

A vertical banner with a blue background. It features a blurred image of a person in a classroom or lecture hall. The text 'EDUCATION' is written vertically in white, sans-serif capital letters. In the background, the letters 'G W' and 'DED' are visible, likely part of the university's name.

EDUCATION

A vertical banner with a gold background. It features a blurred image of a person in a professional setting, possibly a leader. The text 'LEADERSHIP' is written vertically in white, sans-serif capital letters.

LEADERSHIP

A vertical banner with a teal background. It features a blurred image of a hand holding a pipette in a laboratory. The text 'DISCOVERY' is written vertically in white, sans-serif capital letters.

DISCOVERY

A vertical banner with a blue background. It features a blurred image of a building with a curved facade. The text 'COMMUNITY' is written vertically in white, sans-serif capital letters.

COMMUNITY

A vertical banner with a green background. It features a blurred image of a person in a clinical setting, wearing a mask and cap. The text 'CLINICAL EXCELLENCE' is written vertically in white, sans-serif capital letters.

CLINICAL EXCELLENCE

SCHOOL OF MEDICINE
AND HEALTH SCIENCES

PROGRESS REPORT 2017

**THE GEORGE
WASHINGTON
UNIVERSITY**

WASHINGTON, DC

DEAN'S LETTER



DEAR COLLEAGUES,

In the pages of this report, you will read about the incredible progress we've experienced at the George Washington University (GW) School of Medicine and Health Sciences (SMHS) in areas that align with our strategic plan.

Since our last progress report, we have made great strides in many areas, including research, education, and clinical care. Some examples include:

- SMHS researchers were selected as the recipients of the NIH Martin Delaney Collaboratory grant to find a cure for HIV/AIDS using new approaches;
- the Ron and Joy Paul Kidney Center, which was established in 2015 to educate members of the Washington, D.C., community about kidney disease, made important head-way through a large-scale advertising campaign; and,
- the GW Cancer Center celebrated the opening of new labs dedicated

to cancer research and collaboration with a ribbon-cutting ceremony. GW Cancer Center is paving the way for more success by recruiting the best researchers and clinicians in the country to be a part of its growing efforts.

With all of these initiatives, we have kept to our mission of eliminating health disparities and transforming health care to enrich and improve the lives of those we serve.

Several significant accomplishments also have occurred this year that support our objectives, such as the attainment of eight years of accreditation for our M.D. program, 10 years of accreditation for our Medical Lab Sciences program, and, for the seventh straight year, a 100 percent pass rate for our Physical Therapy program students on their National Physical Therapy Examination.

SMHS is also examining the issue of student debt load and working to identify approaches that will ease this burden

for our graduates. We've put substantial effort into increasing our scholarship fund and scholarship opportunities, providing relief for our students.

As an institution, we continue to grow and are very proud of the progress we have made, yet there is still a lot of work to do to achieve our goals. We have a great capacity to influence the future of health care through our students, our research, and the care that we provide to our patients of today and tomorrow. I hope you find this report to be informative, and if you have interest in getting involved, we welcome your input.

Warmest regards,

JEFFREY S. AKMAN, M.D. '81, RESD '85
Vice President for Health Affairs
Walter A. Bloedorn Professor of
Administrative Medicine
Dean, School of Medicine and
Health Sciences



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Mission & Vision

The George Washington University School of Medicine and Health Sciences is dedicated to improving the health of our local, national, and global communities by:

- Educating a diverse workforce of tomorrow's leaders in medicine, science, and health sciences.
- Healing through innovative and compassionate care.
- Advancing biomedical, translational, and health services delivery research with an emphasis on multidisciplinary collaboration.
- Promoting a culture of excellence through inclusion, service, and advocacy.

As a globally recognized academic medical center, GW embraces the challenge of eliminating health disparities and transforming health care to enrich and improve the lives of those we serve.

A FULL EIGHT YEARS

The George Washington University (GW) School of Medicine and Health Sciences (SMHS) M.D. program received full accreditation for an eight-year term from the Liaison Committee on Medical Education (LCME), following a peer review process that included self-study and data gathering as well as an intensive three-day site visit.



“This is an outstanding outcome – and I am grateful to the incredible team of students, faculty, staff, and deans who worked extremely hard to achieve this result,” said Jeffrey S. Akman, M.D. ’81, RESD ’85, vice president for health affairs, Walter A. Bloedorn Professor of Administrative Medicine, and dean of SMHS.

Members of the survey team found that the SMHS program was in compliance with LCME standards, which are designed to ensure that medical school graduates exhibit general professional competencies appropriate for the next stage of training. The LCME team also requested a follow-up report on the evaluation of the revised curriculum once its rollout is completed in 2017, as well as a report on the school’s continued efforts to mitigate student indebtedness.

PERFECT PASS RATES

For the seventh consecutive year, graduates of the George Washington University (GW) School of Medicine and Health Sciences Physical Therapy (P.T.) Program achieved a 100 percent first-time pass rate on the National Physical Therapy Examination (NPTE). The NPTE, which serves as a common element across jurisdictions in the evaluation of licensure candidates, is a rigorous and comprehensive exam all P.T. graduates must pass.

The Commission on Accreditation in Physical Therapy Education monitors program pass rates to determine whether student achievements meet the required standards. Pass rates also are an important measure of whether a program is meeting its mission to graduate qualified practitioners.



REVISED M.D. CURRICULUM

The revised M.D. curriculum, which launched at the start of the 2014-15 academic year, continues to focus on four major areas: curriculum delivery, including active learning teaching models; early clinical exposure, beginning in the second year of medical school; new content areas, such as ethics, health policy, diversity, and interprofessional education; and an enhanced use of technology.

The inaugural Class of 2018 is now moving through clinical rotations. Written and clinical exam outcomes remain consistently good, as do board scores. Students have reported an appreciation for the earlier start in clinical

immersion and for the expanded choice in electives, while clinical faculty have noted that students are more prepared and think differently.

“We’re very happy with version 1.0, and we think we’ve made improvements subsequent to that,” said Matthew Mintz, M.D. ’94, RESD ’97, FACP, assistant dean for preclinical education and associate professor of medicine at the George Washington University School of Medicine and Health Sciences, adding that students routinely provide feedback. “The performance of our students continues to improve, and we’ve made a lot of adjustments, almost in real time.”

HEALTH SCIENCES

- Undergraduate growth in admissions is up 20 percent over 2015
- Overall undergraduate enrollments are up 15.8 percent
- Fall 2016 enrollment targets were exceeded by 122 students
- A Ph.D. program in Translational Health Sciences has launched with a cohort of 15 students at the Virginia Science and Technology Campus
- Overall, graduate online enrollments are 42.8 percent higher than they were this time last year

AUGMENTING INTEGRATIVE MEDICINE

In response to the rising adoption of integrative medicine — care that pairs traditional Western medicine with alternative therapies such as acupuncture, herbal medicine, massage, and stress-reduction activities like yoga — the

George Washington University (GW) School of Medicine and Health Sciences has expanded its Master of Science in Health Sciences in Integrative Medicine degree program to include a Fellowship in Integrative Medicine.

The fellowship, open to students who have completed a master's degree in integrative medicine, allows graduates to sit for the newly established American Board of Integrative Medicine certification and includes additional hands-on experience,

designed to meet core competencies defined by the Academic Consortium for Integrative Medicine and Health.

Fellows participate in a standardized patient assessment and partner with a clinical faculty member to observe, evaluate, and inform patient care. Fellows also learn how to operate successful clinical practices while building their professional skills in research methods, business practices, health policy, and the social aspects of health.

SMHS STUDENTS LEND A HAND AT HISTORIC WASHINGTON, D.C., EVENTS

As most of Washington, D.C., slept during the early hours of Jan. 20, a group of George Washington University (GW) School of Medicine and Health Sciences (SMHS) students made its way to the National Mall to assist with medical aid at the Presidential Inauguration.

More than 130 volunteers from the GW medical community, including students, physicians from the GW Medical Faculty Associates, nurses and doctors from GW Hospital, and faculty from Children's National Health System, were on hand to provide medical care for the crowd during the historic event.

"It's a once-in-a-lifetime experience; it was incredible to be that close to everything," said Cody Schlaff, a second-year M.D. student. "To be able to walk through and have the official credentials to say 'hey, I'm part of this event' was really humbling."

Students helped with patient tracking and assisting physicians at 22 aid stations peppered throughout the Mall and near the Capitol.



Drew Maurano, P.A.-C., unit leader for the D.C. Department of Health's Medical Reserve Corps, managed by the GW Medical Faculty Associates, praised the students for their hard work and positive attitudes.

"It really stood out to [the Department of Health and Human Services], DOD, and the Secret Service. Everybody was very impressed," said Maurano, who also serves as associate clinical professor of emergency medicine at SMHS.

Earlier in the year, SMHS M.D. students were on hand for the opening of the

National Museum of African American History and Culture. The students, as well as faculty from GW's Department of Emergency Medicine, volunteered their time and services throughout the weekend, attending to minor wounds and assisting the medical team triaging the injured or ill attendees.

Jené Carter, a second-year M.D. student who volunteered at the event, said she participated in order to put into practice the skills she had learned in class while also being part of "a huge, historic moment."

THE ART OF INNOVATION

Students looking to work in the field of medical innovation can learn to navigate the regulatory process and bring new inventions to market faster thanks to George Washington University's (GW) Master of Engineering degree program in Regulatory Biomedical Engineering.

The new, first-of-its-kind degree is an interdisciplinary program offered through GW's Department of Biomedical Engineering in the School of Engineering and Applied Science in partnership with the GW School of Medicine and Health Sciences Regulatory Affairs Program, led by director Daniela Drago, Ph.D., program director for clinical and translational research and assistant professor of clinical research and leadership. The program addresses the nation's unmet need for a graduate program to educate engineers in regulatory science, biomedical innovation, and entrepreneurship — especially as the medical device industry continues to expand.

The 30-credit program includes biomedical engineering course work and a practicum, courses in regulatory issues, and patent law classes for engineers.

FALL 2016 ENTERING M.D. CLASS SNAPSHOT

- 60 percent female, 40 percent male
- Average age 23.8 years, ranging from 21 to 41
- Representing 30 states, D.C., and Canada
- Varied ethnic backgrounds, including self-descriptions of African-American, Afro-Caribbean, Argentinean, Armenian, Asian Indian, Cherokee, Chinese, Cuban, Guamanian, Filipino, Korean, Mexican, Pakistani, Peruvian, Sri Lankan, Turkish, Ukrainian, and Vietnamese
- Average total MCAT score: old exam: 30, new exam: 510.8
- Average undergraduate GPA: Science (biology, chemistry, physics, and math): 3.63, Overall: 3.70
- Average graduate GPA: 3.70
- 86 undergraduate schools and 20 graduate schools represented
- Majors/areas of study: approximately 60 percent of class majored in science
- Top majors: biology, psychology, neuroscience, biochemistry, English, anthropology, history



FROM SPECIAL OPERATIONS TO THE CLASSROOM



As a child, Jared Ross, M.B.A. '03, B.S. '01, dreamed of being a Green Beret in the United States Army Special Forces. Twenty-six years after that goal materialized, Ross, newly retired from the Army, decided to shift his attention to the classroom, educating the next generation as an adjunct instructor of clinical research and leadership at the George Washington University (GW) School of Medicine and Health Sciences.

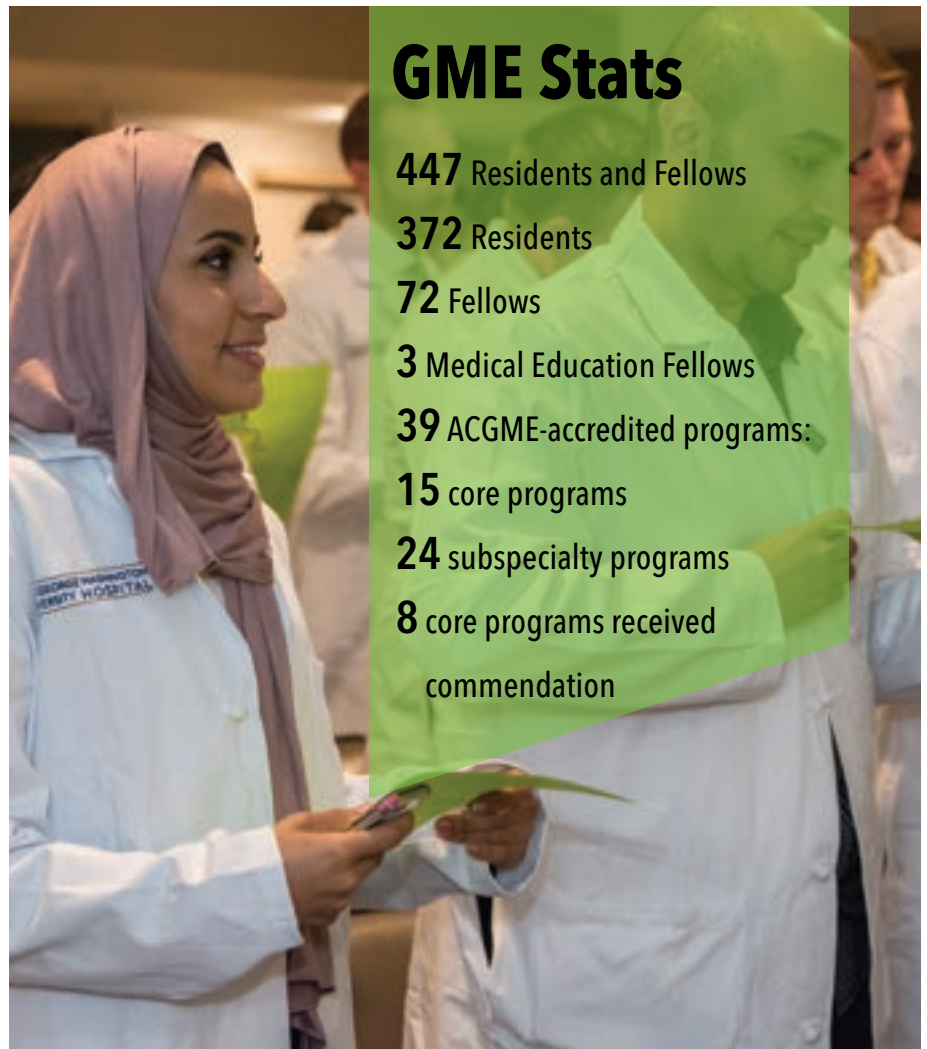
Ross' core courses — in both the Clinical Management and Leadership Program and the Health Sciences Laboratory Technology Certificate Program through the Military Affiliated Programs — and his experience have helped to ease the transition for those re-entering civilian life after a career in the military.

“GW has a strong reputation in the military,” Ross said. “GW, more than anyplace else I’m aware of, has really opened up to the community, and it’s more user-friendly; there’s a strong Veterans Affairs office here, and the reputation is growing.”

A NEW GENERATION OF CANCER RESEARCHERS

The George Washington University Cancer Center launched the Albert L. Tucker and Elizabeth T. Tucker Postdoctoral Fellowship to support promising young cancer researchers. The fellowship is made possible thanks to a \$1 million grant from the Albert L. Tucker and Elizabeth T. Tucker Foundation, which provides financial support to hospitals, medical centers, and other health service organizations.

As the inaugural Tucker fellow, Heather Levin, M.D. '16, is contributing to research in liver cancer. “Having this award allows me to [have] a research year, which will strengthen my medical background and strengthen my science background before I start [my residency],” she said. “It’s really exciting for me.”



GME Stats

447 Residents and Fellows

372 Residents

72 Fellows

3 Medical Education Fellows

39 ACGME-accredited programs:

15 core programs

24 subspecialty programs

8 core programs received commendation

CLINICAL PUBLIC HEALTH SUMMITS TACKLE NATIONAL HEALTH ISSUES



Innovative proposals from M.D. students at the GW School of Medicine and Health Sciences (SMHS) created during 2015's HIV clinical public health summit are now part of Washington, D.C.'s new HIV/AIDS Action Plan.

"The 90/90/90/50 Plan: Ending the HIV Epidemic in the District of Columbia by 2020" looks to ensure 90 percent of Washington, D.C., residents are aware of their HIV status, 90 percent of people with HIV get treatment, 90 percent of those in treatment achieve viral load suppression, and that the city will see a 50 percent decrease in new HIV cases within three years.

Before the fall and spring semesters, M.D. students at the George Washington University (GW) School of Medicine and Health Sciences attend workshops that expand their knowledge in specific areas. The courses focus on topics such as HIV/AIDS, childhood asthma, and obesity.

The three-day fall M.D. program Clinical Public Health Summit, "How Physicians Can Help Create an AIDS-Free Generation," took an intensive look at the HIV/AIDS epidemic. Students

met with leaders on the front lines of the HIV/AIDS fight and proposed innovative ideas to tackle the disease. There are between 12,000 and 14,000 people living with HIV in Washington, D.C., and at least one-third of all new diagnoses occur in patients between the ages of 13 and 24.

For the 2016 spring program, students attended a Clinical Public Health Summit on obesity. At the summit, students heard from experts in the field, participated in plenary sessions and

breakout discussions, and completed site visits. During the session, students also looked at various approaches to fighting obesity, such as restructuring health systems, promoting healthy eating, and improving physical activity habits. Students presented their proposals to a panel of experts from Nemours Children's Health System, Children's National Health System, and the GW Medical Faculty Associates, among other institutions.



MAKING A MATCH

TOP 5 SPECIALTIES

	2016	2015
Internal Medicine	43	35
Pediatrics	26	21
Anesthesiology	14	20
Emergency Medicine	12	15
Diagnostic Radiology	12	4

As the clock struck noon on March 18, 2016, George Washington University (GW) School of Medicine and Health Sciences (SMHS) M.D. students ripped open white envelopes and pulled out slips of paper that would determine the next step in their journey to becoming doctors — where they would spend their residency.

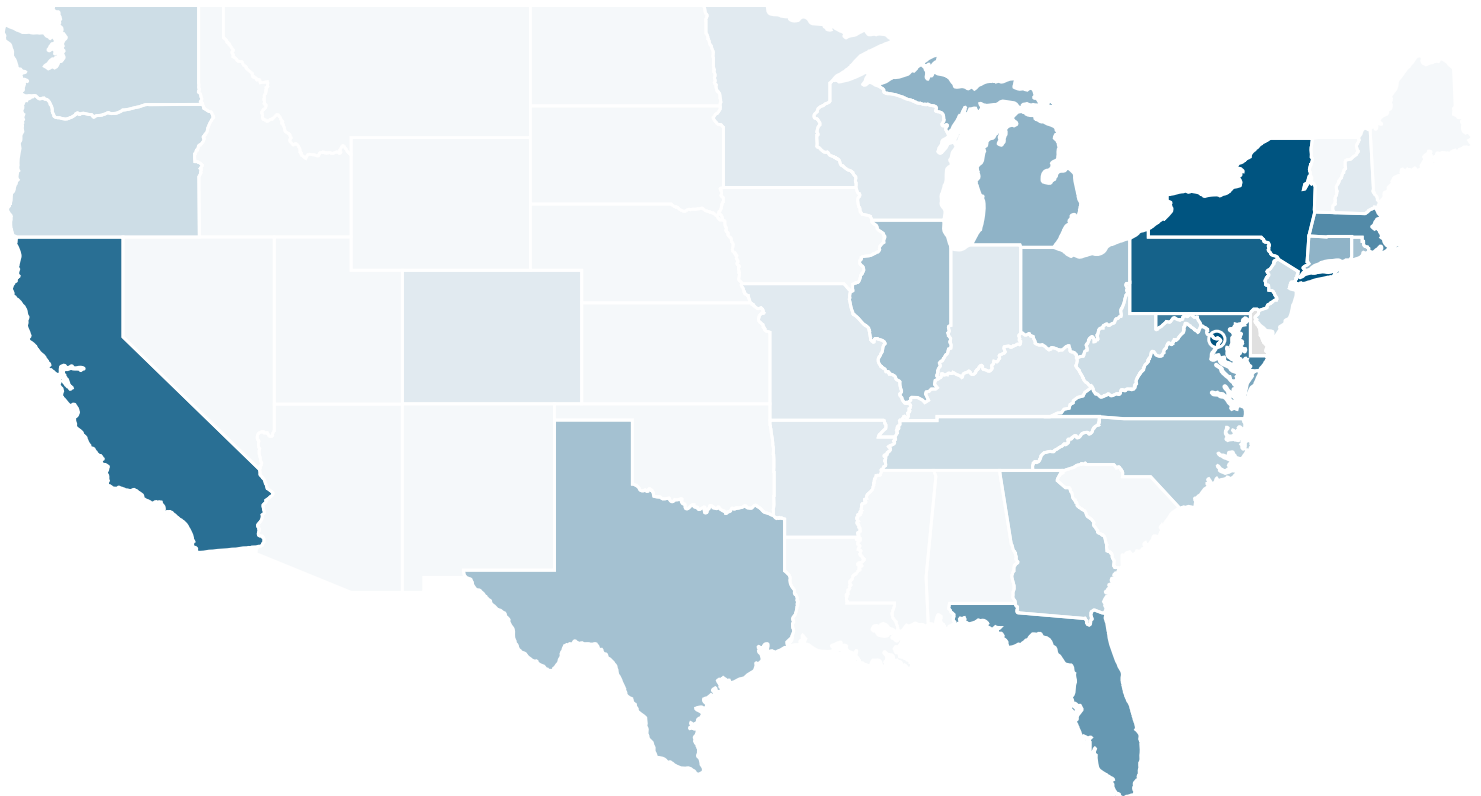
It's a moment four years in the making, and it comes a few weeks after students submit their top choices for where they would like to train. The National Resident Matching Program takes those

submissions and uses an algorithm to match each student with a residency program.

SMHS students matched at dozens of institutions around the United States, including UCLA Medical Center, Johns Hopkins Hospital, Emory University, the University of Virginia, and University of Maryland Medical Center, among others. Eight students continued their training at GW, and seven are training at Children's National Health System in Washington, D.C.

TOP 5 MATCH PLACES

1. District of Columbia – 28
2. New York – 28
3. Pennsylvania – 23
4. California – 20
5. Maryland – 13



28 District of Columbia
 28 New York
 23 Pennsylvania
 20 California
 13 Maryland
 11 Massachusetts

10 Florida
 8 Virginia
 5 Connecticut
 5 Michigan
 4 Illinois
 4 Ohio

4 Rhode Island
 4 Texas
 3 Georgia
 3 North Carolina
 2 New Jersey
 2 Oregon

2 Tennessee
 2 Washington
 2 West Virginia
 1 Arkansas
 1 Colorado
 1 Indiana

1 Kentucky
 1 Minnesota
 1 Missouri
 1 New Hampshire
 1 Wisconsin
 1 Canada



RISING LEADERSHIP

Sally A. Moody, Ph.D., was tapped to serve as interim chair of the Department of Anatomy and Regenerative Biology, in addition to her role as professor of anatomy and regenerative biology at the George Washington University (GW) School of Medicine and Health Sciences. Moody was also recently elected to a two-year term as vice president, and later president, of the Society for Craniofacial Genetics and Developmental Biology, an international organization committed to advancing the knowledge, health care, and prevention of craniofacial disorders.

Moody, who has a long history of leadership roles, has also served as director of the neuroscience graduate program and as associate director of the Institute for Biomedical Sciences at GW, and has led several research projects focused on craniofacial genetics and developmental biology.



GUIDANCE GOALS

Reamer Bushardt, Pharm.D., P.A.-C., DFAAPA, is the newly appointed senior associate dean for health sciences at the George Washington University (GW) School of Medicine and Health Sciences (SMHS). He leads all health sciences departments, including the Department of Physician Assistant Studies, the Department of Physical Therapy and Health Care Sciences, the Department of Clinical Research and Leadership, and the Department of Integrated Health Sciences.

The priorities of Bushardt's role involve a dedication to collaboration, patient safety and quality outcomes research, clinical practice innovation, translational science, medical informatics research and support, team science, and blended learning and education research throughout the health sciences. He also develops and establishes integrated education initiatives with regional partners.

Prior to joining SMHS, Bushardt served as a tenured professor and chair of the Department of Physician Assistant Studies at Wake Forest Baptist Medical Center's School of Medicine, as well as a professor in the Department of Internal Medicine, professor and program leader in Wake Forest's Clinical Translational Science Institute, and professor in the W.G. Hefner VA Medical Center.

SMHS FACULTY NUMBERS

227 Professors

212 Associate Professors

580 Assistant Professors

28 Instructors

77 Other Ranks

1,124 Full-Time Faculty

2,221 Limited Service Faculty





DRIVING AUTISM RESEARCH

As the inaugural director of George Washington University's (GW) Autism and Neurodevelopmental Disorders Institute (ANDI), Kevin Pelphrey, Ph.D., Carbonell Family Professor in Autism and Neurodevelopmental Disorders, brings more than 15 years of experience in autism and neuroscience research to GW.

Pelphrey will refine and implement the vision of ANDI, which was established in 2010, as a resource that offers evidence-based clinical treatments and conducts research on the full spectrum of autism. In partnership with Children's National Health System, the GW Medical Faculty Associates, and six of GW's colleges, ANDI will focus particularly on adults

with autism, a rarely covered age range in the field. In addition, Pelphrey will encourage research on women with autism, because the signs they exhibit are different from those of men and they are often diagnosed at a later age.

Pelphrey was installed as the inaugural Carbonell Family Professor in Autism and Neurodevelopmental Disorders in October 2016. The position was funded through a \$2.5 million gift from the Nelson A. and Michele Carbonell Family Foundation.

"It's one of the greatest honors of my life," Pelphrey said during the installation. "I promise I will earn this."

SUPPORTING FINANCE, ADMINISTRATION AT GWCC

Michael K. Benedict, Pharm.D., serves as the George Washington University (GW) Cancer Center's new associate center director (ACD) for administration and finance. Benedict oversees the central administrative functions of the center.

He joins the GW Cancer Center from Georgia Regents University Cancer Center in Augusta, Georgia, where he served as the ACD for administration. In this role, he provided administrative leadership and oversight for the clinical and research components of an emerging National Cancer Institute-designated cancer center.



INTEGRATING HEALTH SCIENCES AT GW'S VIRGINIA SCIENCE AND TECHNOLOGY CAMPUS

The George Washington University School of Medicine and Health Sciences has introduced a new department: Integrated Health Sciences. The creation of the department, according to Interim Chair Marcia Firmani, Ph.D., M.S.P.H., director of the blended and graduate programs in medical laboratory sciences (MLS), came about through a reshuffling of programs to better suit students, faculty, and staff.

“Within Health Sciences, there have been three departments: one is physical therapy and health care sciences; one is physician assistant studies; and one is clinical research and leadership,”

Firmani explained. “As new programs have been built or come into health sciences, they usually get put into the physical therapy and health care sciences department or clinical research and leadership.”

Now falling under the Integrated Health Sciences umbrella, the MLS programs, as well as the post-baccalaureate, pre-medicine program — designed to prepare college graduates without science degrees with the necessary pre-requisites and tools for medical school application — relocated to the Virginia Science and Technology Campus (VSTC) in Ashburn, Virginia.

CANCER CENTER'S KEY TO HEALTH EQUITY

As the George Washington University Cancer Center's new associate center director for patient-centered initiatives and health equity, Mandi Pratt-Chapman focuses on national research for patient-centered care and integration of research into practice.

In her role at the GW Cancer Center, she is responsible for creating a patient services program, growing community relationships, and maintaining a portfolio of projects related to patient-centered care. Pratt-Chapman joined GW's cancer efforts in 2008 and became the director of the GW Cancer Institute (GWCI) in 2012.

GWCI was recently rebranded as the Institute for Patient-Centered Initiatives and Health Equity at the GW Cancer Center. The name change reflects continued emphasis on promoting health care that is patient-centered, accessible, and equitable.



LEADING SUPPORT

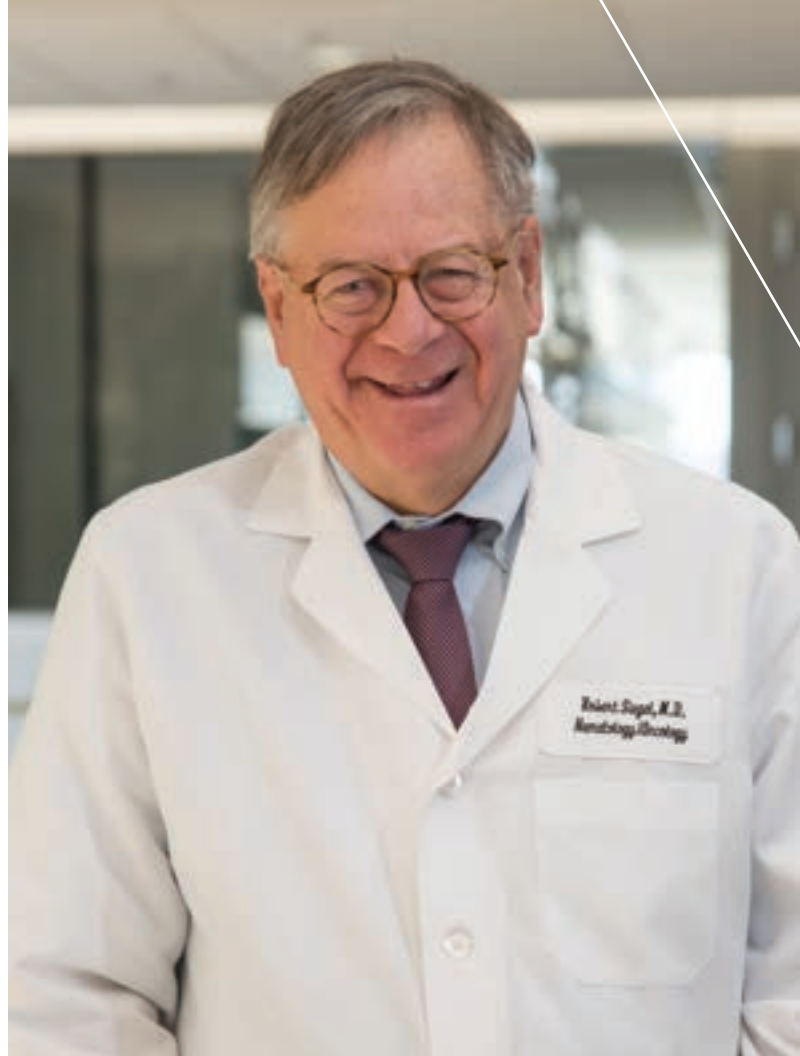
Leslie Davidson, Ph.D., OT/L, FAOTA, the recently appointed chair of the Department of Clinical Research and Leadership at the George Washington University (GW) School of Medicine and Health Sciences, oversees more than 60 faculty members and supports about 600 students, many of whom are distance education learners. In her role, Davidson is responsible for guiding future growth, facilitating international collaborations, supporting faculty research efforts, and raising the national and international profile of the department. She also ensures that the department continues to integrate research and teaching into all aspects of its work in order to enhance models for clinical and translational research and health care delivery, and to influence policy change.



BRINGING ACADEMICS TO GW CANCER CENTER

Robert Siegel, M.D. '77, has been selected to serve as the George Washington University Cancer Center's (GW Cancer Center) associate center director for education and training. Siegel, who joined the faculty at the GW School of Medicine and Health Sciences in 1982, is a professor of medicine and served as director of the Dr. Cyrus and Myrtle Katzen Cancer Research Center. His research interests focus on refining therapies for breast and head/neck cancers.

Siegel was among the first to document the fact that young African-American women are more likely to develop biologically aggressive cancers compared with Caucasians and Hispanics. He has supervised the medical school's second-year program in hematology since the fall of 1982, and is the director of the GW Board Review Course, the largest program of its kind focusing on hematology and oncology in the country.



WELCOMING WALTER HARRIS

The George Washington University (GW) School of Medicine and Health Sciences (SMHS) has tapped Walter Harris, M.B.A., PMP, as the senior associate dean for administration and operations, a new position within the Office of the Vice President for Health Affairs and Dean of SMHS. Harris comes from the U.S. Food and Drug Administration, where he served as the deputy commissioner for operations and as chief operating officer. At SMHS, he will spearhead business and management efforts designed to balance strategic and operational initiatives. He will also be responsible for SMHS operations and administration, including communications, strategic planning, financial planning and accounting, information technology, human resources, facilities, and safety and security.

KIMBERLY RUSSO TAPPED TO LEAD GW HOSPITAL



Kimberly Russo, M.B.A., M.S., was recently selected to serve as CEO and managing director of the George Washington University (GW) Hospital. The Illinois native's career path has taken her from clinical care as a speech-language pathologist to the highest levels of hospital management.

Before being named CEO, Russo served as chief operating officer for GW Hospital starting in April 2009. She also served as associate administrator since August 2006, and before that held the role of executive director of rehabilitation services.

"As we continue to expand and increase our level of care, we remain committed to our alignment with the School of Medicine and Health Sciences as well as the GW Medical Faculty Associates," said Russo. "Together, we make up the GW clinical enterprise, and we are able to offer comprehensive, research-based care."

ROBERT E. KELLY NAMED GW MEDICAL FACULTY ASSOCIATES CEO

George Washington University (GW) Medical Faculty Associates (MFA) recently selected Robert E. Kelly, M.D., to serve as CEO of the clinical enterprise. In this role, he will provide leadership and strategic physician enterprise integration, as well as overall operational management for the organization. Kelly brings to GW decades of both clinical and administrative experience, most recently serving as president and

chief operating officer of New York Presbyterian Hospital, and as a faculty member of Weill Cornell College of Medicine since 1985.

As CEO, Kelly will partner with Anton Sidawy, M.D., M.P.H. '99, president and chair of the Board of Trustees at the GW MFA, and Lewis B. Saltz Professor and Chair of surgery at the GW School of Medicine and Health Sciences, and other

key members of the GW MFA community to further develop and implement the organization's mission and strategic vision.

The GW MFA is the largest, independent physician group in the Metropolitan Washington area offering primary care and 51 specialties with more than 750 providers committed to coordinated, patient-centered care built on a rich history of academic medicine.

THE ELECTRIC LIBRARY

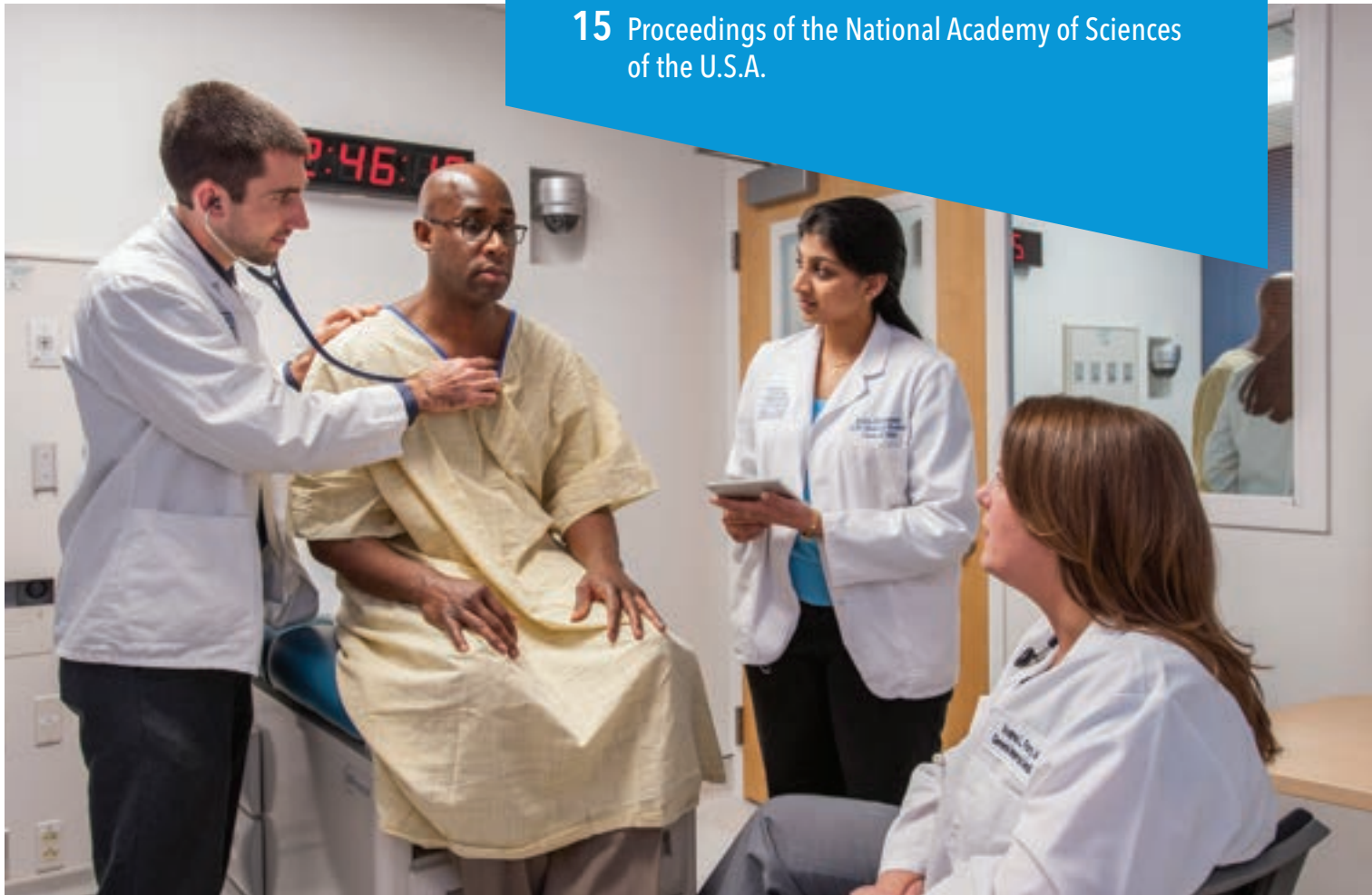
The Himmelfarb Health Sciences Library saw a record number of uses of its electronic collection in 2016, with 4,679,373 visits to its home page, a 10 percent increase over the previous year. Librarians also taught a record number (18,978) of attendees at workshops, orientations, and classes. Many classes were held online using the WebEx and Blackboard technology to accommodate both in-person and off-campus attendees. In July 2016, DynaMed Plus, a new interface for DynaMed that provides users with a sleeker look and improved functionality for clinical point of care information, became available for the George Washington University School of Medicine and Health Sciences community.

LEADING PUBLISHERS

- 26 Pines, Jesse | Emergency Medicine
- 22 Brindley, Paul | Microbiology, Immunology & Tropical Medicine
- 15 Bollard, Catherine | Pediatrics
- 14 Hinds, Pamela | Pediatrics
- 14 Watts, Doraine | Clinical Research & Leadership

TOP PUBLICATIONS

- 50 PLoS ONE
- 25 Pediatrics
- 19 Pediatric Blood and Cancer
- 18 Academic Emergency Medicine
- 18 Journal of Pediatrics
- 15 Proceedings of the National Academy of Sciences of the U.S.A.

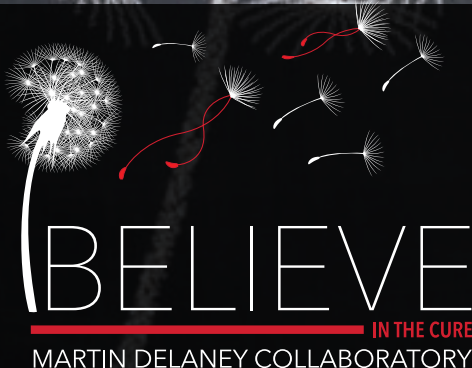


BELIEVE IN A CURE

Researchers at the George Washington University (GW) School of Medicine and Health Sciences, led by Douglas Nixon, M.D., Ph.D., chair of the Department of Microbiology, Immunology, and Tropical Medicine and Walter G. Ross Professor of Basic Science, received a five-year, multimillion-dollar Martin Delaney Collaboratory grant from the National Institutes of Health to apply novel immunotherapy advances in order to create a new HIV cure strategy.

The project, named "Bench to Bed Enhanced Lymphocyte Infusions to Engineer Viral Eradication (BELIEVE)," takes a novel cell therapy approach to making patients' immune systems more effective in eliminating HIV reservoirs. Current HIV cure strategies, known as "kick and kill," are unable to completely clear infected cells or reduce the viral reservoirs once latency is reversed; the BELIEVE research team, however, will define the mechanisms that have prevented the immune system from clearing these infected cells completely.

To accomplish this goal, GW is working with 17 different medical sites, as well as two companies, Altor BioScience Corporation and Torque, a biomedical engineering company. The BELIEVE team also will partner with community advisory boards to ensure continued communication, ownership, and participation in the project.



BELIEVE
IN THE CURE
MARTIN DELANEY COLLABORATORY

NEW TECHNOLOGY, BETTER DETECTION

A new technology, bioelectric impedance cardiography (ZCG), which can assess blood flow in the chest to make inferences about heart function, may lead to an easier and less invasive way to identify heart problems. Now, with the help of a Health Sciences Emerging Scholars grant, George Washington University's (GW) Josh Woolstenhulme, Ph.D., D.P.T., looks to prove the effectiveness of that technology.

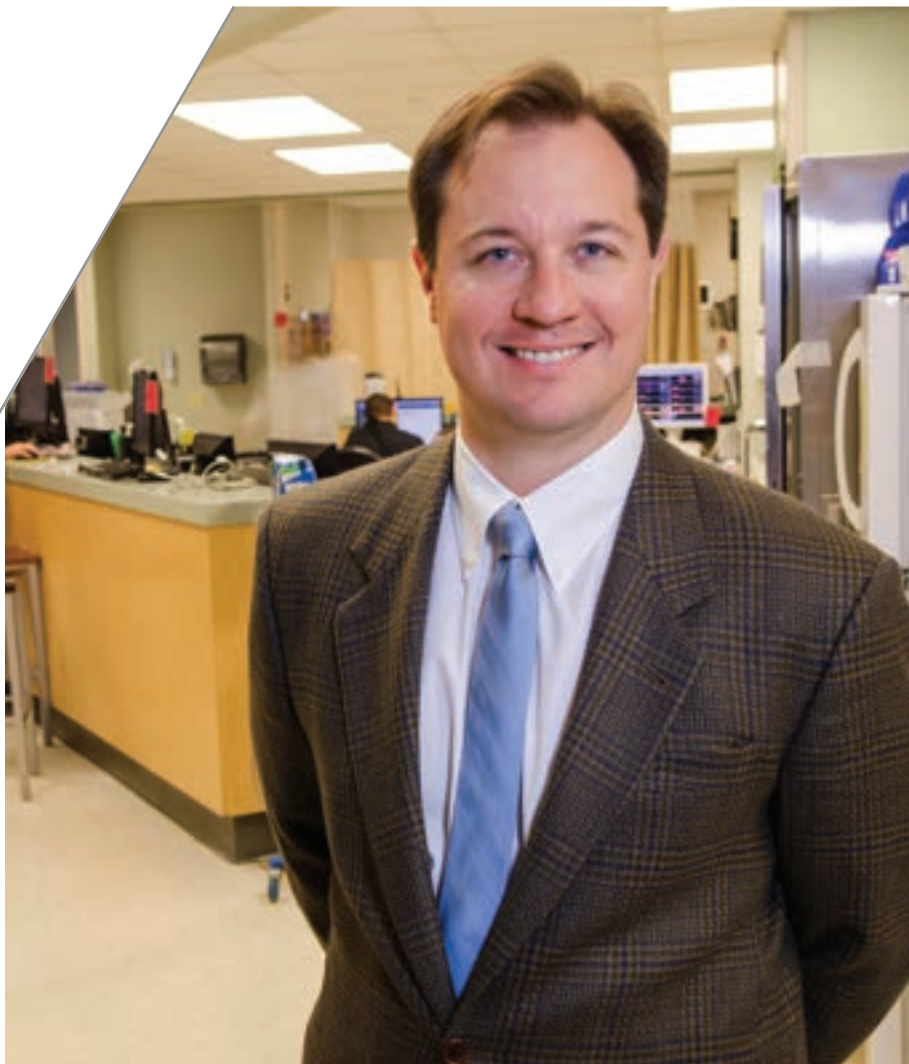
Woolstenhulme, an assistant professor in the Department of Physical Therapy and Health Care Sciences at the GW School of Medicine and Health Sciences,

explained that ZCG uses the electrical impedance of blood in the chest to determine how much blood is pumped out of the heart during each heartbeat.

The primary focus of Woolstenhulme's project is to validate the use of ZCG to assess diastolic function — the part of the heart cycle when the heart is between beats and filling with blood — while the patient is at rest, and when exercising. Validating the ZCG technology for this specific purpose might enable clinicians to more easily identify the presence of diastolic dysfunction.



EXPANDING MEDICAL CARE INNOVATION



In a time of major health care delivery and payment system change, George Washington University's (GW) School of Medicine and Health Sciences (SMHS) established the Center for Healthcare Innovation and Policy Research (CHIPR) to study innovative practices in medical care with a goal of promoting evidence-based public policy.

The center, chartered in May 2016, absorbed both the Office of Clinical Practice Innovation and Urgent Matters, an online program supporting innovations in acute and emergency care. CHIPR collaborates with institutions across the United States, working with experts in areas that include epidemiology, economics, business administration, law, health policy, and medicine.

Jesse Pines, M.D., M.B.A., professor of emergency medicine at SMHS and professor of health policy and management at the Milken Institute School of Public Health at GW (Milken SPH), serves as the director of CHIPR. Steven Farmer, M.D., Ph.D., associate professor of medicine at SMHS and associate professor of health policy and management at Milken SPH, who was recently published in *JAMA Cardiology*, serves as associate director.

CUTTING COSTLY SERVICES



Seeing a physical therapist at the start of care, rather than delaying therapy until later or skipping it altogether, reduces the need for potentially costly services, according to a policy brief from the George Washington University (GW) School of Medicine and Health Sciences (SMHS) faculty in partnership with the University of Washington's Department of Family Medicine.

The Health Care Cost Institute, a nonprofit organization with a public-interest mission, published the brief, co-authored by Kenneth Harwood, Ph.D., P.T., director of the Program in Health Care Quality, director for research for the Program in Physical Therapy, associate professor of clinical research and leadership, and associate professor of physical therapy and health care sciences at SMHS; and Jesse Pines, M.D., M.B.A., director of the Office for Clinical Practice Innovation and professor of emergency medicine and health policy and management at SMHS.

The researchers found that states should consider reviewing laws that restrict direct access to physical therapy services, mirroring the school's strategic mission of serving the community.

IMPROVING HEART FUNCTION

The George Washington University (GW) School of Medicine and Health Sciences (SMHS) researchers embarked on a four-year study in June to look at a heart-brain connection that could help millions of people suffering from heart failure around the world.

The project, which received \$1.6 million from the National Heart, Lung, and Blood Institute, studies ways to restore parasympathetic activity to the heart through oxytocin neuron activation, which could improve cardiac function during heart failure.

A distinctive hallmark of heart failure is autonomic imbalance, consisting of increased sympathetic activity and decreased parasympathetic activity. However, few treatments exist that can increase parasympathetic activity.

SMHS and the GW School of Engineering and Applied Science (SEAS) are collaborating on the study, with David Mendelowitz, Ph.D., vice chair and professor in the Department of Pharmacology and Physiology at SMHS, and Matthew Kay, D.Sc., PE, associate professor in the Department of Biomedical Engineering at SEAS.



SECRETS OF CHRONIC WOUNDS

A new test that can rapidly detect bacteria in wounds, developed by Victoria Shanmugam, M.B.B.S., MRCP, associate professor of medicine and director of the Division of Rheumatology at the George Washington University (GW) School of Medicine and Health Sciences, and her lab, could lead to more effective treatment and lower health care costs.

For the WE-HEAL study, Shanmugam and her colleagues investigated the interplay between the host immune response and the wound bed microbiome in patients with chronic wounds. The study has three components: 1) using molecular analysis of the tissue from wounds to investigate the immune response in wound healing; 2) profiling the microbiome of these wounds; and 3) investigating symptoms associated with chronic wounds.

Shanmugam and her colleagues discovered that the bacterium *Pseudomonas*, commonly found in infected chronic wounds, produces a chemical, pyocyanin, that is electrically active. The team developed an inexpensive, inch-long disposable electrochemical sensor that can immediately detect the presence of the chemical and, thus, the bacterium. Detecting *Pseudomonas* and other organisms faster greatly enhances caregivers' ability to deliver timely patient care. Building on her research, Shanmugam recently published a study, titled "Relationship between Opioid Treatment and Rate of Healing in Chronic Wounds," in *Wound Repair and Regeneration*. The study revealed that patients suffering from chronic wounds who never receive opioids tend to heal faster than those who do receive the drugs.

NEW RESEARCH AWARDS

2016	\$28,327,602		83 new awards
2015	\$24,160,994		53 new awards
2014	\$23,007,314		45 new awards
2013	\$16,226,972		30 new awards



ACCELERATING KNOWLEDGE

Since the World Health Organization declared the Zika virus an international public health emergency, researchers around the world have been stepping away from silos and freely sharing their work to accelerate knowledge of the disease. At the George Washington University (GW) School of Medicine and Health Sciences (SMHS), Chiara Manzini, Ph.D., assistant professor of pharmacology and physiology, and vaccinologist Jeffrey Bethony, Ph.D., professor of microbiology, immunology, and tropical medicine, are, along with other researchers, taking a collaborative approach to Zika research.

“Nobody has the general expertise to deal with this; it isn’t like other epidemics,” Bethony said. “[Zika] has long-term effects that you wouldn’t

know existed unless you had a multidisciplinary team.”

In response, those at SMHS interested in Zika-related research are applying for grants, and a Zika interest group has formed among SMHS, the Milken Institute School of Public Health at GW, the GW Medical Faculty Associates, and GW clinical partner Children’s National Health System.

The SMHS Department of Microbiology, Immunology, and Tropical Medicine, led by Douglas Nixon, M.D., Ph.D., Walter G. Ross Professor of Basic Science Research, and the Office of International Medicine Programs also co-sponsored a scientific research summit in Brazil to enhance communication about Zika and provide an opportunity for cooperation.

RENEWED EFFORT TO TRANSLATE DISCOVERY

The partnership between the George Washington University (GW) School of Medicine and Health Sciences (SMHS), the Milken Institute School of Public Health at GW, and Children's National Health System (Children's National) recently received a renewal of its National Institutes of Health Clinical and Translational Science Award (CTSA).

The \$23 million grant represents not just a five-year extension to the original award the partnering institutions received in 2010, but also is an expansion of the organizations' original goals: enhancing clinical and translational research; overcoming research barriers and promoting collaborative research; providing research training; and

focusing on health disparities and childhood forerunners to adult diseases.

The partnership, known as the Clinical and Translational Science Institute at Children's National (CTSI-CN), continues to be the only CTSA program out of the 64 in the nation with an emphasis on child health, according to Robert Miller, Ph.D., senior associate dean for research, Vivian Gill Distinguished Research Professor, and professor of anatomy and regenerative biology at SMHS.

The CTSI-CN will use the renewal grant to focus on informatics, workforce development, collaboration, and community engagement.

Lisa Guay-Woodford, M.D., director of the CTSI-CN, Richard L. Hudson Professor of Pediatrics at Children's National, and associate vice president for clinical and translational research at GW, says the partnership will answer a few central questions: "What are the challenges for child health in translational science? How can we help investigators who want to take them on? How can we help these investigators in developing studies that can be done across the consortia? And, from an extended perspective, how can we interact with other CTSA programs to develop best practices from which all can benefit?"

HUMAN ENDOGENOUS RETROVIRUSES AND CANCER

George Washington University (GW) researchers received a \$2.2 million grant from the National Cancer Institute to uncover why certain cancer types increase whereas others are unchanged or even decrease in those with HIV infection.

Douglas Nixon, M.D., Ph.D., chair of the Department of Microbiology, Immunology, and Tropical Medicine at the GW School of Medicine and Health Sciences (SMHS), is the principal investigator on the grant.

Joining Nixon is Eduardo M. Sotomayor, M.D., director of the GW Cancer Center, which provided seed funding for this research. Also on the team are Brad Jones, Ph.D., assistant professor of microbiology, immunology, and tropical medicine at SMHS, Keith A. Crandall, Ph.D., director of the GW Computational Biology Institute at the Milken Institute School of Public Health



at GW, and Gustavo Reyes-Terán, M.D., M.P.H., adjunct professor of microbiology, immunology, and tropical medicine at SMHS and head of the Department of Infectious Diseases at the National Institute of Respiratory Infections in Mexico City.

"While I am not primarily a cancer researcher, I believe HIV/AIDS research

can provide unique insights into cancer mechanisms and biology," said Nixon. "I believe this project shows the importance of seed funding, but also of cross-disciplinary work – something GW has made a priority, allowing people from different fields to come together and talk to each other in ways many large institutions do not."



VOICING CAUTION IN THE RUSH TO PRECISION MEDICINE

Shawneequa Callier, J.D., assistant professor of clinical research and leadership in the George Washington University (GW) School of Medicine and Health Sciences, co-authored a perspective article featured in the May 26, 2016, edition of *The New England Journal of Medicine* titled, “Will Precision Medicine Move Us Beyond Race?” The article addresses issues related to prescription medications that fall within the category of precision medicine.

The authors identify challenges associated with racial and genomic data based on a self-reported data collection model — creating potential for detrimental prescription drug outcomes. In the paper, they argue that geographical ancestry can be a major determinant of genomic variation, which can influence reactions to certain drugs.

“Precision medicine is a burgeoning field of study that is slowly being translated into clinical practice. Along the way, questions about the use of race in

medicine will need to be addressed to ensure that we are treating people in the most strategic way,” says Callier. “Identifying the genetics of a patient through science is an area in need of more research and refinement. We are concerned that people who could benefit from certain drugs may be excluded from receiving them and others may be given treatments that are not effective when doctors use race as a proxy for genetics.”

VACCINATING AGAINST HOOKWORM

Researchers David Diemert, M.D., associate professor of microbiology, immunology, and tropical medicine and of medicine, and Jeffrey Bethony, Ph.D., professor of microbiology, immunology, and tropical medicine at the George Washington University's (GW) School of Medicine and Health Sciences, received a \$2.1 million U01 grant from the National Institutes of Health (NIH) to begin a phase I clinical trial to test a hookworm vaccine in an endemic area of Brazil.

The trial, which combines two separate vaccines, will be the first time immune interference has been tested using new antibody profiling methods and B-cell immunology.

Diemert and Bethony also received an R34 planning grant from the NIH to vaccinate volunteers in Washington, D.C., and then infect them with hookworm to determine the vaccine's efficacy.

POTENTIAL THERAPIES

In conducting research on chronic toxoplasmosis, one of the most common parasitic diseases in the world, Imtiaz Khan, Ph.D., professor of microbiology, immunology, and tropical medicine at the George Washington University (GW) School of Medicine and Health Sciences (SMHS), discovered a previously unknown connection between CD8 T cell exhaustion and CD4 T cell exhaustion. Previous research found CD8 cells to be critical in controlling the disease, but Khan observed that not only does CD4 become exhausted as a result of the depleted immune system, but the dysfunction is also more pronounced than in CD8 T cells. Khan determined that if CD4 T cells were regulated, CD8 T cells could also be regulated, leading to potential new therapeutic options. Additionally, his lab discovered that CD4 T cells can be regulated through Blimp-1 protein expression, which is a critical regulator for CD4 T cell exhaustion.

The research, "Blimp-1-mediated CD4 T cell exhaustion causes CD8 T cell dysfunction during chronic toxoplasmosis," was funded by the National Institutes of Health and published in the *Journal of Experimental Medicine*. Additionally, Khan was recognized for his work with the SMHS 2016 Distinguished Research Award.

TAKE A BREATH

Asthma in children living in the inner city can be especially severe, and research by Stephen Teach, M.D., M.P.H., chair of the Department of Pediatrics at Children's National Health System and professor of pediatrics and emergency medicine at the George Washington University School of Medicine and Health Sciences, shows there are distinct subgroups of asthma patients within that vulnerable population.

Funded by the National Institutes of Health, the Inner-City Asthma Consortium (ICAC), of which Teach is a member, consists of a group of investigators from across the country that focuses on improving outcomes for inner-city kids with asthma. After a year of observing more than 600 such children, Teach and his ICAC colleagues were able to identify five distinct asthma phenotypes.

The phenotypes ranged from lower allergy/inflammation with minimal asthma symptoms, which affected 15 percent of participants; to intermediate allergy and inflammation, which affected 24 percent; to the most symptomatic asthma with the highest serum IgE, blood eosinophil count, and allergen sensitizations, which affected 16 percent.

The findings were published recently in the *Journal of Allergy and Clinical Immunology*, along with two other studies by ICAC researchers on inner-city pediatric asthma.

KIDNEY HEALTH EDUCATION ACROSS D.C.

In an ongoing effort to address kidney disease in the region, educate the community, and promote the paired kidney exchange list, the George Washington University (GW) Ron and Joy Paul Kidney Center/GW Transplant Institute participated in many community outreach efforts in 2016 throughout the Washington, D.C., region.

The D.C. metro region has a high concentration of kidney disease, centered in northeast and southeast D.C., Prince George's County, and southern Maryland. The key to fighting the disease is ensuring that individuals who are at greatest risk — people with diabetes or hypertension and who have a family history of kidney disease and who are 60 or older — get screened annually.

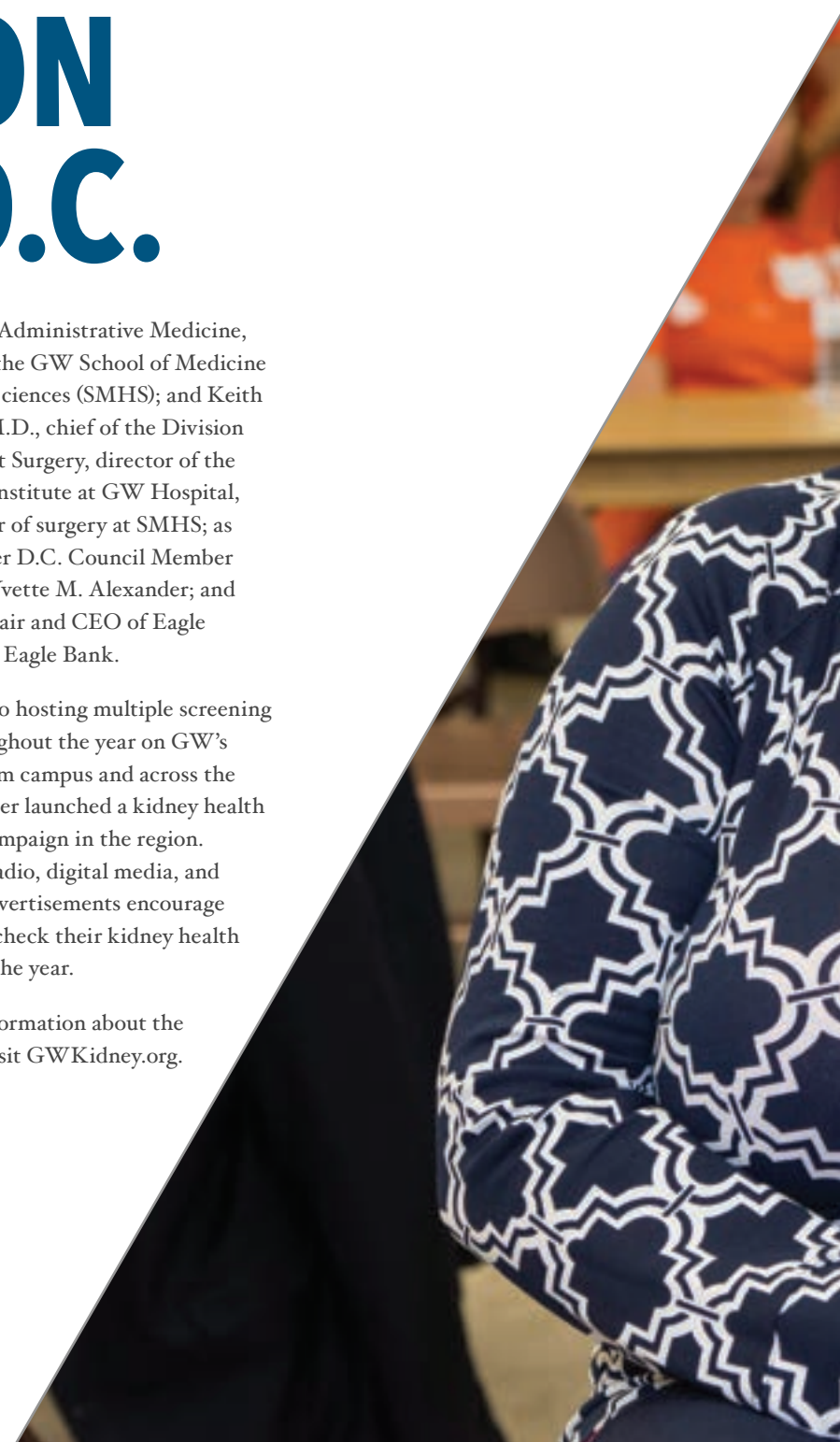
In January, the center participated at the NBC4 Health and Fitness Expo held in the Walter E. Washington Convention Center. Event attendees visited the center's booth to learn about kidney disease and have their blood pressure checked.

In the spring, the center held its own kidney health screening at the Pennsylvania Avenue Baptist Church. The screening provided necessary tests such as blood, urine, and blood pressure, as well as one-on-one consultations with a health care professional. It also featured speakers including Jeffrey S. Akman, M.D. '81, RESD '85, vice president for health affairs, Walter A. Bloedorn

Professor of Administrative Medicine, and dean of the GW School of Medicine and Health Sciences (SMHS); and Keith Melancon, M.D., chief of the Division of Transplant Surgery, director of the Transplant Institute at GW Hospital, and professor of surgery at SMHS; as well as former D.C. Council Member for Ward 7 Yvette M. Alexander; and Ron Paul, chair and CEO of Eagle Bancorp and Eagle Bank.

In addition to hosting multiple screening events throughout the year on GW's Foggy Bottom campus and across the city, the center launched a kidney health education campaign in the region. Television, radio, digital media, and Metrobus advertisements encourage residents to check their kidney health throughout the year.

For more information about the campaign, visit GWKidney.org.





- Established: the GW / Ron and Joy Paul Kidney Center in November 2015, in partnership with the **GW Hospital Transplant Institute** – which has performed **86+** transplants since January 2015
- Goals: educating the Washington, D.C., community about kidney disease, reducing disparities in kidney disease, and promoting the living donor transplantation list – **GWKidney.org**
- Ongoing community events and a multimedia ad campaign: bus ads, television ad buy, radio ad buy, digital ad buy

Young people living in impoverished areas have many obstacles to their health. Social factors, such as income level, water and air quality, and education status, all make a difference in well-being, El-Bayoumi said at the start of the summit.



EMPOWERING YOUTH IN HEALTH CARE

Empowering youth is a key mission of the Rodham Institute, which works to improve health equity in Washington, D.C., and the organization's fourth annual summit set out to address the role of youth in the health of their communities.

"It's important to focus on our youth, it's important to empower our youth, but I think it's taken us a while to understand how to really do that," said Rain Henderson, CEO of the Clinton Health Matters Initiative, at the event held in October 2016 in southeast Washington. "I credit the Rodham Institute for taking the right approach from the beginning ... to include youth in that process and in decision making."

Jehan "Gigi" El-Bayoumi, M.D., RESD '88, professor of medicine at the George Washington University (GW) School of

Medicine and Health Sciences (SMHS), founded the Rodham Institute, which is housed within SMHS and supported by the GW Medical Faculty Associates.

Young people living in impoverished areas have many obstacles to their health. Social factors, such as income level, water and air quality, and education status, all make a difference in well-being, El-Bayoumi said at the start of the summit.

Alexia Charles, a third-year M.D. program student at SMHS, stressed the value of the daylong event from the perspective of a leader. "It was a great experience for me to be able to expose [young adults] to health care careers, to be a role model for some of them," she said.



HEALING HANDS IN HAITI

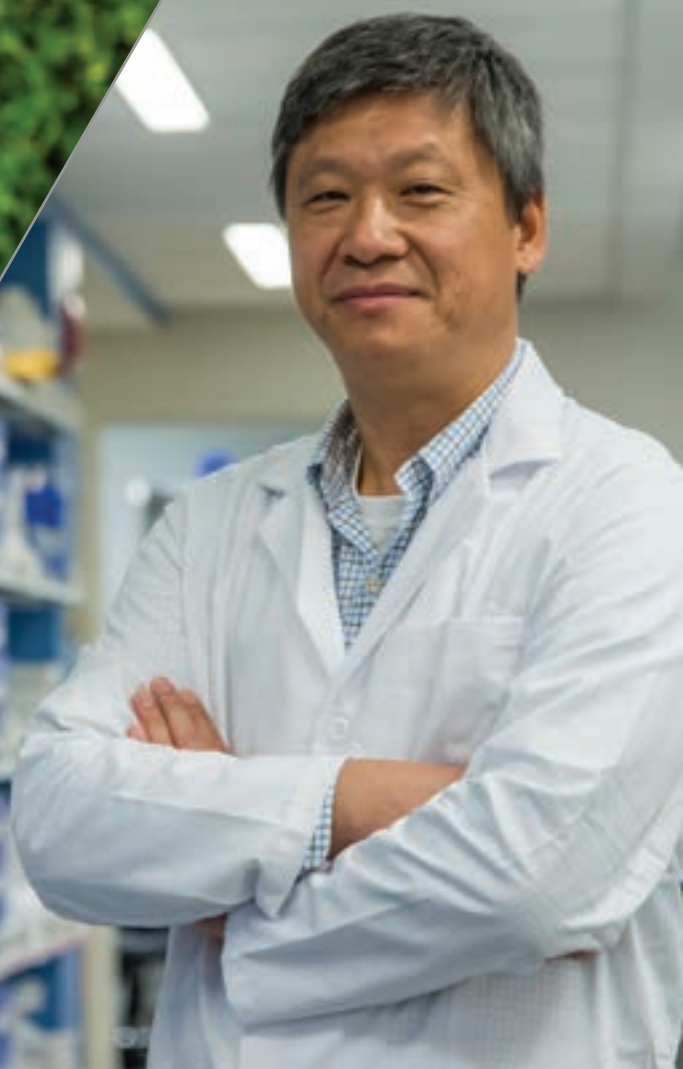
When Kevin Lombardi, a second-year M.D. student at the George Washington University (GW) School of Medicine and Health Sciences, saw news coverage of the devastating 7.0 magnitude earthquake that struck Haiti in January 2010, he did the only thing he could think of: He jumped on a plane to go help.

After responding to the scene — and assisting with rebuilding — Lombardi made it his mission to be where help was needed most. So in 2013, he launched YourStory International, a nonprofit organization that challenges traditional models of aid by empowering local communities to create their own sustainable social and economic change. YourStory's most recent initiative was the Pont Morel Primary and Emergency Care System, which enables community practitioners to provide free primary and emergency care for 5,000 Haitians who previously had little access to medical facilities.

“[This work] is about investing in people where they are, not making them go to a clinic six miles away,” said Lombardi, adding that every patient in the program gets an annual visit with a physician, medical records, free medication, and targeted public health education. “It’s a privilege to put on my white coat and have one-on-one contact with the people I serve.”

INTERNATIONAL MEDICINE PROGRAM NUMBERS

- 6 International M.D. Students
- 34 International Residents and Fellows
- 24 Medical Research Fellows
- 18 Summer Enrichment Program Participants
- 121 GW Students and Residents Abroad
- 72 Visiting Scholars
- 87 Percent NRMP Match Rate



CLOSER TO A CURE

Through their respective labs, Eduardo M. Sotomayor, M.D., director of the George Washington University Cancer Center (GW Cancer Center) and professor of medicine at the GW School of Medicine and Health Sciences (SMHS), and Edward Seto, Ph.D., associate center director for basic science at the GW Cancer Center and professor of biochemistry and molecular biology at SMHS, are closer to turning cancer into a treatable, chronic disease.

At the December lecture of *Frontiers in Medicine*, a lecture series that connects members of the Washington, D.C., community with renowned health

experts, Sotomayor and Seto detailed their progress.

Sotomayor, who focuses on immunotherapy, believes in harnessing the power of the immune system to fight cancer. His current research involves manipulating T cells to better recognize, attack, and destroy cancer cells. Seto, who was installed as the King Fahd Professor of Cancer Biology in February 2017, is concentrating on epigenetics, namely, regulating gene expression to turn cancer cells back to normal cells. In the future, Sotomayor and Seto hope to combine their therapies to potentially cure specific types of cancer.

IMP SUMMIT IN THAILAND PAVES THE WAY FOR FUTURE INTERNATIONAL COLLABORATIONS

The George Washington University (GW) Office of International Medicine Programs (IMP) made strides to broaden its international reach this summer through a joint scientific summit held at Khon Kaen University (KKU) in Thailand.

Faculty members from GW's School of Medicine and Health Sciences (SMHS) and IMP participated in the three-day event in June 2016. The relationship between SMHS and KKU goes back more than a decade, with the organizations partnering on grants to study liver fluke-induced cancer in Thailand, participating in clinical student exchange, and publishing more than 30 manuscripts.



As part of the summit in Khon Kaen, GW and KKU researchers gave presentations on topics such as cancer and health disparities, cancer and cancer therapy, HIV, and tropical infectious diseases,

among others. In addition, SMHS faculty offered training on regulated research practices, and attendees discussed priorities for the collaboration, including ways to support joint research and training.



IMP OPENS THE HAITI MISSION

Since 2004, the Office of International Medicine Programs (IMP) at the George Washington University (GW) School of Medicine and Health Sciences (SMHS) has been sending medical, health sciences, public health, and nursing students to participate in Project Medishare in Haiti. In spring 2016, IMP decided to “cross-pollinate” its programs, and it opened the Haiti Mission, as

it is known, to applicants from the Medical Research Fellowship Program, a 12-month research program for international medical graduates. The result: an enhancement of IMP programs through an additional layer of the exchange of knowledge, culture, and capacity.

“This is a great example of multiple programs intersecting and bringing

together SMHS faculty, U.S.-based medical students, and international students,” said Rachael Fellabaum, program manager and international liaison for the IMP office. “The main purpose of our office is to facilitate international activities that support the SMHS mission of improving the health of our local, national, and global communities.”



DOORS OPEN TO GW CANCER CENTER

Years of hard work and dedication put toward enhancing George Washington University's (GW) cancer research and care enterprise culminated in December 2016 at the grand opening of the GW Cancer Center's new space in the Science and Engineering Hall (SEH).

Collaboration between the GW School of Medicine and Health Sciences (SMHS), GW Hospital, the GW Medical Faculty Associates, and the Milken Institute School of Public Health at GW enabled the opening of the floor.

The eighth floor holds research labs and suites dedicated to immunology and

immunotherapy, translational science, and microbial oncology. The space allows the GW Cancer Center and SMHS to broaden their research efforts, and will better foster collaboration between students and researchers in both SMHS and the School of Engineering and Applied Science.

The floor features equipment that will allow researchers to carry out their molecular biology, biochemistry, and cell biology work. It also will house a new facility in which to perform patient-derived xenograft model studies, a preclinical platform that will help predict the effectiveness of novel targeted agents for cancer patients.

In addition, the lower level of the SEH features a specialized Nanofabrication and Imaging Center (NIC), operated by the GW Office of the Vice President for Research. The NIC is one of the most pristine areas on campus. It houses a Class 100 cleanroom equipped with a full spectrum of nanotechnology equipment. There also is a neighboring microimaging suite filled with the latest in microscopy instrumentation, allowing visualization of atomic structures, integrated microcircuits, neuronal circuits, and more.

HEALTH EQUITY AND CULTURAL SENSITIVITY

With a pair of grants totaling more than \$1 million, the George Washington University (GW) Cancer Center continues to advance health equity across the Washington, D.C., area.

From the Pfizer Foundation, the GW Cancer Center received \$1 million to promote patient-centered cancer care and increase patient health literacy and cultural sensitivity. The project, which provides resources for patients and health care providers to have improved conversations, will examine how gender, gender identity, race, ethnicity, sexual orientation, and income affect the patient-provider relationship.

The second grant, \$100,000 from Susan G. Komen, given as part of a local investment of more than \$1 million, will fund a multifaceted project designed to reduce cancer disparities in the lesbian, bisexual, and transgender (LBT) community in Washington, D.C. The goal of the project is to increase LBT individuals' health literacy and engagement in health care and help health professionals provide more sensitive care to LBT patients at risk of or diagnosed with breast cancer.



WHERE MEDICINE, ECONOMICS MEET



The son of an economist and a doctor, Uchechi Iweala, M.D., a second-year resident in orthopedic surgery at George Washington University School of Medicine and Health Sciences, discovered an interest in both business and medicine at a young age.

Iweala now works to marry those two areas through the creation of a surgical center in his ancestral home of Nigeria and through an app that revolutionizes electronic medical records (EMR) systems.

Through the Capital Health Surgical Center, which Iweala founded with his father, he wants to improve health care delivery, specifically in surgical intervention and care, in Nigeria and West Africa.

Iweala's app, SignOut, grew from his entrepreneurial and altruistic spirit. The EMR system as currently designed, he believes, is incompatible with modern technology, especially given the growing dependence on mobile phones. His goal is to "build an EMR that is totally divorced from any sort of desktop legacy."

INITIATIVES IN CARE

For young adults battling chronic illness, or adult survivors of serious pediatric illness, the move from pediatric care to an adult care setting can be a difficult journey. Patience White, M.D., co-director of Got Transition and Emeritus Professor of Medicine and of Pediatrics at the George Washington University School of Medicine and Health Sciences, co-led the American College of Physicians (ACP) Pediatric to Adult Care Transitions Initiative to smooth that passage.

The initiative includes a tool kit containing disease- and condition-specific tools developed by primary care internal medicine

and subspecialty experts to help physicians transitioning their patients to adult care settings.

White, through Got Transition and the Center for Health Care Transition Improvement, developed Six Core Elements of Health Care Transitions, an evidence-informed model that includes free sample tools for clinicians to download and use in their practices. The core elements, based on the joint clinical recommendations from the ACP, the American Academy of Pediatrics, and the American Academy of Family Physicians, were used as a standard for developing disease-specific tools through the initiative.

SELECT COMPANY

The George Washington University Hospital (GW Hospital) was selected as one of 61 American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP®) participating hospitals to earn recognition for meritorious outcomes for surgical patient care in 2016. GW Hospital is one of only 18 hospitals in the nation, and the only one in Washington, D.C., to receive this honor for two consecutive years.

The ACS NSQIP acknowledges a select group of hospitals for achieving meritorious outcome performance levels in eight clinical patient management areas: mortality, unplanned intubation, ventilator greater than 48 hours, renal failure, cardiac incidents (cardiac arrest and myocardial infarction), respiratory (pneumonia), surgical site infections, and urinary tract infections.

ACS NSQIP is the only nationally validated quality improvement program that measures and enhances the care of surgical patients. This program measures the actual surgical results 30 days postoperatively and also risk-adjusts patient characteristics to compensate for differences among patient populations and acuity levels.

GW HOSPITAL IN 2016

19,937 Total inpatient (IP) admissions

74,680 ER visits

125,995 Total outpatient (OP) visits

25,892 Total surgeries

8,395 IP surgeries

17,497 OP surgeries

3,395 Baby deliveries

533 Robotic surgeries

292 Open heart surgeries

630 Spine surgeries

395 Total joint replacements

55 Kidney transplants

5 Deep brain stimulations
(for Parkinson's)

7 Vagal nerve stimulations
(for epilepsy)

11 Cochlear implants

29 Extracorporeal membrane
oxygenations





GWISH TURNS 15

The George Washington University (GW) Institute of Spirituality and Health (GWish) — the first university-chartered institute dedicated to championing the spiritual needs of patients, families, and health care professionals — celebrated its 15th anniversary in 2016 with a dinner for members of the community, including political and academic luminaries.

The organization, founded in 2001, leads in promoting compassionate approaches to patient care. More than 75 percent of schools today teach students how to address spirituality with their patients, particularly with those who have a serious illness and suffer from existential, religious, or spiritual distress.

The dinner preceded the annual three-day GWish Spirituality and Health Summer Institute. The event featured panels, roundtable discussions, and lectures on interventions and models of generalist-spiritual care from experts including Benjamin Blatt, M.D., professor of medicine at GW's School of Medicine and Health Sciences (SMHS), and Eduardo M. Sotomayor, M.D., director of the GW Cancer Center and professor of medicine at SMHS.

More than 200 George Washington University Hospital and GW Medical Faculty Associates physicians were recognized by *Washingtonian* magazine as 2016 Top Doctors.



ACCREDIT TO CARE

The GW Medical Faculty Associate's Comprehensive Breast Care Center has been awarded full accreditation for three years by the National Accreditation Program for Breast Centers (NAPBC), a program administered by the American College of Surgeons. Accreditation by the NAPBC is given only to centers that have voluntarily committed to provide the highest level of quality breast care, and that undergo a rigorous evaluation process and review of their performance.

BEST POSSIBLE CARE

The George Washington University Hospital (GW Hospital) now offers a wider spectrum of high-quality care, thanks to two new designations.

GW Hospital received accreditation as a Comprehensive Stroke Center from the Joint Commission and the American Heart Association/American Stroke Association, making it part of an elite group of providers focused on complex stroke care. Currently, fewer than 100 hospitals nationwide have received the designation.

Additionally, the American College of Surgeons (ACS) National Surgical Quality Improvement Program recognized the hospital as one of 52 institutions in the United States to have earned meritorious outcomes of surgical patient care.

The ACS previously designated GW Hospital as a Level 1 Trauma Center, and the National Association of Epilepsy Centers designated the hospital as a Level 4 Epilepsy Center, the highest possible level. GW Hospital also has a Level 3 neonatal intensive care unit.



CHRISTINE TEAL, M.D., associate professor of surgery and director, Breast Care Center

THE GW MEDICAL FACULTY ASSOCIATES 2016

730+ providers

50+ specialties

\$393 million in total revenues

\$21 million cost for providing uncompensated care

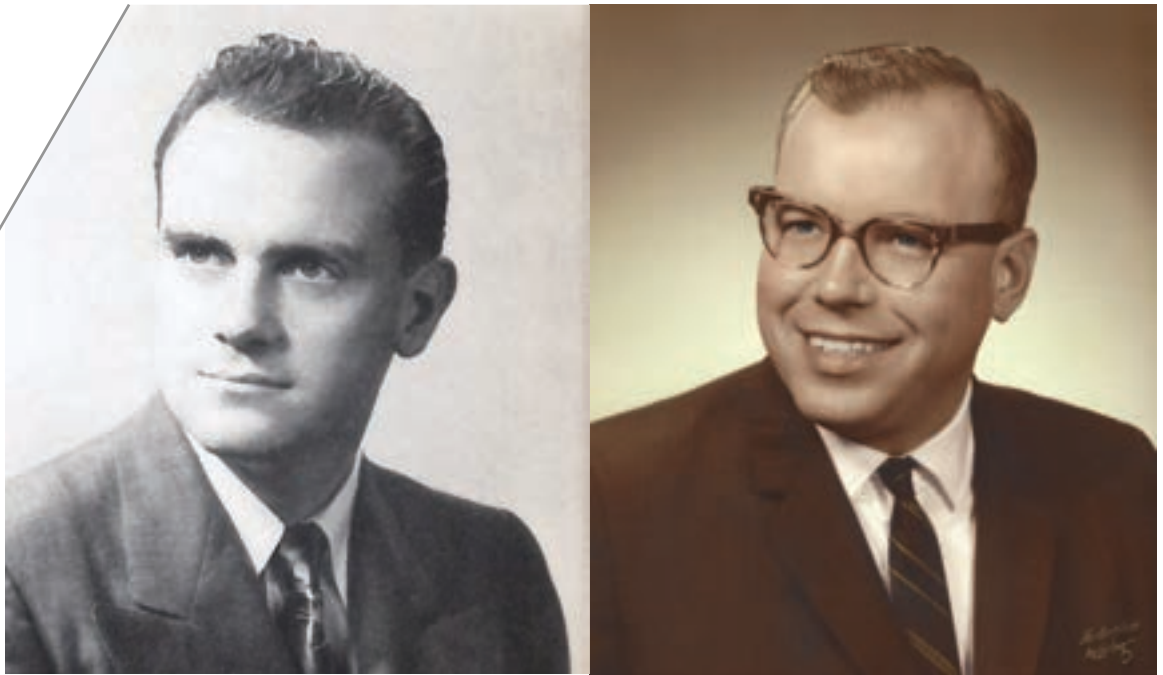
\$54 million cost for providing undercompensated care

ACADEMIC DEVELOPMENT

The high cost of pursuing an advanced degree, particularly in an expensive city such as Washington, D.C., can sometimes stifle the dreams of those longing to become physicians and health care professionals, as well as limit the George Washington University School of Medicine and Health Sciences' (SMHS) capacity to field a student body of the best and brightest. Extraordinary, long-term financial sacrifices are often required to pursue degrees in medicine and the

health sciences. That is why addressing debt load is one of Dean Jeffrey S. Akman's principle development priorities, and scholarships are one of the most effective tools for meeting that goal. To that end, SMHS is working to raise at least \$3.75 million in new scholarships through philanthropic contributions. Over the past year, SMHS has seen numerous examples, from bequests and planned gifts to grassroots giving from many of our newest alumni, of contributions made

to smooth the path for the next generation of physicians and clinicians. These significant gifts, along with many additional gifts of all sizes, supported a wide range of activities at SMHS that have helped GW physicians, health care professionals, and faculty carry out the school's mission: to teach, heal, discover, and serve.



SMHS ALUMNI GIFTS PUT ADVANCED EDUCATION WITHIN REACH

Calculating the value of an education is both literal and figurative, an amalgamation of dollars and cents, and knowledge and skill. For many, the financial costs of a medical education are a burden to a budding health care career. Two George Washington University (GW) School of Medicine and Health Sciences (SMHS) alumni took steps to ensure that each year for a few SMHS students those burdens will be a little lighter. Alumni Stanley

Kulaga Jr., M.D. '64, and Bennet Porter Jr., M.D. '53, A.A. '49, each had a first-hand understanding of that burden — and the significance a scholarship can have on a physician's future. Their endowed scholarships, totaling nearly \$2 million, will ensure that the next generation of physicians can focus their efforts on learning.

“Cost is one of the most significant barriers to pursuing a medical educa-

tion,” said Jeffrey S. Akman, M.D. '81, RESD '85, vice president for health affairs, Walter A. Bloedorn Professor of Administrative Medicine, and dean of SMHS. The generosity of Kulaga and Porter, Akman added, reflects a profound sense of gratitude toward their alma mater. The gifts “will ease the debt burden that our students face as they embark on their careers in medicine.”



GIVING BACK

Every year, alumni and supporters of the George Washington University (GW) School of Medicine and Health Sciences (SMHS) give back to an institution they hold dear through scholarships, endowed funds, and even legacy gifts.

The first annual Doctorate of Physical Therapy (DPT) Alumni Scholarship Competition, in which alumni in the Classes of 2012, 2013, and 2014 competed to have the most members donate funds, helped three members of the Class of 2016 pursue additional and valuable educational opportunities. After the success of the first competition, all PA classes continue to hold the competition; the most recent contest raised \$1,000.

To help support students in the Physician Assistant program who previously served as emergency medical technicians (EMTs), Rochelle “Shelley” Bader, Ed.D. '93, and her husband, Barry, established a \$230,000 endowed fund. They created the fund to honor their daughter, Melissa Bader Lewis, who worked as an EMT, but died at the age of 33 after suffering a pulmonary embolism in 2010. Bader's gift, which totaled \$420,000, also established a fund to support an annual, one-day development retreat for SMHS librarians.

In addition, Class of 1985 alumni, including Lawrence “Bopper” Deyton, M.D. '85, M.S.P.H., senior associate dean for clinical public health and professor of medicine at SMHS, started a fund that promotes physician wellness for graduates and offers educational, advocacy, and mentoring programs.

GRATEFUL TO GIVE

CLINICAL CARE INSPIRES GENDRON FAMILY TO SUPPORT CANCER RESEARCH INNOVATION

Philanthropy has myriad motivations; there are as many reasons to give as there are causes in need of support. For Roger J. and Susan Gendron, the reasons are simple: First, their son Theodore is a recent graduate of the George Washington University (GW) School of Business, earning a bachelor's degree in business administration in May 2016; in addition, Susan is a breast cancer survivor under the care of Robert Siegel, M.D. '77, associate center director for education and training at the GW Cancer Center and professor of medicine at the GW School of Medicine and Health Sciences (SMHS).

In recognition of the treatment Susan Gendron received from Siegel, the couple made a \$2.5 million gift to the GW Cancer Center to establish the Gendron Family Cancer Research Fund. The fund will support basic and translational science research, as well as contribute to pilot research grants for residents and fellows. "The staff, nurses, and physicians have made my journey much more bearable due to their compassionate care and professionalism," Gendron said. "Giving back is our way of saying thank you."

"We're bringing innovative research to areas in need," explained Eduardo M. Sotomayor, M.D., director of the GW Cancer Center, director of the Division of Hematology and Oncology, and professor of medicine at SMHS. "We are not just repeating what other cancer centers are doing — we're coming with our own set of unique ideas."

Thanks to the Gendron family's gift, he added, the opportunities for collaboration around pilot funding resources will blossom, "dramatically increasing our capacity to impact both cancer research and clinical care."



A DIALOGUE ON STUDENT DEBT

To address the issue of student loans and the influence debt has on career choice, the George Washington University (GW) School of Medicine and Health Sciences (SMHS), through a gift from Peter Kovler, member of the GW Board of Trustees and parent of SMHS alumnus Mark Kovler, M.D. '15, decided to start the conversation on how to ameliorate the issue.

"There is a fundamental problem in this country, that we would [allow this much] debt for our finest citizens and our finest students; it's outrageous that we have this kind of order," Kovler said.

The symposium, hosted in partnership with other medical schools and the Association of American Medical Colleges, created a dialogue on strategies to ease the debt burden these students face upon graduation. The goal was to raise awareness of the national scope

and significant impact of medical and health profession student indebtedness, and share best practices and strategies of mitigating the burden of student indebtedness.

At SMHS, philanthropy is the primary driver behind reducing students' financial burdens, a trend seen across the country. GW is in the midst of a billion-dollar capital campaign, and SMHS has set scholarship support as the highest priority among its development efforts.

"SMHS is committed to reducing medical student indebtedness through a multi-prong approach, including limiting tuition increases, raising funds earmarked for scholarships, and providing effective financial counseling and debt management strategies," said Richard Simons, M.D., senior associate dean for M.D. Programs and professor of medicine at SMHS.



THE POWER AND PROMISE OF MEDICINE

When Marcus Mitchell, a D.C. native and fourth-year M.D. student, first entered the George Washington University (GW) School of Medicine and Health Sciences, he planned on pursuing emergency medicine, but “although I have so much respect for the field, I quickly found out that it wasn’t for me,” he says, laughing. “Had you told me I’d be applying to anesthesiology last year, I probably wouldn’t have believed you. It’s something that just kind of developed.”

Anesthesiology, he explains, is procedural and hands-on, with moments of intensity. It allows him to interact more closely with his patients, giving them his undivided attention. “I like that even though [during] your interaction with your patients, their conscious awareness is brief, it’s really powerful, especially during the pre-op encounter.”

When Mitchell was still a first-year, he received an SMHS Power and Promise scholarship, designed to alleviate the financial burdens for GW’s best and brightest. It’s helped relieve his student debt — and inspired him. “It actually encourages me to give back as an alumnus,” he says. “I definitely want to have my own scholarship fund so I can give back and help some [unsuspecting] student who’s doing a good job.”



SUPPORT FROM SAG HARBOR

For the second consecutive summer, John D. Evans and Steven Wozencraft welcomed members of the George Washington University (GW) School of Medicine and Health Sciences (SMHS) to their Sag Harbor, New York, home for a special reception to benefit two SMHS organizations: the Research Center for the Eradication of HIV and the Rodham Institute for Health Care Provider Education to Eliminate Disparities. This year’s event took place aboard Evans and Wozencraft’s yacht, the *Waterford*.

FISCAL YEAR 2016

SMHS DEVELOPMENT AND ALUMNI RELATIONS BY THE NUMBERS

Amount Received: **\$20.2 million**

3,087 donors to SMHS in FY16

3,986 gift transactions in FY16

Source: GW's Advance database

SMHS TOTAL ENDOWMENT

\$219 million spread across 280 endowment funds support students, faculty, programs, lectures, and other important activities. It produces **\$12.2 million** in income for the various programs.

UNIVERSITY ENDOWMENT

University – **64.1%**

SMHS – **13.9%**

All other schools – **22%**

Source: GW Office of the Comptroller, Finance Division

FY16 ATTAINMENT BY DONOR TYPE

GW Alumni – **\$4.6 million**

Corporations – **\$3.2 million**

Foundations – **\$3.3 million**

Friends – **\$6.9 million**

Other Organizations – **\$1.7 million**

Other Individuals – **\$0.5 million**

Source: GW's Advance database

Note: Some individual donors contributed through family foundations and donor-advised funds.

Total alumni – **34,142**

M.D. alumni – **11,244**

Resident alumni – **6,479**

Both M.D. and resident alumni – **1,169**

Health Sciences alumni – **15,250**

Source: GW's Advance database

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GW Cancer Center

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GW Center for Integrative Medicine

GW Heart and Vascular Institute

GW Institute for Neuroscience

GW Institute for Spirituality and Health (GWish)

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