crandall was instrumental in organizing clinical services for Maplewood's Planned Parenthood clinic in the 1950s and 1960s. She advocated for the building of

Maplewood's community pool and volunteered with her husband, Charles Eben Crandall '50, to administer the polio vaccine. She raised funds for child care services for working families through the South Mountain YMCA and was a committed volunteer with the Girl Scouts, United Methodist Church, and Winchester Gardens. She loved sailing. Elizabeth was preceded in death by her husband and two sons. She is survived by two children, three grandchildren, and a great-grandchild.

1951

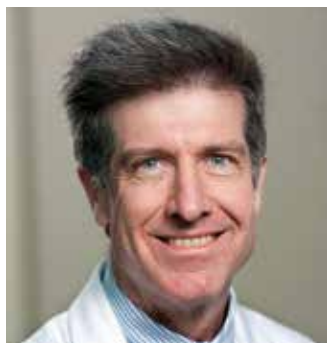
Barbara O'Connell, a pioneering psychiatrist in adolescent and women's mental health and the care of incarcerated women, died May 30, 2022. She was 95. She was an avid sailor, reader,



John Driscoll



Mieczyslaw Finster



Mark Heaney



Blair Ford



Donald Kornfeld



Elizabeth Crandall '50



Barbara O'Connell '51

gardener, and bridge player. She is survived by four children and seven grandchildren.

Muriel Kowlessar, professor emerita of pediatrics at the Medical College of Pennsylvania, died July 13, 2022. She was 96. She trained at Strong Memorial Hospital in Rochester and later became assistant professor of pediatrics at the SUNY Downstate Medical Center. In 1966, she moved to Philadelphia to accept a position at St. Christopher's Hospital for Children. In 1970, she joined the Department of Pediatrics at the

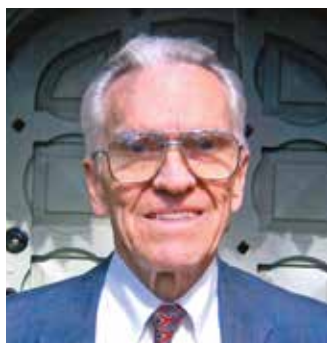
Medical College of Pennsylvania, where she served as vice chair, director of the pediatric outpatient department, and professor of pediatrics until retirement. She moved to Massachusetts in 2008, where she volunteered as a foster care reviewer for the Department of Children and Families, a school mentor for the Big Brothers Big Sisters Program, and a member of the board of directors of the Community Music School of Springfield. Dr. Kowlessar is survived by a daughter and a granddaughter.

1952

Gustave Prinsell, a surgeon with a family medicine practice in Houghton, New York, from 1964 until his retirement in 1991, died July 13, 2022. He was 100. He served four years in the U.S. Navy as a minesweeper during World War II. He trained at the University of Michigan's Saginaw Hospital and completed a fellowship in tropical medicine through the University of London. He devoted the early part of his career to medical missions at Kamakwie Wesleyan Hospital in Sierra Leone, as well as in Zambia, Zimbabwe, and Haiti. He returned to Sierra Leone in 2001 and 2009. He was the school physician at Houghton College and Fillmore Central School, helped found the Wesleyan Medical Fellowship, and was active in the Houghton Wesleyan Church. Dr. Prinsell is survived by his wife, Louise Binger, four sons, seven grandchildren, and five great-grandchildren.

1953

Leland B. Cowan, a radiation therapist, died June 23, 2022, at age 93. After medical school, he became a medical officer in the U.S. Air Force, serving on active duty first on Johnston Island, a tiny atoll in the South Pacific, then at Tripler Army Medical Center on Oahu. He later trained



Leland B. Cowan '53

at Memorial Sloan Kettering Cancer Center. In 1965, he went into practice side by side with his father, Dr. Leland R. Cowan, a longtime surgical oncologist in Salt Lake City. When his father died of cancer in 1976, Dr. Cowan helped found the Leland R. Cowan Cancer Clinic and treated patients there for the rest of his career. Dr. Cowan is survived by two sons and two grandsons.

1954

Mehran "Micky" Goulian, a hematologist, molecular biologist, and professor emeritus at UC San Diego, died Jan. 7, 2022, at age 92. He trained at Barnes Hospital at Washington University in St. Louis, conducted research at the NIH, and received further training in internal medicine and hematology at Yale University and Massachusetts General Hospital. He later studied DNA synthesis as a fellow in the laboratory of



Mehran "Micky" Goulian '54

Arthur Kornberg at Stanford University. He joined the faculty of the University of Chicago, then the Division of Hematology at UC San Diego. There he continued his bench work in the molecular biology of DNA while serving as a practicing clinician, investigator, and educator until retirement in 1995. Dr. Goulian was a passionate violinist who played in string quartets. He is survived by three children and three grandchildren.

Eugene Goldberg, a psychoanalyst, training analyst, and lecturer at Columbia's Center for Psychoanalytic Training and Research, died Feb. 16, 2022, at age 93. Dr. Goldberg was a lifelong New Yorker and musician. He is survived by his wife, three children, and two grandchildren.

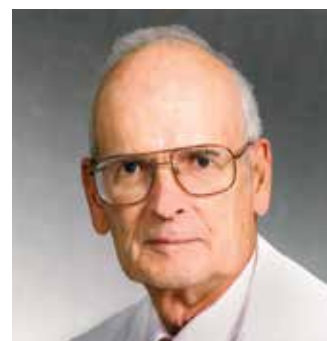
1955

Sylvia Robinson Cruess, professor emerita of medicine and health sciences education at McGill University and an Officer of the Order of Canada who studied professionalism in medicine, died Sept. 8, 2022. She was 92. While in medical school, she married classmate Richard Cruess. She trained in endocrinology at the Royal Victoria Hospital, McGill University, Bellevue Hospital, and NYU. The Cruess family moved to Montréal, where she became director of the Metabolic Day Centre of the Royal Victoria Hospital. In 1978, when she was appointed medical director of the Royal Victoria Hospital, she became the first woman in Québec to serve in a high administrative position within the hospital sector. She retired in 1995 and spent the next 25 years studying issues related to professionalism in medicine. Dr. Cruess and her husband published together extensively. The McGill University Health Centre named its principal lecture hall the Sylvia and Richard Cruess Amphitheater, and McGill University



Sylvia Robinson Cruess '55

established the Richard and Sylvia Cruess Chair in Medical Education. Dr. Cruess received the highest awards available in the medical education community in Canada (the Ian Hart award), the United States (the Flexner award), and the United Kingdom (the ASME gold medal). She enjoyed classical music, fly fishing, berry picking, birdwatching, skiing, and crosswords. She is survived by her husband, two sons, and four grandchildren.



Robert Montroy '56

1956

Robert Montroy of Friendsville, Tennessee, died Nov. 3, 2021. He was 91.

1957

George Burnell, chief of psychiatry at Kaiser Permanente Medical Center in Santa Clara, California, and Honolulu, Hawaii, for the bulk of his career, died May 1, 2022. He was 92. Dr. Burnell was



George Burnell '57

born in Lyon, France, and immigrated to the United States at the age of 20. He served in the USAF (MC) as a captain. He trained at the Langley Porter Neuropsychiatric Institute in San Francisco, Kings County Hospital in Brooklyn, and UC San Francisco. Throughout his career, he served in many capacities, including diplomat of the American Board of Psychiatry, fellow of the American Psychiatric Association, and clinical assistant professor of psychiatry at Stanford University and the John A. Burns School of Medicine at the University of Hawaii. Dr. Burnell was a prolific writer, notably of a memoir about growing up in Nazi-occupied France. He is survived by his son, two grandchildren, and two stepchildren.

1958

Paul D. Harris, a cardiac surgeon at Roosevelt Hospital in New York City and Hackensack Medical Center in New Jersey, died Feb. 15, 2022, at age 89. He trained at the University of Rochester, Harvard, and Columbia. In retirement, he was devoted to baseball, especially as part owner of the Norwich Navigators, a Yankees AA farm team. Dr. Harris is survived by his wife, Sarah, children, and stepchildren.

1959

Mortimer "Mort" M. Civan, emeritus professor of physiology in



Mortimer "Mort" M. Civan '59

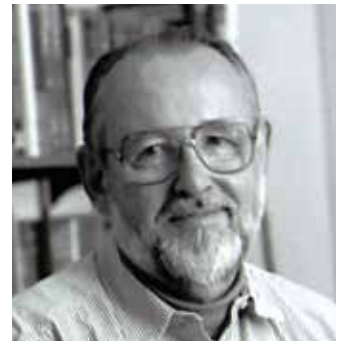
the Perelman School of Medicine and an influential researcher of epithelial salt and water transport, died April 17, 2022. He was 87. He completed his internal medicine internship and residency at Presbyterian Hospital. Dr. Civan studied salt and water transport across kidney epithelia at the National Institute of Arthritis and Metabolic Diseases. Later, in the lab of Alex Leaf at Massachusetts General Hospital and as a faculty member at Harvard, Dr. Civan focused on the toad urinary bladder as a model of the kidney and contributed to the discovery of the need by cells for an energy-dependent mechanism to effectively extrude water (the "double Donnan" hypothesis). He joined Penn's faculty in 1972 and developed a second interest in ocular physiology, using similar methods to help clarify the underlying mechanisms of fluid transport within the anterior part of the eye. He served for 40 years on the editorial board of the American Journal of Physiology: Cell Physiology and earned three patents. Dr. Civan is survived by his wife, Judith, two sons, and five grandchildren.

1960

Horacio Fabrega Jr., a medical anthropologist and professor emeritus of psychiatry at the University of Pittsburgh, died Feb. 21, 2022, at age 88. He trained at St. Luke's Hospital in New York

and at Yale Grace New Haven Hospital before serving in the U.S. Army as a psychiatrist and captain at the Walter Reed Army Medical Center in Washington, D.C. As a medical anthropologist, he focused on evolutionary psychology, ethnomedicine, the biological and social evolution of sickness and healing, and cultural psychiatry. He completed field work in Chiapas, Mexico, and Cuzco, Peru. He published four books, "Disease and Social Behavior" (1974), "Evolution of Sickness and Healing" (1997), "Origins of Psychopathology" (2002), and "History of Mental Illness in India" (2009). Until 2019, he was actively working with colleagues in the United States, Europe, and Australia on conceptions of mental illness in primates and pre-human hominids. He loved reading, movies, and rock climbing. He is survived by his wife, Joan, two daughters, and three grandchildren.

Joost J. "Joe" Oppenheim, senior investigator and head of the cellular immunology section in the Cancer Innovation Laboratory at the NIH, died May 14, 2022. He was 87. Dr. Oppenheim was born in the Netherlands. He and his brother survived the Holocaust there as Jewish children hidden by a Catholic Dutch family. His father was captured and killed, and his mother was sent to a labor camp. In 1945, the boys were reunited with their mother and immigrated to New York City. After completing a residency in Seattle, Dr. Oppenheim joined the NIH. For five decades, he generated landmark discoveries in the field of cytokines, chemokines, and alarmins, which are substances produced by immune cells that enable them to communicate and act as first responders to injury or infection. He was one of the first to acknowledge the importance of intercellular

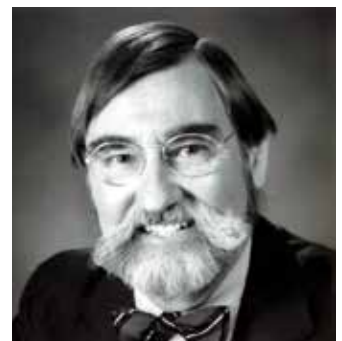


Joost J. "Joe" Oppenheim '60

cytokine signals in the regulation of immune defenses against infections and tumors, for which he nicknamed himself the "Father of Cytokines." He demonstrated the key roles of chemokines in AIDS, inflammation, immune responses, and development. His later work focused on utilizing alarmins as vaccine ingredients for use against infectious agents and tumors. Dr. Oppenheim led societies and journals, received numerous awards for his discoveries and leadership, and trained a network of scientists in Europe, Asia, and the United States. He is survived by his second wife, Ann Goldman, four children, two stepchildren, and 20 grandchildren.

1961

William Dantzer, a founding faculty member of the physiology department at the University of Arizona, died May 27, 2022. He was age 86. After medical school,



William Dantzer '61

he earned a PhD at Duke University and joined the new medical school at the University of Arizona. Over the next 37 years, Dr. Dantzer became professor and chair of physiology, initiated the physiology undergraduate major, served as president of the American Physiological Society, and received two of that society's most prestigious career awards (the Berliner and Krogh Lectureships). Following his retirement in 2005, Dr. Dantzer continued his passions for reading, theater, art, swimming, and travel. He is survived by his wife, Barb, a daughter, and a brother.

Carl F. Brunjes, an orthopedist, died April 13, 2022, in Spokane, Washington, at Providence Sacred Heart Medical Center, the same hospital where he had been a surgeon for decades and across the street from the first office where he practiced. He was 86. Dr. Brunjes completed an internship at Mary Bassett Hospital in Cooperstown, New York, before completing residency at Harvard. In 1967, Dr. Brunjes entered the U.S. Air Force and served at Fairchild Air Force Base near Spokane, Washington. In 1969, he became a founding partner of what is now known as Northwest Orthopedic Specialists. He enjoyed the Spokane Symphony, classic cars, bronze sculptures, art, and skiing. Dr. Brunjes is survived by his



Carl F. Brunjes '61

wife, Marilyn Northern, three daughters, two grandchildren, and four great-grandchildren.

1962

Earl Fogelberg, an orthopedic surgeon, died Jan. 24, 2022. He was 85. He served in the U.S. Air Force as a captain at Stead Air Force Base, trained in Washington



Earl Fogelberg '62

Heights, and moved to California to open a private practice and teach at UCSF. He joined the Ski Patrol at Alpine Meadows as an MD consultant, loved fly fishing, and volunteered with the Guardsmen service to support at-risk youth in the Bay Area. Dr. Fogelberg was diagnosed with pancreatic cancer in September of 2020. He funded an endowment that bears his name for cancer trials and treatment. He is survived by his wife Norma (Spreeman) Fogelberg, two children, a stepdaughter, and five grandchildren.

1963

Myron Lewis, a gastroenterologist who spent most of his career at Baptist Memorial Hospital in Memphis, Tennessee, died April 9, 2022, at age 84. He trained at Vanderbilt University Medical Center and the Cornell Bellevue Division of Memorial Sloan Kettering before serving in the U.S. Public Health Service in Louisville, Kentucky. Dr. Lewis joined Baptist Memorial Hospital in 1970,

where he co-directed the gastrointestinal laboratory and served as the hospital's chief of staff in 1985. He was most proud of his time as president of the National American College of Gastroenterology from 1987 to 1988. He taught at the University of Tennessee and served on the editorial board of the Journal of Gastroenterology. A volunteer physician at Church Health, Dr. Lewis also enjoyed opera and played tennis in his retirement. He is survived by his wife, Gail, three daughters, and four grandchildren.

1964

Paul Berk, former professor of medicine in the division of digestive and liver disease at VP&S who made significant research contributions to the field of hepatology, died July 11, 2021, at age 83. Before medical school, he was a Fulbright Scholar in applied mathematics at the University of St. Andrews in Scotland. After training at Columbia he joined the NIH as a clinical associate in the metabolism branch at the National Cancer Institute and was a commissioned officer in the U.S. Public Health Service. Dr. Berk used his mathematical expertise to examine the kinetics of radiolabeled bilirubin disappearance in people and extended these studies to encompass individuals with Gilbert syndrome. He pursued this line of investiga-



Paul Berk '64

tion for two decades as a senior investigator at the National Cancer Institute. He taught at Georgetown and was recruited to Mount Sinai as chief of the Division of Hematology and later chief of the Division of Liver Diseases. He was the founding editor of the journal Seminars in Liver Disease, which he led for more than three decades. In 2004, he returned to Columbia to teach, and he focused on the role of long chain fatty acids in obesity and the pathophysiologic effects of bariatric surgery in humans. Dr. Berk is survived by his wife, Nicole, and four children.

1966

Arnold Bank, an OB/GYN in private practice in Cedarhurst, New York, for 30 years who



Arnold Bank '66

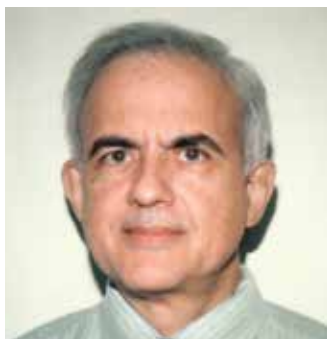
later became an attorney, died June 13, 2022, at age 81. Born and raised in New York City, Dr. Bank studied chemistry and art history at Columbia College before medical school. After training at Mount Sinai Hospital, he served in the U.S. Army as a major at Fort Lee, Virginia, until 1973. After 30 years in private medical practice, Dr. Bank enrolled at the CUNY School of Law and was a malpractice defense attorney for 16 years. He loved sailing. Dr. Bank is survived by his wife, Sharon, two children, and five grandchildren.

1968

John Davis, an orthopedic surgeon who established Mid-Carolina Orthopedics and served Tryon and Rutherfordton, North Carolina, for more than 30 years, died July 7, 2022. He was 79. He trained at Grady Memorial Hospital in Atlanta and was a U.S. Navy lieutenant physician serving in Vietnam and at the Naval Hospital in Oakland, California. He later trained in Chattanooga, Tennessee. He was a member of the Eastern Orthopedic Association, the Southern Orthopedic Association, and the North American Spine Society. Dr. Davis is survived by his wife, Judy Byars Davis, three children, a stepson, two grandsons, and a brother.

1976

Guillermo "Bill" R. Sánchez, a pediatric cardiologist who helped Children's Hospital of Philadelphia (CHOP) create specialty care centers across New Jersey, died Jan. 7, 2022, at age 76 while on his way to care for patients at



Guillermo "Bill" R. Sánchez '76

the CHOP Princeton Specialty Care Center. At age 15, his family immigrated to New Jersey as Cuban refugees. He completed a PhD in biochemistry from Columbia and an NIH postdoctoral research fellowship before attending medical school. He trained at Children's Hospital of Pittsburgh. He worked at St.

Christopher's Hospital for Children in Philadelphia and Cooper Hospital/University Medical Center in Camden, New Jersey, before joining CHOP in 1995. He taught at each post, eventually joining the Perelman School of Medicine. Dr. Sánchez made many clinical research contributions to the field of pediatric cardiology and established pediatric cardiology clinics in southern New Jersey in Voorhees, Princeton, Atlantic County, and other communities. He served CHOP as medical director of pediatric cardiology in South Jersey until the time of his death. He was a little league coach, a masters swimmer, and an active parishioner of Queen of Heaven Catholic Church and School. Dr. Sánchez is survived by his wife, Earline, four children, a grandson, and eight siblings.

1977

Craig Coonley, an Air Force lieutenant colonel, hematologist/oncologist, and clinician-scientist who practiced for two decades in Bridgeport, West Virginia, died June 7, 2022. He was 71. Dr. Coonley completed his internal medicine residency at Wilford Hall USAF Medical Center, Lackland AFB, in San Antonio, Texas, and his fellowship in hematology/oncology at Memorial Sloan Kettering Cancer Center in New York. He served as chief hematologist/oncologist at USAF Medical Center-Keesler AFB in Biloxi, Mississippi, and was staff hematologist/oncologist at Wright Patterson AFB in Dayton, Ohio. He received a USAF Commendation Medal in 1986. His retirement from private practice in 2012 was short-lived, as he soon became medical oncologist and cancer program administrator at the Louis A. Johnson VA Medical Center in Clarksburg, West Virginia. Dr. Coonley was a

licensed amateur radio operator and member of the Central West Virginia Wireless Association. He is survived by his wife, B. Joyce Coonley, two daughters, two stepsons, three grandchildren, and two great-grandchildren.

1978

Andrea Schaffner, who practiced geriatric medicine in Essex and Middletown, Connecticut, for 38 years, died March 19, 2022, of cancer. She trained in internal medicine and geriatrics at Yale New Haven Hospital. During her career, she served as the medical director of four nursing homes and cared for many



Andrea Schaffner '78

thousands of patients across the Connecticut Shoreline. She enjoyed travel, cooking, reading fiction, book clubs, gardening, canasta, and mahjong. She is survived by her husband, Mike Saxe, three children, three stepchildren, and two grandchildren.

1979

Brooke Barton, who practiced pharmacological psychiatry in Santa Monica, California, died Jan. 11, 2022, of unsuspected cardiac problems at her home in Los Angeles. She was 67. Before medical school, she attended Princeton University, where she was an enthusiastic member of the Glee Club. She trained in neurology and psychiatry at UCLA.

She filled her life with music, studying cello, flute, and piano and singing in three chorales. She attended the theater, ballet, and opera; took ballet class; and loved traveling. Dr. Barton is survived by her father, a sister, two nieces, and a nephew.

2017

Ifeanyi Onyeji, a urologic surgery resident at UC Davis, died unexpectedly May 8, 2022. He was 31. Born in Lagos, Nigeria, Dr. Onyeji immigrated to Greensboro, North Carolina, at the age of 11 and attended Stanford University, graduating Phi Beta Kappa. At VP&S, he co-directed



Ifeanyi Onyeji '17

Young Docs, which connects medical students with neighborhood children to interest them in medical careers. This earned Dr. Onyeji a Student National Medical Association Pipeline Mentoring Institute grant. He graduated from VP&S with the Dean's Award for Outstanding Contributions to VP&S. He dedicated an additional year of his training to research and was published in the field of andrology. Dr. Onyeji was passionate about travel and extended his outreach abroad, spending time in Spain and Nicaragua. His acumen in Spanish enhanced his care for his patients. Dr. Onyeji is survived by his mother, stepfather, two brothers, and two sisters.

PROVIDING FOR

FUTURE GENERATIONS OF VP&S STUDENTS

The VP&S Office of Development interviewed **Lorenz Ng, MD, VP&S 1965**, to learn about his career in neurology and his support of Columbia through a bequest and creating scholarships that benefit VP&S students.

DR. NG IS A NEUROLOGIST AND EDUCATOR. After earning his medical degree at Columbia, he completed his neurology residency at the University of Pennsylvania Hospital, and then worked as a research fellow at the National Institute of Mental Health. After his fellowship, Dr. Ng was Special Assistant to the Director at the National Institute on Drug Abuse. He eventually became the director of the Washington Pain Center, and from 1991 to 1998 he was the medical director of the Chronic Pain Program at the National Rehabilitation Hospital in Washington. Dr. Ng was also the director of medical and regulatory affairs at Greater China Eli Lilly & Co. in Shanghai.

Dr. Ng explained, “I came to the U.S. from Singapore in 1958, at 18 and I went to Stanford for my undergraduate education. I had a full scholarship...I was accepted to Columbia medical school, full scholarship.” He continued, “When Laura Tenenbaum approached me about doing a scholarship I said I would do what I can. I tried to not only give back, but to see what I could do to help in a small way.”

In addition to creating a scholarship for VP&S students, Dr. Ng has a bequest that includes Columbia. He said, “I have provided, after my death, a portion of my life insurance policy to Columbia and at the same time, what I eventually give to Columbia will depend on how long I live—what remains will go to Columbia and a few other places.”

Dr. Ng is also an active supporter of his class of 1965. **“Last year I gave money to the scholarship of my class. It’s great to know that everybody is pulling their weight in terms of helping Columbia. All the alumni are pulling their weight.”**



LORENZ AND ROBERTA NG

SARAH EGAN

TOUTING OUR CLINICAL EXPERTISE, LEGACY

The medical school's first billboard overlooking the Henry Hudson Parkway in New York City was unveiled in October. The billboard is located near 130th Street in Manhattan and is visible to both northbound and southbound traffic.

