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## from the president

As the semester draws to a close, we can reflect on an academic year that has brought tremendous change to EVMS. We have more space and more students thanks to our state-of-the-art new building and renovations to Lewis Hall and the library. We're gaining strength in important programs that improve health in our community. And we hired a new Provost and Dean — Richard V. Homan, MD.



Dr. Homan's arrival is significant for EVMS as we seek to build on

the momentum we've gained over the past several years (see pg. 20). He has a record of helping organizations reach new heights, and he has big plans for our school. Dr. Homan knows the profound impact EVMS has on Hampton Roads, and he's committed to helping us become the nation's most community-oriented school of medicine and health professions.

Part of caring for the community includes sharing information that helps people make informed decisions about their health care. Vaccines have become an area of uncertainty for some, so we asked our experts to explain why they're safe and important for public health (see pg. 14).

We're also continuing to expand the kind of care we provide — including offering services unavailable elsewhere in this region. Our Department of Obstetrics and Gynecology is launching a fetal surgery program that offers hope to expectant mothers who experience serious complications (see pg. 26). It's just one more way we're staying true to our commitment to ensure that the people of Hampton Roads have access to the care they need.

We could not do these things without the steadfast support of our friends in the community — from elected officials to alumni to patients. Thank you for all you do on behalf of EVMS.

Sincerely,

Harry T. Lester

Havryi Cestr

President



## news

## EVMS FACULTY MEMBER HELPING PREPARE MENTAL-HEALTH WORKFORCE FOR INTEGRATED CARE



Barbara A. Cubic, PhD

An EVMS mental-health expert is helping lead a national effort to ensure the country's psychiatric workforce is prepared for the realities of the modern medical workplace, and EVMS' training program is serving as a model for meeting that goal.

Barbara A. Cubic, PhD, Associate Professor of Psychiatry and Behavioral Sciences, chaired the American Psychiatric Association's (APA) Primary Care Training Task Force. The task force's main goal was to determine what psychology-training programs must do to prepare students for work in integrated, prevention-focused primary-care settings, according to the APA.

The ongoing evolution of modern health care, which gained momentum from healthcare reform, has broken down traditional barriers between mental-health and primarycare providers. Psychologists must learn how to communicate effectively with and adapt to the time constraints of their primary-care counterparts.

Continued on page 39

## **PARTNERSHIP**

## Agreement with GE matches students with the latest medical technology

new agreement with General Electric Company (GE) puts a cutting-edge diagnostic tool in the hands of EVMS medical students early in their training. The donation of 34 portable ultrasound machines puts EVMS at the forefront of a movement to incorporate more technology into the curriculum for future doctors.

Advances in ultrasound and digital technology have made the equipment small enough to carry directly to patients' bedsides, allowing for quick and accurate diagnoses of common conditions, such as heart disease, kidney stones, pelvic masses, gallstones and internal bleeding. The machines also are more cost-effective, and ultrasound has advantages over other imaging modalities as it does not emit radiation such as X-rays and CT (computed tomography) scans and is more affordable than MRI (magnetic resonance imaging) and CT.

"These machines will be the stethoscopes of the future," says Alfred Z. Abuhamad, MD, Professor and Chair of Obstetrics and Gynecology. "They allow you to look at a patient's anatomy directly as you perform a physical examination. Exposing medical students to this imaging modality at the start of their studies is something that very few other medical schools are doing."

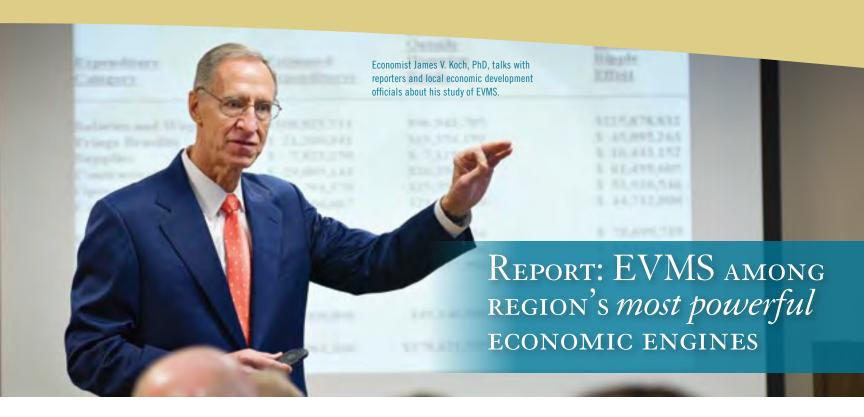
The equipment, valued at \$350,000, will become part of classroom and laboratory curricula beginning with first- and second-year students and progressing into their clinical years. Faculty members also will receive training on the devices. The ultrasound machines can help students learn about anatomy, identify tumors and abnormalities in living organs and perform invasive procedures, such as catheterization.

EVMS plans to track how students use the technology later in training and ultimately in their medical careers as part of a clinical study in collaboration with GE. Alexander B. Levitov, MD, Professor of Internal Medicine, is the Principal Investigator on this study. Dr. Abuhamad expects ultrasound to become an important complement of the physical examination and clinical decision-

"This really is a great achievement for EVMS," he says. "This allows our medical students and faculty to be at the forefront of medical education and at the frontier of a novel use of this technology."

Dr. Abuhamad has a long-established relationship with GE as a researcher. He also sits on the board of the Society of Ultrasound in Medical Education, which promotes the use of clinical ultrasound in medical student education and training, and is the current President of the





During a time of economic uncertainty, EVMS has bucked the trend and grown into one of the region's most powerful economic engines.

Since 2007, the school's annual economic impact has grown nearly three times as rapidly as the region's economy, surging 18 percent to \$823.6 million, according to a study conducted by leading regional economist James V. Koch, PhD. EVMS is now the 20th largest private-sector employer in Hampton Roads.

"EVMS has become one of the region's most reliable and important sources of economic growth," Dr. Koch wrote in his report, released Feb. 14.

The economic impact represents another measure of the value of the school's educational, research and clinical operations, says EVMS President Harry T. Lester.

"Our focus has always been on doing what's best for the people of this region. It's wonderful to know that our efforts have had such a profound impact on the local economy," President Lester says. "Hampton Roads is a healthier community — both physically and financially — because of EVMS."

EVMS commissioned Dr. Koch, a highly respected economist and former university president, to take a comprehensive look at the school's fiscal impact from spending by the school, its employees and alumni, to a value assessment of research and charitable care undertaken by faculty and students.

EVMS alumni alone represent an important part of the school's economic influence. The approximately 950 medical and health professions graduates who reside in the region's largest cities combine for an economic impact of \$222 million annually. Then there are the faculty, many of whom also see patients, who are drawn to EVMS.

"The presence of EVMS continues to attract highly qualified medical personnel that provide a menu of high-quality medical care that otherwise would be beyond our regional grasp," Dr. Koch contends.

With 1,379 employees, EVMS ranked 20th among non-governmental employers in Hampton Roads in 2010. That translates into \$109 million in salaries and wages and another \$21 million in fringe benefits.

When these employees are taken together with students, residents and alumni, they generate an estimated \$25 million in sales tax revenue and support 3,752 "spin-off" jobs that are a direct result of their combined buying power.

As a not-for-profit institution dedicated to the community, EVMS provides large amounts of charitable service and care to those unable to pay. In 2011, the estimated value of the uncompensated health services provided by EVMS clinicians exceeded \$51 million. That does not include another \$2.8 million in estimated public service ventures, such as counseling, vaccinations and preventive care provided annually to 100,000

youths and 7,500 parents and teachers.

Dr. Koch describes EVMS as "a good citizen in a fashion rarely matched in Hampton Roads."

As he did in his 2007 study, Dr. Koch explored the consequences if EVMS did not exist. He predicts that scenario would cost the region \$220 million and would force 98,000 patients to travel outside Hampton Roads in search of appropriate medical care.

Without EVMS, Dr. Koch writes, the quality of care would decline because many providers would be missing, and the region would have to do without the medical advances that spring from EVMS research labs.

Also missing would be the 23 percent of local physicians who have graduated from EVMS. That would come at a time when a national shortage of 150,000 physicians is expected by 2025.

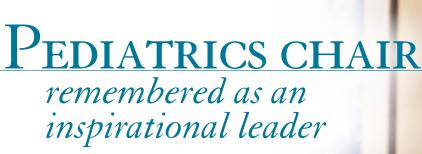
"The absence of EVMS would transform this shortage into disaster proportions in Hampton Roads," Dr. Koch wrote.

Then there are the other benefits that EVMS brings that are difficult to quantify.

"EVMS is a caring organization dedicated to doing good deeds and improving the human condition," Dr. Koch concludes.

"When EVMS restores faith, reduces pain, makes individuals more productive and, yes, saves lives, indisputably this has a positive impact not only on the affected individuals but also on the entire region."

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Donald W. Lewis, MD, Chair of Pediatrics for the last seven years and a vital part of the school for nearly a quarter century, died Feb. 17.

A pediatric neurologist, Dr. Lewis joined the EVMS community faculty in 1987 while still in the U.S. Navy. He came to the school and Children's Hospital of The King's Daughters full-time in 1993.

"At EVMS and CHKD, Dr. Lewis was an enthusiastic advocate for pediatric research, children's health and quality pediatric care," said EVMS President Harry T. Lester and CHKD CEO Jim Dahling in a joint statement.

"Dr. Lewis was an inspirational leader," the statement continued. "As Chair of the Department of Pediatrics at EVMS and Senior Vice President of Academic Affairs at CHKD, he was a mentor and champion of a generation of young pediatricians."

He made a difference in countless lives. He treated thousands of children and teens for headaches (especially migraines), seizures and other neurological disorders. His research advanced the understanding and treatment of children's migraines.

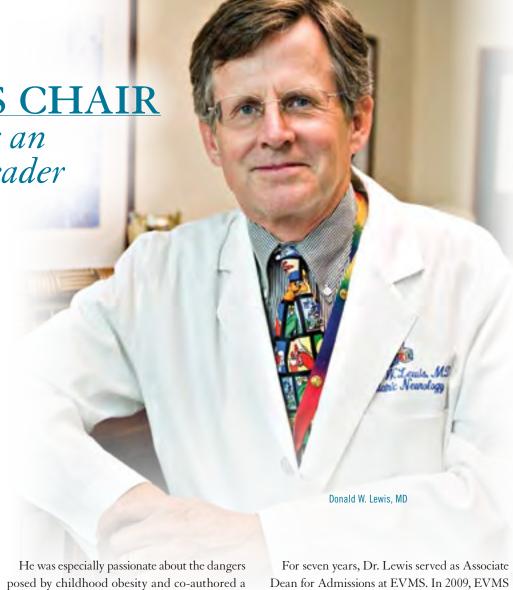
Dr. Lewis published more than 50 studies and authored two books and more than a dozen book chapters on the subject. He led the team of neurologists who developed national guidelines for evaluating and diagnosing children and adolescents with recurring headaches.

He was especially passionate about the dangers posed by childhood obesity and co-authored a study that showed that the trajectory toward morbid obesity in adolescents often begins before a child is two years of age.

He was also a gifted teacher known for his engaging lectures on Harry Potter's headaches and the neurological disorder that likely affected Tiny Tim, the beloved little boy from Dickens' "A Christmas Carol."

For seven years, Dr. Lewis served as Associate Dean for Admissions at EVMS. In 2009, EVMS honored him with the Dean's Outstanding Faculty Award, the school's highest recognition for faculty.

On March 8, Richard V. Homan, MD, Provost and Dean, and Mr. Dahling announced that C.W. Gowen Jr., MD, associate professor of pediatrics and director of the residency program, had accepted the position of interim chair. A national search for a new chair is now underway.



## Pictured from left are Mr. Kevin O'Malley, Dr. L.D. Britt, Professor Eilis McGovern, Dr. Patrick Gullane, Countess Laura Viani and Mr. Joe Duignan. 6 VOL. 4 ISSUE 3, 2011.12 WWW.EVMS.EDU

## Dr. Britt earns international honors

L.D. Britt, MD, MPH, Brickhouse Professor and Chair of Surgery, was recently recognized by the Royal College of Surgeons in Ireland (RCSI) with an honorary fellowship. According to Professor Eilis McGovern, MB, FRCSI, FRCS(Ed) of the RCSSI, honorary fellowship is reserved for those who have made outstanding contributions to medicine, surgery or humanity.

Dr. Britt, past president of the American College of Surgeons, joined a prestigious list of Honorary Fellows of the RCSI including: Her Excellency Mary McAleese, President of Ireland; Former

## Dr. McCole selected to lead Ophthalmology

For the first time in nearly three decades, the Department of Ophthalmology has new leadership.

In January, Shannon M. McCole, MD, Assistant Professor of Clinical Ophthalmology, succeeded Earl R. Crouch, MD, as Chair of the department. Dr. Crouch had served in the role since 1984.

"Dr. McCole has an outstanding reputation and is well respected by her peers and colleagues and revered by the residents for her dedication to and enthusiasm for the ophthalmology residency

"Dr. McCole has an outstanding reputation and is well-respected by her peers and colleagues and revered by the residents for her dedication to and enthusiasm for the Ophthalmology residency program."

program," said Gerald J. Pepe, PhD, who made the appointment just before he stepped down as Provost and Dean.

Dr. McCole is Director of the EVMS residency program in ophthalmology and Clinical Director of the resident ophthalmology clinic in the Lions Center for Sight at Sentara Norfolk General Hospital. A graduate of the Stritch School of



Shannon M. McCole, MD

Medicine at Loyola University, Dr. McCole trained in ophthalmology at EVMS.

Dr. Pepe praised Dr. Crouch for his "stellar career" at EVMS. Dr. Crouch chose to step down as chair and remain on faculty to focus on academic career goals and pursuits.

Dr. Crouch has published more than 100 articles and has presented at meetings of national and international societies. Under his leadership, the department has grown substantially and has earned national recognition.

President of South Africa Nelson Mandela; the late Mother Teresa of Calcutta; His Highness Sheikh Khalifa Bin Salman Al Khalifa, Prime Minister, Kingdom of Bahrain; and poet and writer Seamus Heaney.

The Royal College of Surgeons of England also recently awarded Dr. Britt an honorary

fellowship. This designation is restricted to no more than 150 living honorary fellows.

Additionally, last fall Tuskegee University conferred an honorary degree on Dr. Britt at the 12th Annual Biomedical Research Symposium, "Passion and Compassion in Eliminating Health Disparities." Dr. Britt was a keynote speaker.



## EVMS Obstetrics AND GYNECOLOGY opens new location

EVMS Obstetrics and Gynecology recently opened its newest location in Virginia Beach, giving the practice three locations throughout the region.

Located at 2075 Glenn Mitchell Road on the campus of Sentara Princess Anne Hospital, the new office expands the EVMS Health Services presence near the hospital by opening a dedicated space for women's health. The facility offers services in general gynecology, maternal-fetal medicine, urogynecology and reproductive medicine.

"We are excited to be expanding to meet the needs of our patients and continue to offer the best patient experience possible," says Alfred Z. Abuhamad, MD, Chair of Obstetrics and Gynecology.

The new site is one of three OB/GYN locations in Hampton Roads, including offices in Newport News and in downtown Norfolk. EVMS Health Services clinicians in dermatology, surgical oncology, plastic and reconstructive surgery and endocrinology already share an office in the Princess Anne Hospital complex.

For more information or to make an appointment, call 757.689.5104. □

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orget basketball brackets! March Madness at EVMS was all about Match Day 2012.
On Friday, March 16, fourth-year medical students across the country tore into their envelopes at 1 p.m. to learn where they matched for residency. None, however, were as stylish as the 112 EVMS students.

In true "I love the '90s" fashion, Ninja Turtles took the stage with boy bands, "Bay Watch" lifeguards and Vanilla Ice. Wrestling giants Stone Cold Steve Austin and The Rock threw down their championship belts and were joined in celebration by the Addams Family and Men In Black.

Residency encompasses the three (or more) years

of training that are required before medical school graduates can practice without supervision. Conducted annually by the National Resident Matching Program, the match is based on a computerized mathematical algorithm. The process is engineered to produce a best result by aligning the preferences of applicants with the preferences of residency programs in order to fill the thousands of open training positions at U.S. teaching hospitals.

Nearly 30 percent of the EVMS MD Class of 2012 will train at residency programs in Virginia, including 18 here at EVMS. The remainder will spread out to civilian and military hospitals and medical centers across the country.

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Grinning from beneath a mask of face paint, fiveyear-old Damien Reid paused to give a banana-clad man a high five.

"I run faster than you, banana," he said. "And I don't even go to school here."

Damien was one of more than 200 visitors drawn to campus on a Saturday earlier this spring for Community Care Day. MD and Health Professions students joined forces to boost health awareness and education in the Hampton Roads region by hosting the event and provided important health screenings, health education and kid-friendly entertainment.

"Community Care Day undoubtedly has a positive impact on the community around us and will continue to do so to greater extents in the coming years," says Andrew K. Bolton, MPH, MD Class of 2014.

Visitors to Community Care Day were offered free health screenings including Body Mass Index (BMI), blood pressure, blood sugar and skin cancer checks. Students in the Physician Assistant program used fundraisers to collect more than \$3,500 to purchase bicycle helmets and booster seats. Parents lined up at the booth to have their children fitted for the free helmets. Nearby, visitors were able to touch a real brain and see the effects of smoke on lungs.

Partner organizations including Sentara, Old Dominion University and the Virginia Department of Health helped to make the event a success.

"I've always known that EVMS was here, but I had no clue they did so much," said Norfolk resident Tameka Reid. "I brought my grandson to do the fun things and I got my blood pressure checked while I was here."

The Lions Club also provided hearing and sight screenings on campus. More than 70 people received a free pair of glasses during the screenings, including Norfolk resident Marianne Harris.

"It's an incredible thing these students are doing for the community," Ms. Harris says. "God bless them."



Paul F. Aravich, PhD, Professor of Pathology and Anatomy, talks about the different functions of the human brain.

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## Major research grant targets inflammation

## in battle against obesity and development of heart disease, diabetes

f you are obese, you are at significant risk of developing heart disease and diabetes. But research now underway at EVMS could drastically improve your odds of avoiding these serious conditions.

A multidisciplinary EVMS research team is targeting chronic inflammation, which scientists believe triggers the development of diabetes and heart disease in people who are overweight. Their research is supported by a five-year, \$1.8 million grant from the National Institutes of Health (NIH) and may lead to ways to prevent the development of these diseases linked to obesity.

"Inflammation is key to why central 'belly' fat leads to high risks for diabetes, heart disease and maybe even some forms of cancer," says Jerry L. Nadler, MD, Director of the EVMS Strelitz Diabetes Center and principal investigator on the grant.

Inflammation is a double-edged sword. The immune system uses inflammation to battle certain infections and heal wounds, and it subsides when no longer needed. But chronic inflammation can cause problems. That's what Dr. Nadler and his colleagues are targeting.

The EVMS scientists have preliminary evidence showing that excess belly fat, also known as visceral fat, can increase inflammation in the vascular fat surrounding the blood vessels, according to Anca D. Dobrian, PhD, Assistant Professor of Physiological Sciences and co-investigator on the grant. "The cross-talk between visceral fat, vascular fat and blood vessels is an exciting, novel concept that may explain better the complex relationship between obesity, diabetes and heart disease," she says.



The research team brings together physicians and basic scientists to try to unlock the secrets of obesity and its strong ties to diabetes and cardiovascular disease.

Obesity — now at epidemic levels in the United Sates — represents a major public-health challenge. The risk of heart attack triples with obesity. Nearly 80 percent of people who develop Type 2 diabetes (often as a result of obesity) also develop heart disease.

To help limit the potentially deadly impacts of these diseases, the scientists are examining a particular chemical pathway in the body involved in chronic inflammation. Obesity activates the protein Interleukin-12 (IL-12) that then signals a gene "switch" called STAT-4 to initiate inflammation.

"As IL-12 goes up, it activates the gene switch, and we think when that is unregulated or not regulated correctly, it leads to excessive inflammation around the blood vessels and in the body. That can lead to heart disease, insulin resistance and potentially to diabetes," Dr. Nadler says.

Dr. Nadler, who also is Professor and Chair of Internal Medicine, is leading the team of scientists on the research. Dr. Dobrian and Elena Galkina, PhD, Assistant Professor of Microbiology and Molecular Cell Biology, are also part of the team. They are collaborating with other well-known scientists in the field, including Alan Chait, MD, from the University of Washington, and Mark Kaplan, PhD, at Indiana University.

The team already has strong evidence to demonstrate that by controlling STAT-4 they can prevent long-term inflammation and the diseases that often follow.

Preliminary studies over the last two years show that when certain mice are fed a high-fat diet, they develop insulin resistance (a precursor to diabetes) and atherosclerosis (hardening of the arteries that is a hallmark of heart disease). But when scientists eliminate the STAT-4 gene, the mice do not develop disease and otherwise appear normal.

"You can't take out the gene in people, but you can develop drugs that work the same way," Dr. Nadler says. "We're not preventing obesity. That has to be a lifestyle change. But what we are able to do is help prevent some of the damaging effects."

The researchers will use mice and donated human tissue — including blood vessels and fat cells — to determine if controlling the STAT-4 switch is safe and effective in preventing the development of disease. They also hope to better understand how IL-12 and STAT-4 work, so they can identify targets for drugs that would control the inflammation.

"Right now we don't have any treatments like this. Nothing is on the market to target that kind of inflammation," Dr. Nadler says. "If this works, it will open up a whole new idea of how to treat people with obesity, with heart disease and maybe even prevent diabetes."

## Student blog gives peek inside medical school

Medical school is one of those experiences that is hard to fully appreciate without living it. Add in the fact that each institution has its own unique character, and it becomes tough to get a feel for what it's like inside those labs and lecture halls.

To bridge the gap, medical school Class of 2015 member Laura J. Tyrrell has been writing about her experiences as a first-year student on EVMS' first student-authored blog, *Inside EVMS*. Ms. Tyrrell covers everything from the stress of studying for basic science to the problem of managing a social life amid long hours of studying.

Check out www.evms.edu/blogs/InsideEVMS to see how her first year unfolded and be sure to check back often as other EVMS students share their stories.



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## Clearing the air New Research examines SMOKE IN THE OR

A researcher at EVMS is studying the possible health risks of smoke generated during surgery with the ultimate goal of making operations safer for doctors, hospital staff and patients.

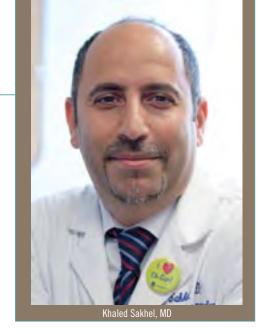
Khaled Sakhel, MD, Assistant Professor of Obstetrics and Gynecology and Coordinator for the Institute for Minimally Invasive and Robotic Surgery at EVMS, is collaborating with a team of Old Dominion University researchers led by Petros Katsioloudis, PhD, Director of the school's Industrial Technology Program. The multi-year study, now in its early stages, will test a variety of surgical instruments, including lasers, ultrasound and cauterization.

The first phase of the study began last fall and will calculate the amount of smoke produced by each instrument using a specially-designed measurement device. The second phase will examine exactly what chemicals and other substances — possibly including blood particles and viruses small enough to get through surgical masks — are in the smoke and how they might affect anyone in an operating room.

"The risks of surgical smoke really aren't well known by many people, including doctors and hospitals," Dr. Sakhel says. "Our ultimate goal through this research is to develop filtering recommendations to minimize surgical smoke exposure for health-care workers."

Researchers already know that surgical smoke contains a number of cancer-causing substances, including hydrogen cyanide, benzene and formaldehyde. The chemicals also can irritate airways, worsen asthma and possibly cause chronic coughs, headaches and fatigue. Surgeons, who might perform thousands of operations in their careers, likely would be most at risk.

In addition, case reports have documented transmission of the human papillomavirus (HPV) from patient to surgeon. Conceivably, tiny blood



particles could transmit the human immunodeficiency virus (HIV), as well, Dr. Sakhel says.

Solutions could include better filtering, along with vacuum and ventilation systems, in operating rooms as well as limiting the amount of smoke generated. As the study progresses, Dr. Sakhel expects to attract statewide interest and, hopefully, a variety of grants. "With so many different surgical modalities available today and so little written about the safety of surgical smoke, I think we're just at the tip of the iceberg now," he says. □

## EVMS executive, faculty honored

In recent months, the local publication *Inside Business* has honored six members of the EVMS family.

The recognition began when Claudia E. Keenan, Senior Vice President and Chief of Staff, was selected among the magazine's Women in Business honorees. The publication honored Ms. Keenan for her work to rejuvenate the school's marketing, communications, development and alumni relations programs.

In February, five faculty were honored as Health Care Heroes:

Terri W. Babineau, MD, Director of Community Outreach and a graduate



Jean Shelton, MD, was one of five faculty members celebrated as a Health Care Hero by the publication *Inside Business* in February. Pictured with her are, center, event sponsor Hal Levine, MD, of Value Options, and Inside Business Publisher Ed Powers.

of EVMS, received the Primary Care Physician award for her efforts to facilitate student involvement in the community, such as the HOPES Clinic, the first student-run free clinic in Virginia.

W. Thomas Bass, MD, Professor of Pediatrics, received the award for Advancements in Health Care. Dr. Bass, a neonatologist at Children's Hospital of The King's Daughters (CHKD), was part of a team that pioneered a technique to reduce the chance of long-term brain damage among children who experience brain trauma during childbirth.

Edward H. Karotkin, MD, Professor of Pediatrics, received the Pediatrician award. Dr. Karotkin, a neonatologist at CHKD, was honored for his work with Physicians for Peace.

Jean E. Shelton, MD, Professor and former Chair of Physical Medicine and Rehabilitation, received the award for Physician Specialist. Dr. Shelton has dedicated her life to develop services for children with disabilities and traumatic injuries. She holds the Lydia I. Meyers Endowed Professorship in Physical Medicine and Rehabilitation.

Thomas R. Pellegrino, MD, was presented a posthumous award recognizing him in the category Health Care Leader. Associate Dean for Education at the time of his death in 2011, he was celebrated as the consummate educator, even using his own battle with cancer as a learning opportunity for students. His wife, Jane Pellegrino, was on hand to accept the award on behalf of the family.  $\Box$ 

Check out www.evms.edu/magazine for other Health Care Heroes photos.

**12 VOL. 4 ISSUE 3, 2011-12 WWW.EVMS.EDU** AROUND CAMPUS



ohn T. Sinacori, MD,
Assistant Professor
of OtolaryngologyHead and Neck Surgery,
is Director of the EVMS
Voice and Swallowing
Center. He specializes in
diagnosing and treating
a wide variety of voice
disorders that affect both



John T. Sinacori, MD

professionals and the general public. The Voice Center also treats patients with swallowing problems. Many ailments that affect the voice can also cause difficulty with swallowing.

## What are some common problems that can cause hoarseness?

Acute laryngitis is the most common cause of hoarseness and sudden voice loss. Usually, this is caused by a viral infection that leads to swelling of the vocal folds. When they swell, they vibrate differently, so your voice sounds abnormal or raspy. The best way to treat this is to stay well hydrated with water and reduce your voice use or completely rest your voice if possible. If a runner hurts his knee, he doesn't go out running the next day. He rests and recovers. We just don't think of our voices that way, so most people continue to use them when they are already weak or hurt, which can lead to more chronic problems. An otolaryngologist should evaluate any hoarseness lasting more than two to three weeks.

## Can I overuse or misuse my voice?

Absolutely. Speaking is a physical task that requires coordination of breathing with the use of several muscle groups. As in any other physical task, there are efficient and inefficient ways of using your voice. Excessively loud, prolonged and/or inefficient voice use can lead to vocal difficulties. This can lead to excessive muscle tension in the neck and poor breathing, which can result in chronic hoarseness. This may be common among teachers and business professionals. In this world of communication where we are always on the phone, our voices never get a break, so almost anyone can overuse or misuse his or her voice.

## What are some common situations that are associated with voice misuse?

- Speaking in noisy situations.
- Excessively using a cell phone.
- Cradling a telephone handset to the shoulder. This puts your larynx and muscles in an unfavorable position while speaking.
- Using inappropriate pitch too high or too low when speaking.
- Not using amplification when publicly speaking or when speaking in a room with lots of background

## Can reflux cause voice problems?

Reflux of stomach juice into the throat can cause many different symptoms. Most people think of

reflux as just heartburn, but reflux can cause chronic throat clearing, a feeling of something stuck in your throat especially after swallowing, bad breath, chronic coughing, hoarseness and a feeling of thick mucous that some mistake as post-nasal drip. If you have any of these symptoms, then you may have reflux without ever having heartburn and should set up an appointment with an otolaryngologist.

## When should I see a doctor for my voice problem and what type of doctor should I see?

Since the most common cause of hoarseness is acute — lasting less than two weeks — laryngitis from a viral condition, most people do not need to seek a professional. However, if your hoarseness lasts more than two weeks, you should follow up with your primary-care physician. New guidelines published on the treatment of hoarseness indicate that antibiotics do NOT help with laryngitis. Your physician should reiterate appropriate hydration and voice rest. If your hoarseness persists more than two weeks without any signs of improvement, then you should seek an otolaryngologist who can directly evaluate your vocal folds. Hoarseness in a smoker is certainly more urgent because of the concern for cancer. A laryngologist, like me, is someone who has had an extra year of training specifically in voice disorders and may be helpful if your hoarseness persists.

To learn more about The EVMS Voice and Swallowing Center, call 757.388.3200.

TO YOUR HEALTH WWW.EVMS.EDU VOL. 4 ISSUE 3, 2011-12 13

# Vacciaties.



Sorting myth from fact in the vaccine debate

VACCINATING AGAINST FEAR WWW.EVMS.EDU VOL. 4 ISSUE 3, 2011-12 15



## What happens when fear of the cure becomes stronger than fear of the contagion?

Vaccines were so successful over the last century that parents stopped being afraid of diseases and started being unnecessarily afraid of vaccinations, EVMS experts say.

The ensuing debate has led some parents to decide against vaccinating their children, which has allowed certain illnesses to creep back into the country. Two of the most contagious diseases, pertussis (commonly known as whooping cough) and measles, have led the way, with cases increasing in Virginia and nationwide.

"We're setting ourselves up for outbreaks of diseases that are completely preventable," says Edward C. Oldfield III, MD, Professor of Internal Medicine and Director of the Division of Infectious Disease. "All people talk about are side effects of vaccinations, which in reality are extremely rare. They forget the terrible risks of these diseases themselves."

EVMS experts are actively working to dispel myths and inflammatory reports about vaccinations, which most often cause only mild, temporary side effects, such as fever and tenderness at the inoculation site. The medical school and the Virginia Department of Health also are partners on Project Immunize Virginia, which promotes on-time vaccination for both children and adults.

Vaccinations are credited for wiping out smallpox and polio and nearly eliminating measles and rubella from the United States. Inoculations for diphtheria, mumps, whooping cough and tetanus have led to a 92 percent reduction in each illness and a 99 percent reduction in deaths from those diseases over the past three decades. Shots for hepatitis A and B, influenza and chickenpox, all introduced since the 1980s, have decreased related infections and deaths by more than 80 percent. Rotavirus vaccination, introduced in 2006, essentially eliminated exposure to the virus by 2010 in North America.

Preventing outbreaks, however, requires a "herd

immunity" of at least 90 percent, and ideally more than 95 percent, Dr. Oldfield says. The United States has cut it close on some vaccines in recent years. In 2009, 90 percent of children had received the two recommended doses of the measlesmumps-rubella shot by age three, a number that climbed to 91.5 percent in 2010, according to the Centers for Disease Control and Prevention (CDC).

Opting against vaccination can be dangerous, especially for vulnerable populations such as young children, the elderly and persons with chronic diseases and compromised immune systems, EVMS experts say. Take measles as an example. As of late October 2011, doctors had diagnosed 223 cases nationwide, up from 61 cases in 2010 and the highest number since 1996, when there were 508 cases. Of those 223 patients, 87 percent had not been vaccinated as recommended. Many picked up the virus overseas, where it is more common than people imagine; Europe had more than 26,000 cases and nine deaths in the first six months of 2011 alone, according to the World Health Organization.

"Whooping cough has become particularly difficult to manage," says David O. Matson, MD, PhD, Professor of Health Professions and Pediatrics. "Like measles, as fewer cases have occurred, recognition of the disease is less frequent. Whooping cough has occurred in two of the church choir members with whom I sang. Only one of them was aware that was what he had."

Decades ago, families lived in terror of contagious diseases that could cripple or kill. Infected people lived in isolation or in special hospital wards. But that's been so long ago that people have forgotten the dire consequences. Instead, fear of rare complications has given birth to pervasive myths.

**VACCINATING AGAINST FEAR** 

## MYTH: The diphtheria, tetanus and pertussis (DTP) vaccine can cause brain damage.

FACT: According to the CDC, severe allergic reactions such as long-term seizures or coma occur in less than one out of a million doses — so rarely that it is "hard to tell if they are caused by the vaccine." Any seizures that do occur are almost always temporary and found in children who are prone to seizure with fever, according to Donald W. Lewis, MD, who was Chair of the Department of Pediatrics at the time of his death in February 2012. "So it's not the shot that's directly causing the seizures, it's their body's usual reaction to a fever," he said.

Whooping cough itself, meanwhile, causes such violent coughing that it can lead to permanent or fatal brain damage, particularly in babies and toddlers. More than half of patients younger than one with pertussis must be hospitalized, and of the 27 people who died of the illness in 2010 in the U.S. — out of 27,550 reported cases — 25 were younger than one, according to the CDC.

After a vaccination, on the other hand, "in most cases a child will simply be achy and sore or have a mild fever," Dr. Lewis said. "That's a small price to pay for protection from these horrible diseases."

## MYTH: The measles-mumps-rubella (MMR) vaccine can cause autism.

FACT: Children often exhibit the first signs of autism as toddlers when they first receive the MMR vaccine. In 1998, a small study out of England added to parents' concerns by suggesting the vaccine caused a gastrointestinal complication that triggered autism. But in 2010, *The Lancet*, the medical journal that published the report, retracted the study altogether, and its lead author lost his medical license because of fraud. Multiple major studies since then have shown "no link whatsoever" to autism, Dr. Oldfield says. And the preservative thimerosal, which many parents specifically fear, hasn't been in the MMR vaccine since 2001. Guarding against any one of the illnesses covered by MMR is critical. Before the measles vaccine became widely available in the 1960s, for example, the disease struck an estimated three to four million

people each year in the U.S. and hospitalized 48,000. About 500 people, many of them young children, died annually of measles complications such as pneumonia or encephalitis (brain inflammation). Two doses of the measles vaccine are 98 to 99 percent effective at preventing infection, Dr. Oldfield says.

## MYTH: The human papillomavirus (HPV) vaccine can cause mental retardation.

Former presidential candidate Michele Bachmann's September claim that the shot caused brain damage in a child drew swift condemnation from doctors, including the CDC and the American Academy of Pediatrics, with the latter saying there is "absolutely no scientific validity to this statement."

The reality, Dr. Oldfield says, is that vaccinating boys and girls at age 11 or 12 — before they become sexually active — could essentially eliminate cervical and anal cancers and cut rates of penile cancers by some 40 percent, as well as prevent many cases of genital warts. Often showing no symptoms until it is too late to treat, cervical cancer alone strikes 12,000 women a year and kills 4,000. Recently, researchers also have learned that 90 percent of oral squamous cell cancers are related to the HPV virus.

"It's an amazingly effective vaccine," Dr. Oldfield says. "However, it needs to be done early because it can't help after a person has become infected with the virus."

**MYTH: Spacing out vaccines is safer for** children.

Not true, Dr. Lewis said.

Instead, if vaccines are

spaced out, children will go

unprotected when they're

most vulnerable to

infections and

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serious complications. "A lot of science went into selecting the timing of these," Dr. Lewis said. "We give vaccines when they are most effective."

Even though children might get some 30 shots before they're teenagers, the total amount of antigens — toxins or foreign substances that provoke an immune system response — represents only a fraction of those once included in a single smallpox vaccine, Dr. Lewis added. "The older shots weren't nearly as purified," he said. "The shots today are so much better than they were even 10 or 15 years ago."

Adults also should follow immunization guidelines recommended by their physicians and national health organizations, EVMS experts say. Based on their vaccination records and health history, occupation or lifestyle, adults might need immunizations or boosters for MMR, DPT, HPV, varicella, meningitis, pneumonia, hepatitis A and B and more in addition to annual flu shots.

"The safety profile of a vaccine can be well established with the large studies conducted before licensure, as well as the post-licensure studies that include thousands of vaccine recipients enrolled at centers with computer databases," Dr. Matson says. "Such studies easily find adverse events at rates of 1 in 30,000, or even rarer events when such events occur."

The bottom line is that prevention is far less risky than contracting the disease. Inoculations have been

"the greatest public health success story

in the history of medicine," Dr. Lewis said.

As time has passed, the well-founded fear of childhood diseases like polio and measles has been replaced with an unfounded fear of the technology (vaccines) that eliminated those scourges, says Dr. Oldfield. "Unless we maintain very high levels of vaccination, we will begin to see the return of these



## Our Panel of Experts



Donald W. Lewis, MD: Until his sudden death in February of this year, Dr. Lewis was a Professor of Pediatrics and Chair of the Department of Pediatrics. A pediatric

neurologist at Children's Hospital of The King's Daughters, Dr. Lewis was an enthusiastic advocate for pediatric research, children's health and quality pediatric care.



DAVID O. MATSON, MD, PHD: Dr. Matson is a Professor of Health Professions and Pediatrics and former Director of infectious diseases in pediatrics.

Dr. Matson was principal U.S. investigator in one of the nation's largest pre licensure clinical trials, a study that resulted in FDA approval of the vaccine Rotateq for rotavirus.



Edward C. Oldfield, MD: Dr. Oldfield is Director of the Division of Infectious Diseases at EVMS. During a career in the U.S. Navy, Dr. Oldfield served

as specialty advisor on infectious diseases to the Navy Surgeon General. The Institute of Medicine appointed him to its Gulf War and Health: Infectious Diseases Committee.



## THE RIGHT MAN AT THE RIGHT TIME

## Visionary leader sees great potential for EVMS

lad in blue pin stripes and wielding a worn leather baseball mitt, then six-year-old Richard V. Homan, MD, was a Yankee in every sense of the word. Like most boys growing up in New York, a love of baseball dominated his career dreams.

"I wanted to be Clete Boyer and play third base for the Yankees," Dr. Homan says. "I still love baseball, but I found another dream to follow."

That new dream was in the field of medicine, and the only pin stripes visible in Dr. Homan's wardrobe today are on his suit jacket. Once a little leaguer, he's taking swing at a new title, Provost and Dean of EVMS, with a transition to president of the institution scheduled for some time in 2013.



"It was never in my plans to be a dean of a medical school; it was something I evolved into during my career," he says. "For me it's always been about making the biggest impact with everything I do and always, always helping others."

Once the only family-medicine doctor at the helm of a U.S. medical school, Dr. Homan is still one of only a handful of primary-care physicians to ascend the ranks in academic medicine.

## It's 5:30 p.m. on a Wednesday.

Dr. Homan is standing at his second-floor office window studying the campus. He has two more meetings and an event scheduled before he can head home. Still, the view of a bustling medical school has captured his attention for a few short

"I can throw a baseball from my office window and hit the wall of the only children's hospital in Virginia — that's amazing," he says. "The partnerships we have, the great educational facilities all in one campus, people directing energy toward developing the next generation of scientists and health-care providers — the pieces are in place for this institution to become better known nationally."

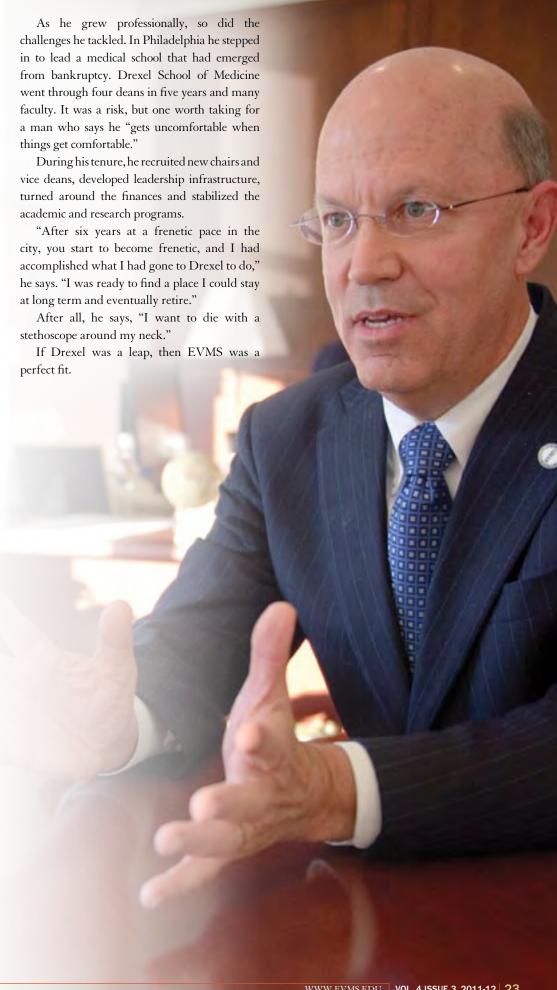
## Dr. Homan recognizes opportunity, dedication and strength when he sees it.

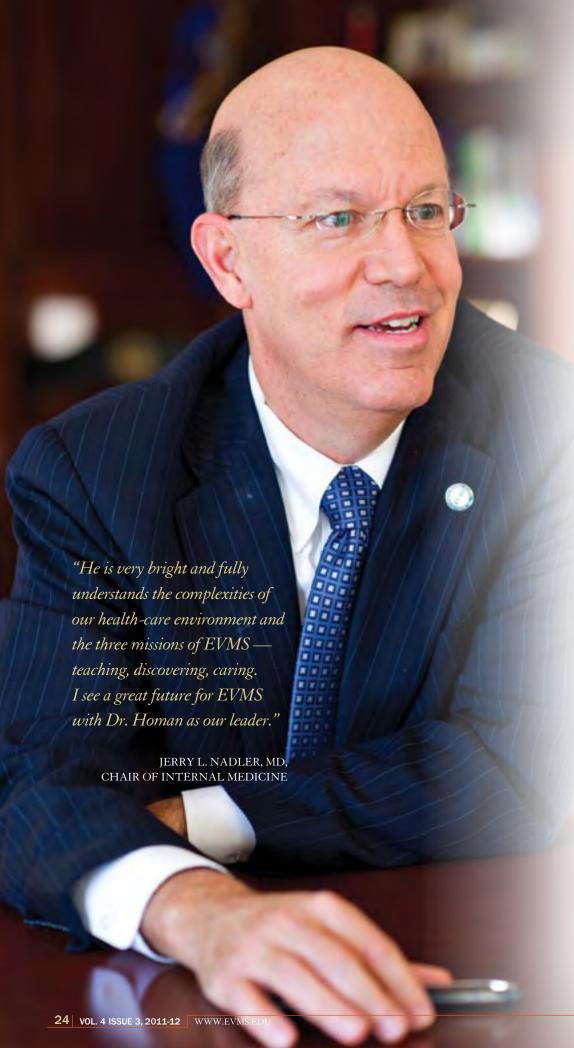
In many ways, his belief system and dedication to community-focused medicine was formed early in his career at the White River Indian Reservation in Arizona. There, he was immersed in a culture unlike anything he had experienced before and was on the front lines of medicine in a rural community 200 miles from the nearest WalMart.

He treated children, adults, trauma cases and complicated pregnancies. He sent many patients to Phoenix and taught students from across the country about how to care for every patient that came through the door.

"It was an adventure being the only Anglo in the post office or little grocery store, but it was also a great lesson in how to cross cultural barriers and provide quality health care in a respectful way," Dr. Homan says.

Other formative lessons came later in Texas, where he went on a five-year plan and ended up staying for 16. During that time, he rallied the legislature and built a new medical school out of a satellite campus.





In EVMS, he saw a medical school where he could make a difference and a community he could call home. But perhaps the most appealing was EVMS' strong focus on the community. It wasn't a difficult decision.

"At the heart of it all, I am a primary-care physician, which means I see how helping patients can, in turn, help their family and the community, and that through our work we can make a difference," he says. "The students, faculty and staff at EVMS recognize how they can impact health care in Hampton Roads, the Commonwealth of Virginia and the world. It is exciting to be a part of something like that."

The civility of the south and proximity of the ocean didn't hurt when convincing his wife to move. "It's like Texas on the beach," he says.

Within hours of the announcement of Dr. Homan's appointment to the EVMS helm, Judith Robinson Mercer's email box began filling up.

Mrs. Mercer, Associate Dean for Library and Learning Resources and Director of Educational Technology for the Edward E. Brickell Medical Sciences Library, was overwhelmed with "lucky you" messages from professionals across the country.

"I had countless emails and phone calls from colleagues around the country telling me 'you will love working with him," Mrs. Mercer says. "Whether faculty and staff at his earlier institutions or professional collaborators that worked with him on committees or groups within the American Association of Medical Colleges, all described a man of vision and energy who understands the health-sciences educational environment and is a great leader."

Just a few months in and he is already living up to his reputation, she says. "I am delighted to say that everyone was right, and I believe we will flourish under his guidance," Mrs. Mercer says.

Jerry L. Nadler, MD, Chairman of Internal Medicine, agrees.

"He is very bright and fully understands the complexities of our health-care environment and the three missions of EVMS — teaching, discovering, caring," Dr. Nadler says. "I see a great future for EVMS with Dr. Homan as our leader."

## Today, Dr. Homan is touring

a handful of buildings and offices on campus that are on his list of must-sees. He moves along the hallways nodding and calling people by name as he passes — a man clearly on a mission.

He checks out available lab space at Lewis Hall, stops in for impromptu conversations with a select number of directors and department chairs and does a top-to-bottom walk through of Smith Rogers Hall. He's energetic, polite and fires off questions:

"What size is this lab?"

"What research goes on here?"

"What departments are in this building?"

"Who works on this floor?"

He stops to write something down in his notebook, then moves on. He's processing and thinking forward — always planning for what's next.

He's bound for a meeting with a group of students in 20 minutes to discuss their ideas about how to advance the campus. These are the things he lives for — so much so, he started meeting with students before he even was on campus officially as the dean.

John E. Prescott, MD, Chief Academic Officer of the Association of American Medical Colleges (AAMC), has witnessed Dr. Homan's professional growth over the past several years. Dr. Prescott oversees AAMC efforts designed to prepare and assist deans, faculty leaders and future physicians for the challenges of 21st century academic medicine. Dr. Homan's work on the Council of Deans has earned him national attention.

"I can think of few people who are as devoted to medical education, research and clinical care, as well as committed to community as Dr. Homan," Dr. Prescott says. "EVMS has gained



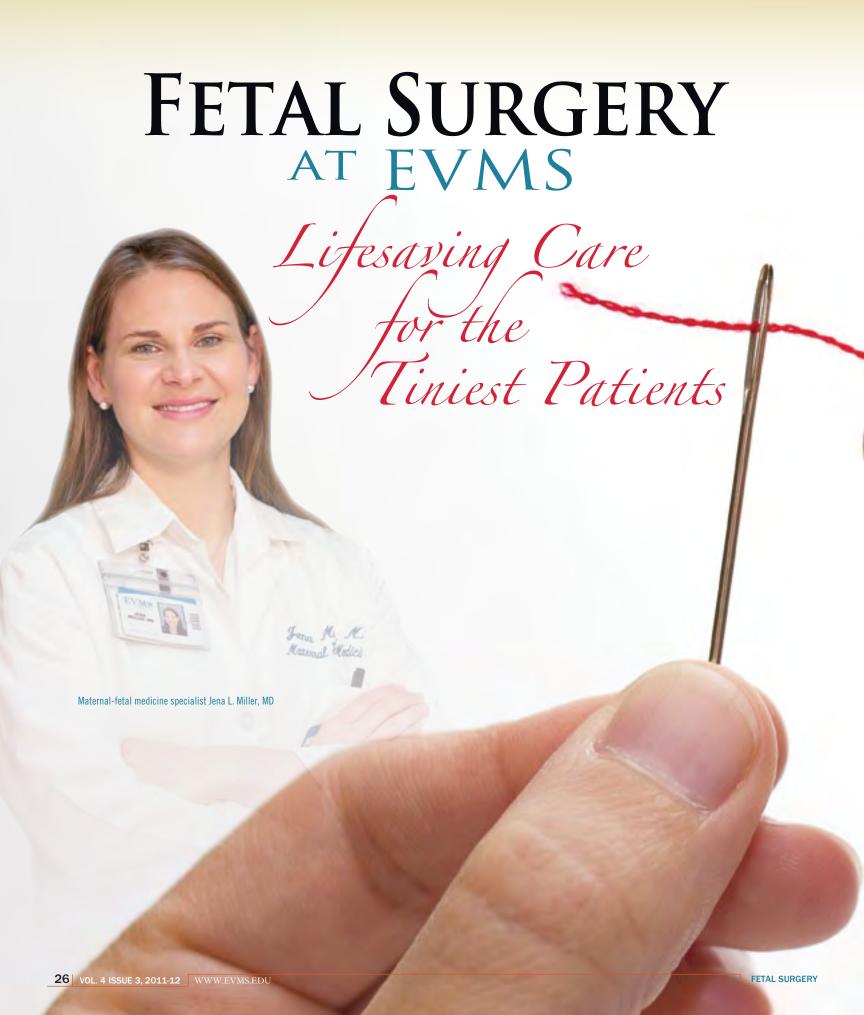
someone who will listen carefully, formulate a plan of action seeking input from his faculty and someone who can execute on that plan."

Dr. Homan was nominated to be one of 20 LCME accreditors in the country — a position that would have put him in position to directly impact how, and if, medical schools earn their accreditation. It's a highly sought-after position he turned down to accept the job at EVMS.

"He will do great things complementing the ground work that others — President Lester, Dean Pepe — laid before him," Dr. Prescott says. "There is little doubt in my mind that he will take EVMS to places it has never been before to better serve the community and the nation."

Also, Dr. Prescott says, he's just a wonderfully nice guy. □





## HAVE TROUBLE threading A NEEDLE?

IMAGINE USING A LASER THE SIZE OF A PIECE OF THREAD TO PERFORM LIFESAVING SURGERY ON AN UNBORN CHILD

very expectant parent dreams of a smooth pregnancy, an easy delivery and a healthy infant. But for 10 to 15 percent of pregnant mothers, those dreams are clouded by fear and worry. That's because they are more likely to need medical or surgical intervention due to an underlying condition in themselves or their unborn children. Although they plan and prepare like other parents, they must do it while living with the unsettling label "high risk."

"It can make for a pretty high-anxiety pregnancy," says Maternal-Fetal Medicine Specialist Jena L. Miller, MD, who provides advanced specialty care for these mothers and babies as part of the comprehensive Maternal-Fetal Medicine Program at EVMS. "A lot of what we do is monitor and counsel patients to help them understand exactly what is happening."

When high-risk patients do need surgical intervention, time is critical. In the past, the sickest patients often had to be transported far from home to specialty centers in Maryland, Pennsylvania or Florida, increasing anxiety and potentially delaying treatment.

But thanks to a new Fetal Surgery Program that's a cooperative venture of EVMS and Sentara, many of these patients can now

get the highly advanced specialized care they need close to home.

"EVMS is already nationally recognized for expertise in prenatal ultrasound and prenatal diagnosis, so adding a fetal surgery program was a natural extension of our expertise and a natural next step for our Maternal-Fetal Medicine practice," says Alfred Z. Abuhamad, MD, Chair of Obstetrics and Gynecology.

Fetal surgery at EVMS not only allows for faster treatment when hours count, but also keeps them closer to home and family support when they need it most.

FETAL SURGERY WWW.EVMS.EDU VOL. 4 ISSUE 3, 2011-12 27

## When Care Can't Wait

Fetal surgery is the last resort for babies who have run out of options. The Fetal Surgery Program at the Eastern Virginia Medical Center, a collaboration between EVMS Maternal-Fetal Medicine and Sentara Healthcare, provides cutting-edge treatments for life-threatening conditions. In addition, Pediatric Specialists from CHKD will provide medical and surgical expertise in a comprehensive model care.

"There are a handful of conditions, such as Twin-to-Twin Transfusion Syndrome (TTTS), which, if you don't address them before birth, will seriously jeopardize the life of the fetus," says Dr. Abuhamad. "Without intervention, the fetus would either die or the quality of life would be seriously altered."

A fetal surgery program addresses conditions such as TTTS using the least invasive and most advanced methods possible, says Dr. Miller, who was fellowship trained in maternal-fetal medicine at the University of Maryland Medical Center, home to the Center for Advanced Fetal Care, and has a particular interest in the challenges of complicated twin pregnancies.

"A lot of patients are actually quite shocked to learn the risks," says Dr. Miller. "They think 'Oh, we're going to have twins. It's going to be great!' I tell patients that you can't really feel relaxed until you are holding both of those babies at the end."

The Fetal Surgery Program is one of only about 20 similar programs nationwide. While it can't take away all the anxiety of a difficult pregnancy, Dr. Abuhamad says having such an advanced program close to home should be reassuring for Virginia's highrisk mothers and babies.

### **FETAL INTERVENTIONS**

Fetal surgery is no easy task. Because of the small spaces in which doctors have to work, they often use small tools, fine needles and ultrasound or a special camera called a fetascope for guidance. To hone her skills, Dr. Miller spent a month in the Fetal Medicine Foundation at King's College Hospital in London, England, and another month at Necker hospital de L'Enfant Malade in Paris, France, studying precision techniques like fetal endoluminal tracheal occlusion (balloon placement) for congenital diaphragmatic hernia and laser surgery for TTTS.

"It can be extremely challenging," says Dr. Miller. "The vessels are quite small and you don't always know exactly where they're located until you see the placenta. Everyone's anatomy is different. In a twin case, the fetuses are both moving, so they often get right in your way. And the mom is usually awake, so you also have

Jena L. Miller, MD, Maternal-Fetal Medicine Specialist





her position to consider. There is a lot going on and it is easy to get disoriented without a lot of concentration and preparation."

## TWIN-TO-TWIN TRANSFUSION SYNDROME

TTTS is a serious complication that occurs in as many as 35 percent of all U.S. monochorionic pregnancies — in which one or more fetuses share a single placenta. In some cases, connecting blood vessels within that placenta allow blood to pass from one twin to another, leading to disproportionate blood distribution. High blood volume in one baby may strain its heart, raising the risk of heart failure, while low blood volume in the other twin can seriously stunt development.

TTTS accounts for an estimated 17 percent of all fetal deaths in twins. An advanced procedure called selective laser photocoagulation helps to distribute the blood more evenly. Performed when babies are no bigger than the size of your palm, the procedure offers many of them their best chance of survival. EVMS will begin offering the delicate procedure later this year.

## **FETAL ANEMIA**

Caused by fetal infection or antibodies in the mother's blood, fetal anemia can lead to serious developmental problems in utero. New medications have reduced the incidence of the condition, but severe cases may still require surgery. To counter low-blood count and avoid premature birth, EVMS maternal-fetal medicine specialists offer intrauterine transfusion, a procedure during which red blood cells are given through a tiny needle placed in the umbilical cord with ultrasound guidance.

"At this point in pregnancy, the umbilical cord is about 2 mm, so you have to be extremely precise," says Dr. Miller.

## **BLADDER OUTLET OBSTRUCTION**

Another potential high-risk complication is the development of a bladderoutlet obstruction, which occurs in approximately one in 5,000 pregnancies. Left untreated, an improperly working urinary system can cause urine to back up and cause irreversible kidney damage. In severe cases, EVMS specialists may recommend a fetal shunt to drain the urine.

## FETAL PLEURAL EFFUSIONS

Abnormal fluid accumulation in the chest — called fetal pleural effusion — requires a different approach. While some cases may clear up on their own, unchecked pleural effusion compresses and damages developing lungs and even causes fetal heart failure. When cases are severe enough to need treatment, excess fluid may be drawn off with a needle guided by ultrasound.

Because it plays a role in both diagnosis and intervention, the state-of-the-art EVMS ultrasound unit is a vital part of the fetal surgery program. The unit includes eight-color doppler ultrasounds, as well as a 3D machine, and is staffed by seven full-time registered diagnostic medical sonographers with extensive expertise in high-risk obstetrical ultrasound.

"THANKFULLY, MANY OF OUR CASES JUST REQUIRE VERY CLOSE MONITORING, BUT FOR PATIENTS WHO DO NEED A HIGHER LEVEL OF CARE, WE ARE GLAD TO BE ABLE TO NOW OFFER POTENTIALLY lifesaving interventions."

JENA L. MILLER, MD

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## Desperately Seeking Hanna

## Former patient helps EVMS grad secure \$2 million research grant

n the highly-competitive world of medical research where promising ideas far outstrip the funds available to pay for expensive studies, one EVMS graduate has defied the odds.

Hanna K. Gaggin, MD, MPH, earned her medical degree in 2003 and continued to build on her knowledge. She completed her residency at the University of Virginia Health System, earned a Master of Public Health from Harvard University School of Public Health and undertook cardiology fellowships at the University of Pittsburgh Medical Center and Massachusetts General Hospital.

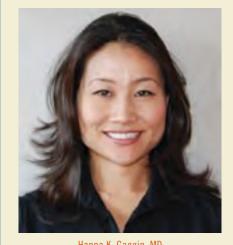
Stirred by her experiences at EVMS, Dr. Gaggin maintained an interest in research — specifically, in congestive heart failure. Her commitment to excellent care has opened the door to expanding her research.

Dr. Gaggin was moonlighting at Falmouth Hospital in Massachusetts when she treated a woman who was very ill.

"I spent a lot of time with her and her family. I just did my job and took time to explain what was going on and to plan with other doctors," Dr. Gaggin says. "She got better, wrote a very nice thank you note, and we lost touch."

Several years later, Dr. Gaggin learned that her former patient was looking for her. The patient wanted to discuss how her family foundation could help with Dr. Gaggin's research.

Over the following year, Dr. Gaggin worked



Hanna K. Gaggin, MD

with the woman to refine her research plan and navigate the grant application process. Dr. Gaggin was touched by the woman's generosity and thrilled with the rapid approval of the proposal for a \$2 million research grant.

"To have the foundation actively pursuing and finding me is incredible," she says. "I would never have expected a patient to come back and support me and my research. It's like something you see on TV."

Dr. Gaggin's research focuses on refining a blood test that measures a hormone released during congestive heart failure. There is evidence that this hormone, or "biomarker," may be found in the blood of patients early in the course of the disease, a prospect with far-ranging implications for treatment and management.

Dr. Gaggin attributes her interest in research to her time working on sleep-related studies at EVMS with Robert D. Vorona, MD, Medical Director of the Division of Sleep Medicine, and J. Catesby Ware, PhD, Division Director.

"They were incredibly supportive and treated me like a colleague," Dr. Gaggin says. "It got me addicted to research and coming up with ideas and new methods to treat patients."

Dr. Vorona says he was impressed by Dr. Gaggin's commitment to research despite the demands of her medical education.

"I'm always surprised when someone is awarded such a remarkable gift. But if a philanthropist would be impressed by the intellect, wonderful disposition and demonstrated hard work of someone, it doesn't surprise me that it would be Hanna," he says.

Dr. Gaggin is now at Massachusetts General Hospital. In July, she will join the Harvard Medical School faculty as a clinical instructor. She is leading two biomarker clinical trials.

Throughout her career, Dr. Gaggin's goal to marry bedside treatment with cutting-edge research has remained steadfast.

"I love seeing patients as much as I love doing research. It's from taking care of patients that I get research questions," she says. "I don't ever want to be out of touch in taking care of patients."

## CLASS NOTES

Rolando J. "Rolo" De Leon MD '82, became Chief of the Medical Staff at Mercy Hospital in Miami, Fla., effective Jan. 1.

"I know that whatever I have achieved is entirely due to the formative education that we received during those early EVMS years," Dr. De Leon says.



Sharing a table at a holiday cocktail party where Hampton Roads alumni learned about opportunities to support EVMS are, from left, C. Stokes Kirkland, MD '81, and Janis Kirkland along with Michael Joyner and his wife Christian Joyner, MPA '06.

Have you updated your Alumni profile lately? Visit www.evmsAlumni.com to make sure your information is current.



Ronald W. Flenner, MD, Associate Professor of Internal Medicine, was appointed Associate Dean for Medical Education in November. A 1989 EVMS graduate and faculty member at the school for the last 16 years, he continues to see some patients but is transitioning away from his role as student clerkship program director. He took a few minutes from his busy schedule to talk about his new role.

### *Q What does your position entail?*

A The vast majority of what I do is oversight of medical education and the evaluation and management of curriculum and student progress. That involves interfacing with individuals in the Office of Student Affairs, and I work closely with the Medical Education Committee with representation from first- and second-year course directors, third-year clerkship program directors, medical students and other faculty, including residency program directors. I've also retained

some patient-care responsibilities, both outpatient and in the hospital.

Q What are the challenges in establishing and maintaining an appropriate curriculum?

A The challenges we face are not unique to this school. The challenges, in part, are based on the complexity of the medical system and the changes that occur at a rapid rate. Students entering medical school come with expectations of more time devoted to self-directed study and online learning and decreased medical lectures. They also expect small-group discussions led by peers and faculty with increased use of information technology, modeling and simulations. Small groups, which benefit students greatly, rely on faculty whose time and resources for their own practice and research have been diminished. Finding time for them to lead small groups is difficult. In addition to our full-time faculty, we also rely on volunteer and

Continued on page 39

## **ALUMNI INFORMATION**

Send your class notes and news to Alumni@evms.edu

SAVE THE DATE: May 11, 2012 White Coat Retirement Ceremony.

August 3-5, 2012 MD Alumni Reunion Weekend celebrating the classes of 1977, 1982, 1987, 1992, 1997, 2002, 2007. October 26, 2012 Annual School of Health Professions Alumni Banquet, EVMS campus, 6-8 p.m.

To learn more and register for these events, please visit www.evmsAlumni.com.

## In Memoriam: KEVIN G. HEGEWALD, MD



The EVMS community lost a respected member when alumnus Kevin G. Hegewald, MD, died in September 2011 after a valiant fight with cancer. He was 43.

After graduating from the University of Utah, Dr. Hegewald earned his medical degree from EVMS in 1997. He completed residency at Loma Linda University and for the past 11 years worked as an emergency room physician in San Clemente, California.

The father of four was dedicated to his family and faith. He was an avid outdoorsman who introduced his children to fishing, skiing, climbing, biking and surfing. He was a counselor and served a two year mission in Germany as a member of The Church of Jesus Christ of Latter Day Saints.

Classmates remember Dr. Hegewald

"Kevin faced every challenge with a smile and a kind word," says Daniel A. Neumann, MD, a fellow member of the Class of 1997. "He helped each of us buffer the ups and downs of medical school and life with his subtle humor and refreshing perspective. He balanced his education and family life while still making time to play on our intramural sports teams and socialize."

His wife of 19 years, Abby, and his children, Joshua, 16, Sophie, 14, Benjamin, 10, and Samuel, 7, survive Dr. Hegewald. □

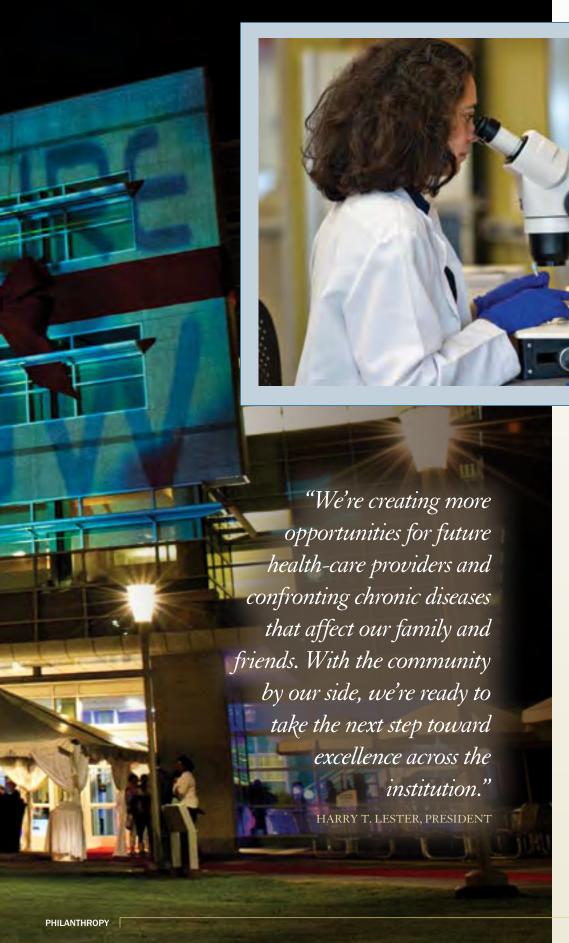
## THE EVMS CAPITAL CAMPAIGN:

20/Twenty Vision of a Bright Future



A projected image announces "The Future is Now" across the front of the Education and Research Building during the ribbon-cutting ceremony for the structure.

The new building has provided much needed research space and a home for the Leroy T. Canoles Jr. Cancer Research Center.



ropelled by a groundswell of support from the community, EVMS is moving into the final phase of its 20/Twenty Capital Campaign, having already exceeded its goal.

The campaign positions EVMS for the future by providing financial resources for construction and renovations, critical research programs, scholarships and endowments. EVMS launched the 20/Twenty initiative in 2009 with a \$25 million goal. With the rest of 2012 still to go, the campaign already has topped that mark. And it's still growing.

"People in Hampton Roads understand the importance of supporting EVMS," President Harry T. Lester says. "We're creating more opportunities for future health-care providers and confronting chronic diseases that affect our family and friends. With the community by our side, we're ready to take the next step toward excellence across the institution."

The campaign's achievement is good news not just for EVMS, but for all of Hampton Roads. The "20/Twenty" title is not just a reference to the clarity of EVMS' vision; it also denotes the year that the growing Baby Boomer population could overwhelm the health-care system.

## "EVMS is really a 'by the community, for the community' kind of organization. In many ways, the Capital Campaign is about improving the community."

CLAUDIA E. KEENAN, SENIOR VICE PRESIDENT and CHIEF OF STAFF

"EVMS is really a 'by the community, for the community' kind of organization," Senior Vice President and Chief of Staff Claudia E. Keenan says. "In many ways, the Capital Campaign is about improving the community."

The impending shortage of physicians will directly impact everyone in the area — whether it's in the form of delays in a doctor's office or lack of access to specialty care. EVMS was established in 1973 to improve the region's health care. True to its roots, the school is addressing the threat of a shortage head on by stepping up its efforts to attract and train more top-quality students, many of whom are likely to stay and practice in the region.

The 20/Twenty Capital Campaign directly supports that effort by funding the things that today's medical students demand: renowned faculty members, advanced learning and research facilities and financial support for students.

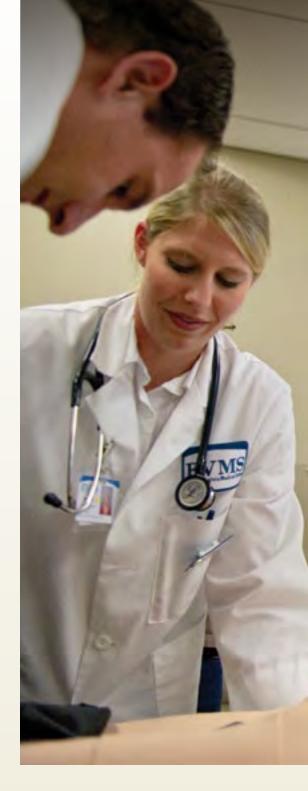
The Education and Research Building, which

opened in July 2011, is the most visible evidence of the Capital Campaign's success. It houses modern lecture halls equipped for larger class sizes, the state-of-the-art Sentara Center for Simulation and Immersive Learning, the Leroy T. Canoles Jr. Cancer Research Center and the School of Health Professions.

"The new building brings in more students, which increases the need for faculty," says Wayne F. Wilbanks, Managing Principal of Wilbanks, Smith & Thomas Asset Management and Co-Chair of the Capital Campaign. "These faculty members bring with them resources from the National Institutes of Health and other high-caliber funding agencies, which allow EVMS to expand its research efforts and create even more employment. EVMS is one of the largest employers in the area and tends to bring in higher-paying jobs. So, the success of the Capital Campaign and of the school is a win-win for everyone."



New auditoriums in the Education and Research Building utilize the latest visualization technologies to enhance the learning environment. Photo copyright Ellenzweig — Design Architect and Laboratory Planner



With more than 120,000 area patients seeing EVMS health-care providers every year, local residents understand that an investment in EVMS comes full circle in the form of advanced treatments and better access to care. But people outside Hampton Roads also will benefit from the success of EVMS and the Capital Campaign. Cutting-edge research at the school, most notably in critical issues, such as metastatic cancer and

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diabetes, will have an impact on health care around the globe. EVMS cancer researchers are working to improve outcomes by finding new ways to detect and treat cancer earlier. EVMS scientists are pushing for a cure for diabetes, as the incidence of the disease continues to climb.

"When people see the new building and read about the new hires such as Dr. Jerry Nadler and Dr. Amy Tang, and the types of cutting-edge research studies that are being conducted here in vital areas like cancer and diabetes, it becomes an easy case," Mr. Wilbanks says. "EVMS is a success story. And people like to contribute to successful organizations."

If success breeds success, then the EVMS Capital Campaign is poised for more of the same. With MCAT scores and a student population comparable to other Virginia medical schools, EVMS' time has come, says Ms. Keenan.

"We are fortunate to have strong, visionary leadership at EVMS that is very well respected," Ms. Keenan says. "The number one reason that people give is because they are asked, and the second reason is that they are giving to leadership. So, we are telling people about EVMS in a better way, and people are demonstrating their understanding of that by investing in EVMS." □

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## EVMS Fund

## provides crucial support for education, research

State-of-the-art equipment and facilities are vital for a world-class school of medicine and health professions. The EVMS Fund exists to ensure those needs are met at the school.

But the fund, which has a goal of \$1.4 million by June 2012, goes beyond upgrading technology. Donations to the EVMS Fund are used at the discretion of the Dean and can have a major impact on a department's ability to fulfill its mission to teach, discover and provide excellent care.

"The EVMS Fund accomplishes some things that are critical for student and faculty recruitment," says Denise Millsitz, Director of Annual Giving. "Because the Dean is able to look at the big picture, he can see which areas may be in need of important new equipment, a renovation, new computers or some other critical need."

Donations to last year's EVMS Fund helped pay for summer research stipends for second-year medical students, who developed curriculum-enhancing videos and online exam tools for incoming students. It helped fund a fresh tissue lab that will enhance students' and residents' surgical skills. The fund also paid for renovations that will strengthen anatomy instruction.

"The more I learn about the amazing things happening at EVMS, the more excited I get about helping them fulfill their mission," says Tricia Randall, Vice President of private banking at

TowneBank and Co-Chair of the EVMS Fund Committee. Mrs. Randall heads a group of 28 community leaders who serve as fundraisers and messengers of that mission.

"I can really see the different ways EVMS impacts our community, and I love to be able to share that with other people," says Mrs. Randall. "I believe we are all very blessed to have the school here, and I am proud to be affiliated with the EVMS Fund."

A recent study found that EVMS plays a vital role in helping local hospitals attract

and retain critical personnel, providing access to cutting-edge medical treatments and critical-care services and caring for patients regardless of their ability to pay. But the impact of EVMS in Hampton Roads extends beyond community health — it affects the region's economic well-being, too. The same study found that EVMS' imprint on the regional economy exceeds \$824 million annually.

Taking a look around campus — at the students learning in updated classrooms and the faculty

seeking cures in state-of-the-art labs — shows the impact of supporting the EVMS Fund, Mrs. Randall says.

"I think it just deepens their belief when they see the level of involvement of students and faculty" on campus," Mrs. Randall says. "Donors feel more connected to the school and have a better understanding of the great things that are being done there."

Visit www.evms.edu/fund or use the envelope in this magazine to make a donation.



are an investment in the future of health care The student you support through a scholarship could one day save your life or the life of a loved one. That was the poignant message shared at the 2012 Annual Scholarship Dinner and Program.

Students, faculty and donors shared the state of student indebtedness and the ways supporting scholarship funds can ensure that those interested in pursuing a career in medicine aren't dissuaded by education-related debt.

"People I've never met before believe in me so much that they have chosen to help finance me through medical school. That's an amazing thought," Twyla M. Cummings, MD Class of 2015, told the audience of 200 people. "Thinking about that faith and generosity makes me work even harder — not only to ensure a worthwhile investment, but also so that I can do the same one day."

A looming provider shortage is spurring the

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## Largest-ever endowed gift strengthens geriatric care,

## **IMPROVES MEDICAL SIMULATION**

The largest endowment gift in EVMS history will have a profound impact on the safety and treatment of older patients, as well as on the training of new doctors.

The \$10 million donation from Sentara Healthcare will be split between two EVMS programs: the newly-renamed Sentara Center for Simulation and Immersive Learning at EVMS and the EVMS Glennan Center for Geriatrics and Gerontology.

"This has created an incredible opportunity for us that would not have happened or would have taken much longer to happen without Sentara's support," says Thomas W. Hubbard, MD '76, JD, MPH, Director of the Simulation Center. The center has earned a national reputation for its pioneering work integrating task trainers, such as those used to practice suturing; computerized manikins; virtual interfaces and people specially trained to mimic illnesses and conditions, known as standardized patients. Dr. Hubbard says Sentara's gift will allow the center to develop, refine and share training tools so that other facilities can benefit from EVMS' expertise.

The center will refine its efforts in teambased training, helping new physicians better understand the importance of interdisciplinary care. The donation also enables EVMS to develop innovative tools, such as "hybrid" trainers that combine task-simulation devices with human standardized patients and immersive environments like virtual operating rooms.

"We want to develop a level of competence and confidence in our students in a safe environment before they are in life-or-death situations with real



patients," Dr. Hubbard says.

The EVMS Glennan Center for Geriatrics and Gerontology will use its portion of the Sentara endowment to improve care for hospitalized older adults and to ease their transitions from hospital to home.

"There are several parts to this effort," says Glennan Center Director Robert M. Palmer, MD, MPH, a nationally known authority on geriatric patient safety. "By coordinating care more effectively, we will be able to protect hospitalized patients from things like falls, medication errors and hospital-acquired conditions, such as pressure ulcers or catheter-related urinary tract infections."

Dr. Palmer says this coordinated approach to

caring for older patients will facilitate smoother transitions to the home or other health-care environments and reduce hospital readmissions.

"This is a transformational change in how health care is provided," says Dr. Palmer, who will help adapt a geriatric-care model to be used throughout the Sentara system. "It has already been shown that making each member of the care team accountable to both the patient and to each other can result in better patient outcomes."

The endowment also will support the establishment of an advanced geriatric fellowship program at EVMS, further strengthening Sentara's growing clinical relationship with the school.

growth of both medical and health professions graduating classes across the nation. But there are obstacles to graduating more students. According to the Association of American Medical Colleges (AAMC), the average debt of a 2011 U.S. medical school graduate is \$161,290. At EVMS, that figure is \$186,000.

The average debt of an EVMS 2011 physician assistant student is about \$101,000, while that of a

health professions student is more than \$30,000.

This type of debt can discourage even the brightest, most enthusiastic students from pursuing a career in medicine, said Ronald W. Flenner, MD, Associate Dean for Medical Education and Associate Professor of Internal Medicine.

"Scholarships help attract the most talented students to EVMS and afford students the opportunity to focus on their education without their loan payments dictating which specialty they choose," Dr. Flenner said. "Scholarships also help us retain residents who will practice medicine in Hampton Roads."

If you would like to contribute to a scholarship at EVMS, use the enclosed envelope, donate online at www.evms. edu/giving or call 757.446.6070. Visit www.evms.edu/magazine for videos highlighting grateful scholarship recipients and their donors.

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## **IN FOCUS**

Photos from the Scholarship Dinner and Reception, SunTrust Donation, Physician Assistant White Coat Ceremony and the reception for outgoing Dean Gerald Pepe, PhD.















## upcoming

## **EVMS Graduation 2012** - May 19

EVMS will hold its commencement ceremony at 10 am. in downtown Norfolk's Scope Arena. Matthew C. Spitzer, MD, president of the board of directors for Médecins Sans Frontières/Doctors Without Borders USA, will serve as the commencement speaker.

Additional graduation events including military

commissioning will be held earlier in the week. For more information, visit www.evms.edu/magazine.

## EVMS Charity Golf Classic — May 22

EVMS will host the annual EVMS Charity Golf Classic at Virginia Beach's premier Bayville Golf Club. All proceeds from this exclusive tournament benefit the EVMS Foundation.

## **Annual MD Alumni Weekend** - August 3-5

All EVMS MD Alumni, house staff and faculty are invited to take part in this fun weekend of events. Enjoy social and professional networking, CME lectures, medical school updates, and a variety of summer activities in Norfolk, VA.. For more information, visit www.evmsalumni. com.



## 1. Medical student T.J. Tzavaras, recipient of the Dorothy M. Middleton Memorial Scholarship — the first endowed, full-ride scholarship at EVMS — stands with Robert M. McCombs, PhD, former EVMS Associate Dean of Student Affairs, at the annual Scholarship Dinner and Program.

- Master of Art Therapy and Counseling students Sara J. Julsrud and Rachel L. Daniels, as well as medical student Elizabeth A. Finch, were among the students who thanked scholarship recipients at the program.
- 3. SunTrust Bank Hampton Roads President Tommy V. Rueger presents President Harry T. Lester with the company's contribution toward EVMS' capital campaign.
- 4. The EVMS community honored Gerald J. Pepe, PhD, for his service as EVMS' Provost and Dean for seven years. Dr. Pepe stepped down to become Chair of Physiological Sciences.
- **5.** Master of Public Health student Amanda F. Wong, a recipient of the Dr. H. McDonald Rimple Scholarship, met scholarship benefactors Krista Bradley and Donna Rimple at January's event.
- **6.** MPA students beginning their second year in the program, such as Michael G. Simpson, right, have the honor of presenting the incoming class with their white coats.
- **7.** New Master of Physician Assistant student Latasha S. Butler and her classmates received their white coats in January at a ceremony to welcome them as junior colleagues in the medical profession.
- **8**. Stephen Schmoll couldn't hide his enthusiasm during the processional after the White Coat Ceremony, which welcomed the 68 students who comprise the largest group of new students in the history of EVMS' MPA program.

## Student Orientation Week — August 13-17

EVMS will welcome incoming MD and Health Professions students onto campus.

## Wine, Women and Fishing — August 18-19

The Chesapeake Bay Foundation will host the 10th annual Wine, Women and Fishing ladies billfish tournament and gala at Virginia Beach's Rudee Inlet. Women of all experience levels are invited to participate, and the after-party is open to all. Proceeds support EVMS breast cancer research. For details, visit www.evms. edu/magazine.

## MENTAL-HEALTH WORKFORCE

## continued from page 4

The recommendations developed by the task force "challenge programs to offer training activities to make sure psychologists are ready to work in these settings," Dr. Cubic says. "It's about recalibrating the training models and making sure trainees have the education they need for the future."

Dr. Cubic said she was selected to help lead the task force in part because EVMS is seen as a leader in the kind of integrated training the APA wants to promote. EVMS psychology interns and post-doctoral fellows work side-by-side with family-medicine and internal-medicine residents at clinical locations throughout the region. The approach produces doctors and mental-health providers better able to collaborate in the framework of modern medicine, particularly in widely embraced models of care like the patient-centered medical home.

The task force authored a strategic plan to guide the APA's workforce training efforts. Dr. Cubic spoke at a recent conference about ways to integrate behavioral health in primary care.

## Flenner

## continued from page 31

community faculty members who also incur the same pressures and time constraints.

Q How do you ensure that the curriculum is adequate to prepare EVMS students? A There are a variety of outcomes to measure success: assessment on national board examinations, student-satisfaction surveys, success of acceptance to competitive residency programs and surveys of students in graduate residency programs. I think that our track record of continued recruitment of high-quality students speaks to the value of the education that we provide.

### • How do you see the EVMS curriculum evolving?

A The increased use of information technology, such as virtual microscopy, is an important part of the evolution. There has been a significant increase in the use of the Sentara Center for Simulation and Immersive Learning at EVMS for modeling, simulation and procedural-skill sessions, as well as sessions on interviewing and physical examination.

## Q What's it like to be in this position as an alumnus?

A I'm very excited about this opportunity to enhance the educational experience provided here. I take pride as a graduate of this school and am honored to have the opportunity to work with such talented students. It's definitely a challenge, one that I enjoy and look forward to continuing.

## **Q** What is your primary objective?

A Our ultimate goal is for EVMS to be better than the national average in student learning, including excellence in standardized exam performance, student competency, success in residency and training and subsequent medical performance. □



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