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# Dome

A publication for the Johns Hopkins Medicine family

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**Nursing student Kathleen Littleton and pulmonary and critical care fellow Panagis Galiatsatos visit Poe Homes to discuss concussions and sprains.**

MIKE CIESIELSKI

## Breaking Down Barriers

Medicine for the Greater Good puts trainees in the community, where they forge bonds and improve health.



Learn more about the strategic priority for education online at [hopkinsmedicine.org/strategic\\_plan](http://hopkinsmedicine.org/strategic_plan).

**P**ANAGIS GALIATSATOS ROAMS THE cavernous community room of Poe Homes, a public housing complex in West Baltimore. A couple of months ago, he was here with advice about heart health. Now, he's explaining how to treat sprains and concussions.

His audience, again, is about 25 children and teens, the drummers and dancers of the Christian Warriors Marching Band. Again, they sit on folding chairs arranged in a circle around Galiatsatos, a pulmonary and critical care fellow in the Johns Hopkins University School of Medicine. Galiatsatos has about 20 minutes before the marchers resume their twice-weekly practice.

"Do you remember me?" he asks.

"Yeeesss," comes the drawn-out chorus of a reply.

"Do you remember my name?"

"Nooooo."

Galiatsatos chuckles, tells his young audience to call him Dr. G. He knows his name is hard to remember. He also knows he's forming relationships, even as the marchers shift and whisper in their seats. Maybe some of the young people in this room will remember his advice for treating a sprain. Or maybe they'll remember, next time they visit a doctor, that this doctor made them smile.

"The main thing is connecting with and loving the community," says Ernest King, the marching band's longtime director.

That connection is the reason Galiatsatos helped found and still directs Medicine for the Greater Good, a program lauded by U.S. Rep. Elijah Cummings and featured in the *Baltimore Sun* and *New England Journal of Medicine*.

(continued on page 4)

# One Size Doesn't Fit All

PAUL B. ROTHMAN, M.D.  
DEAN OF THE MEDICAL FACULTY  
CEO, JOHNS HOPKINS MEDICINE

At Johns Hopkins Medicine, our patients are at the center of everything we do. Starting with William Osler (1849–1919), who believed medicine should begin and end with careful observation of the patient, Johns Hopkins pioneered the idea of tailoring treatment to the individual.



Human diseases are marked by an identifiable group of symptoms arising from certain abnormalities in biological pathways, but patients with similar diseases are not identical. For generations, our physicians and scientists have been working to understand this variability to customize treatment for every patient.

Fast forward to 2016. One of the most exciting stories in medicine is the tremendous headway in personalized health care, also known as precision medicine. This progress is fueled by an information revolution, in which the speed and power of data analysis are rapidly increasing, as well as a measurement revolution, in which many different parameters can be determined from ever-smaller samples and specimens simultaneously.

Today, more than ever, medicine is poised to unleash the potential of information science, or informatics, to improve patients' lives. At Johns Hopkins, many of our scientists have taken the lead in this arena. Our precision medicine initiative, known as Hopkins *inHealth*, is a collaboration among the university, the health system and the Applied Physics Laboratory. Harnessing big data to improve cancer screenings, cystic fibrosis treatment, heart care decisions, autoimmune disease management, and diagnosis and treatment of age-related diseases, Hopkins *inHealth* is focused on creating tools that improve medical decision-making to provide the right care to the right person.

Of course, the tools of personalized medicine are built on a foundation of past discoveries. In cancer genetics, many of those insights were achieved right here by people such as Bert Vogelstein, Ken Kinzler and Victor Velculescu, whose groundbreaking research established the genetic basis of many cancers.

One of the headline stories in precision medicine over the past decade has been targeted cancer therapies, which zero in on cancer cells that have specific markers without harming healthy cells. These drugs have represented a major step forward, but tumors find a way to become resistant to almost any drug. To address that problem, our Kimmel Cancer Center scientists are pioneering the use of liquid biopsies. By spotting tumor DNA in the bloodstream, these biopsies can detect new cancers or recurrences early, even before symptoms appear, and define how the cancer may be changing in response to therapy. A liquid biopsy can help detect any resistance that is forming and allow physicians to adapt treatment.

In cystic fibrosis (CF), as in cancer, we are also at the threshold of being able to customize treatment for each patient. CF is caused by a mutation in the CFTR gene, which regulates how fluids and salts move across a cell membrane. Two of our faculty members, Garry Cutting and Patrick Sosnay, have spearheaded a systematic review of every CF mutation to identify which ones lead to the disease. Now researchers are developing and testing drugs for CF that target certain classes of mutation. Mike Boyle, our adult CF center director, is the principal investigator of such a study.

These are just a few examples among many.

Coupling our culture of innovation with the powerful tools of the era, there is breathtaking potential to revolutionize how we diagnose and treat illness. The approaches will vary, but the underlying doctrine of patient-centeredness will continue to guide everything we do.



Paula Neira helps health care providers better understand and treat lesbian, gay, bisexual and transgender patients.

## Guiding Compassionate Transgender Care

Being transgender means facing significant health care disparities, says Paula Neira, nurse educator in the Department of Emergency Medicine.

Transgender people have a gender identity different from the one assigned at birth. They often face discrimination and violence, Neira says, which increase their risk for suicidal thoughts, substance abuse and mental health issues.

Health care providers may be hampered by their own discomfort and lack of knowledge, Neira told an audience of about 120 on July 19, in the Richard A. Grossi Auditorium at Johns Hopkins Bayview Medical Center.

In studies, up to 71 percent of transgender people reported discrimination in medical settings, and 50 percent said they had to educate clinicians about transgender care, she said during the second annual LGBT Pride Lecture, sponsored by the LGBT Allies Employee Interest Group and the Johns Hopkins Bayview Diversity Council.

Neira graduated from the U.S. Naval Academy and served in Operation Desert Storm before leaving the Navy and accepting her own female gender identity. Now a nurse, lawyer and nationally recognized advocate on transgender military service, she was recently honored by

the nonprofit OutServe-Servicemembers Legal Defense Network for her work ensuring equal treatment for military members who are lesbian, gay, bisexual and transgender.

Neira urged clinicians to call patients by the name or pronoun they prefer and counseled against asking which bathroom they use, how they have sex and when they "chose" to be transgender. "Being transgender is not a choice," she said. "I challenge all of you to tell me the date and time you chose your gender identity."

Each transition is different and involves complex medical, legal and social decisions, Neira said. Not all transgender people opt for gender-confirming surgery, for example. "The standard of care is patient-centered," she said. "What is most appropriate for each patient involves a conversation between the patient and provider."

—Karen Nitkin



Learn more about transgender care at:

[bit.ly/NeiraTalk](http://bit.ly/NeiraTalk)

[bit.ly/LGBTJHMResources](http://bit.ly/LGBTJHMResources)

[bit.ly/CaringforTransgender](http://bit.ly/CaringforTransgender)

[bit.ly/LGBTFeature](http://bit.ly/LGBTFeature)

## New Tobacco Testing Process for Employees Offers Rewards

Actively supporting a healthy workforce is one of the goals of the people priority, as outlined in Johns Hopkins Medicine's Strategic Plan. To that end, the Johns Hopkins Health System will reward employees who don't use tobacco and will continue to offer resources for those who wish to quit.



During the annual open enrollment period this fall, Johns Hopkins employees who enroll in health care benefits through the various Johns Hopkins participating health care providers—EHP, CareFirst and Kaiser—may voluntarily agree to be tested for tobacco. Employees who test negative for tobacco will receive a \$20-per-paycheck reduction on their premium for health benefits in the 2017 calendar year. Employees enrolling in health care benefits who do not wish to receive the reduction do not need to participate in tobacco testing. There will also be options to receive the premium reduction for employees who wish to stop using tobacco.

Participating entities include The Johns Hopkins Hospital, The Johns Hopkins Health System Corporation, Johns Hopkins Medicine International, Johns Hopkins Community Physicians, Johns Hopkins HealthCare, Johns Hopkins Home Care Group, Johns Hopkins Bayview Medical Center, Suburban Hospital, Sibley Memorial Hospital and Johns Hopkins All Children's Hospital.



Learn more at [bit.ly/jhmtobaccotesting](http://bit.ly/jhmtobaccotesting).

# Turn Wasted Time into 5 More Hours a Week!

Johns Hopkins neuroradiologist David Yousem shares time management tips.

**E**VERYBODY WASTES TIME: A minute daydreaming, a few minutes scrolling Facebook. Neuroradiologist David Yousem, associate dean in the office of faculty development, offers a way to gather up those idle moments and turn them into useful, productive time.


He has created what you might consider a greatest-hits list of tips from several well-known time management theories. Taken together, Yousem says his suggestions can add 45 productive minutes to your workday—or more than six useful weeks a year.

“You can’t actually manage time,” he explains. “You manage yourself. The change is up to you.”

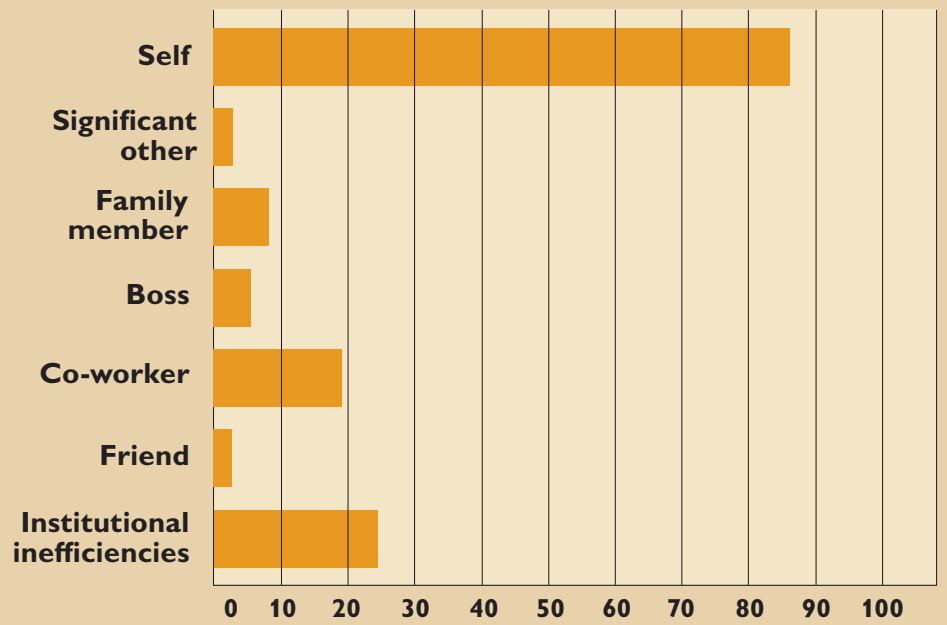
Here are five tips taken from Yousem’s 90-minute presentation, “How to Create Five Additional Productive Hours a Week.”

- Make weekly and monthly to-do lists. Daily to-do lists may cause you to focus too narrowly on short-term goals.
- Create a filter to catch emails that contain the word “unsubscribe” in them. Then either delete them or unsubscribe.
- Schedule a time, or times, during the day to answer email—and stick to that schedule.
- Write every day. By exercising your “writing muscle,” you can jump into writing assignments, even when you have only 15 minutes open in your schedule.
- Plan ahead. Spend a few minutes in the evening planning the next day so that you arrive at work with a strategy.

—Patrick Smith

 Attend Yousem’s time management presentation at noon on Oct. 27 at 2024 E. Monument St., room 1-500. Or, to save time, read his PowerPoint. [bit.ly/timemgtips](http://bit.ly/timemgtips).

## Who is most responsible for your loss of productive time?



Source: David Yousem faculty survey.

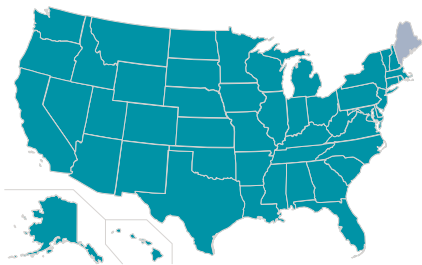
Percentage of time

## Epic Record Sharing in 2015

Epic, the electronic medical record system, improves care by making it easier for Johns Hopkins providers to share patient records with outside hospitals, clinics and emergency rooms.

We have exchanged patient records with

**49** states



**747,900**

patient records exchanged in 2015

**165,856**

patient records exchanged in 2014

We’ve exchanged patient records with more than






**720** hospitals

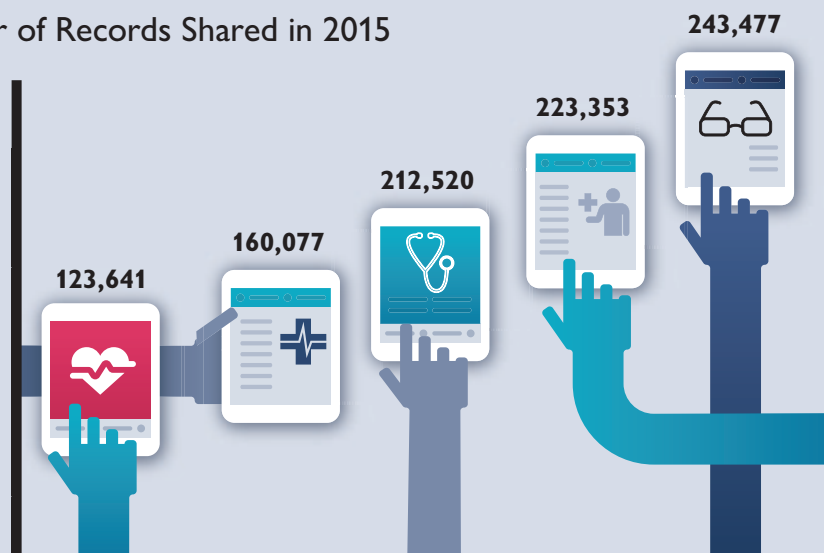
**900** emergency departments

**21,570** clinics



### TOP DEPARTMENTS—Number of Records Shared in 2015

-  OPHTHALMOLOGY
-  FAMILY MEDICINE
-  INTERNAL MEDICINE
-  EMERGENCY MEDICINE
-  CARDIOLOGY



## Breaking Down Barriers

(continued from page 1)

Medicine for the Greater Good (MGG) began in 2011 as a series of workshops that encouraged trainees and experts to discuss nonclinical topics, like health policy, behavioral counseling and social determinants of health. In 2013, it expanded to include a requirement that all internal medicine residents at Johns Hopkins Bayview Medical Center complete at least one project that benefits the community. Many do more.

### A Broader Reach

The program also attracts undergraduate and graduate students from across Johns Hopkins, even though they are not required to participate. Accompanying Galiatsatos at Poe Homes, for example, are nursing student Kathleen Littleton and Siddhi Sundar, a postbaccalaureate premed student in the Krieger School of Arts and Sciences.

Together, 82 trainees and students have launched, led and learned in nearly 300 programs. They bring asthma education to local schools, operate blood pressure cuffs at health fairs, and chal-

**"AS YOU LEARN ABOUT PEOPLE IN THE COMMUNITY, YOU TAKE BETTER CARE OF THEM IN THE CLINIC."**

—COLLEEN CHRISTMAS, MGG CO-DIRECTOR

lenge churchgoers to eat more fruits and vegetables. They attend palliative care workshops and push policy changes to benefit lesbian, gay, bisexual and transgender people.

MGG's directors are Galiatsatos; Colleen Christmas, director of the Primary Care Leadership Track; and Erica Johnson, program director for the Johns Hopkins Bayview Internal Medicine Residency Program. Participants learn from each other through collaborations and presentations.

"More than 50 percent of what we do when we're taking care of patients is not strictly medical," says geriatrician Ariel Green, who started the workshop



A teen tells Panagis Galiatsatos about a recent sports injury.

series when she was an internal medicine resident. "It's confronting other issues, like poverty. That's why it's important for doctors to get beyond the walls of the hospital."

A few weeks into his residency, Christopher Hesh does just that, leaving Johns Hopkins Bayview on a summer Friday to attend a Caregiver Café held at the Enoch Pratt Free Library's Southeast Anchor branch in Highlandtown.

The cafes provide support and resources to people taking care of loved ones. Trainees like Hesh often participate. He sits at a table with Johns Hopkins Bayview social workers, chaplains and others. He listens as a man talks about his sister with stage 4 cancer. He listens as a woman describes the sparkle that still animates her 90-year-old mother.

Galiatsatos is there. So is W. Daniel Hale, founder of the Lay Health Educators Program (LHEP), the largest MGG initiative. Hale started LHEP in the 1990s, when he was a psychology professor at Stetson University in DeLand, Florida.

### Where Faith and Health Intersect

At the time, Hale wanted to bring health information to the older adults in that Florida city. For help, he contacted Johns Hopkins Bayview geriatric experts John Burton and Richard Bennett, who is now Johns Hopkins Bayview's president. The three decided to work together.

"We proposed that the best way was to go through houses of worship, the only places where older adults gather on a regular basis," Hale says. Hale, Burton and Bennett created a curriculum of rel-

evant topics, including diabetes, depression, medication management and heart disease. In Florida, Hale recruited local physicians, who taught dozens of faith leaders how to bring health information to their congregations.

When Hale joined Johns Hopkins Bayview in 2011 as director of the Healthy Community Partnership, he brought the LHEP model with him. The twist, suggested by Bennett, was that the instructors would be Johns Hopkins Bayview residents, not local physicians.

The congregants in Baltimore were younger, on average, than those in Florida, but just as thirsty for health information they could use, such as how to read nutrition labels or recognize depression.

The first Baltimore training session attracted leaders of St. Matthews United Methodist Church in Turner Station, a historically African-American neighborhood in Baltimore County. Armed with new wellness knowledge, participants created a weight loss challenge that inspired congregants in the 150-member church to drop a collective 1,000 pounds in 2013.



LHEP succeeds because the church and medical communities work together, says Dred Scott, who retired in June after 18 years as the pastor of St. Matthews. Hale visits the church often, he says, and worked with Scott to choose topics meaningful to congregants: hypertension, diabetes, heart disease, depression and violence.

### Personal Roots

Galiatsatos learned the power of medical-religious partnerships through his own ties to the St. Nicholas Greek Orthodox Church in Highlandtown. In 2010, he stood in the pulpit and spoke about cancer screenings to the Greek families he had known all his life. The advice was mundane to him but startling to congregants with little knowledge of routine prevention, he recalls.

"That's when I noticed the disconnect between the community and the hospital," Galiatsatos says. "Unless we go out and talk to people, they won't know the value of these screenings."

At Poe Homes, Galiatsatos is once again in the community, once again doing what he can to improve health. He winds down his talk by asking the young musicians and marchers what they want to learn next. One teen suggests CPR. "Great idea," says Galiatsatos. "Maybe one day you'll save somebody's life."

—Karen Nitkin



See a video about Medicine for the Greater Good at [bit.ly/MedGreaterGood](http://bit.ly/MedGreaterGood).

## IN BRIEF

### Two Johns Hopkins Hospitals Win Environmental Awards

The Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center recently won environmental excellence awards from Practice Greenhealth, a national association for health care organizations dedicated to environmental sustainability principles and practices.

The 2016 awards were presented in May at the annual CleanMed conference in Dallas. The Johns Hopkins hospitals received the following honors:

- **The Making Medicine Mercury-Free Award** (*The Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center*) recognizes facilities that have virtually eliminated mercury from their buildings and have made a commitment to continue to be "mercury-free."
- **The Greenhealth Partner for Change Award** (*Johns Hopkins Bayview Medical Center*) recognizes superior performance in environmental sustainability.
- **The Circle of Excellence Award for Greening the OR** (*The Johns Hopkins Hospital*) acknowledges leadership in implementation and innovation in the surgical department. Among the practices evaluated: regulated medical waste segregation, clinical plastic recycling, reformulation of OR kits, single-use device reprocessing and use of reusable sterilization cases.
- **The Circle of Excellence Award for Environmentally Preferred Purchasing** (*The Johns Hopkins Hospital*) celebrates the best in environmentally preferable purchasing programs. Evaluators consider interactions with group purchasing organizations and suppliers, environmentally preferable contracts, and the use of environmental attributes in requests for proposals and business reviews.
- **The Greenhealth Emerald Award** (*The Johns Hopkins Hospital*) is presented to hospitals that demonstrate superior sustainability programs.

# Reducing Physician Burnout

Johns Hopkins Medicine Leadership Retreat explores the perils of career exhaustion and how to prevent it.

*Fried ... Crispy ... Done ...*

However the feeling is labeled, burnout is endemic among physicians—and on the rise. Recently, 250 physicians and senior administrators from across Johns Hopkins Medicine gathered at a leadership retreat in the Washington, D.C., suburbs to discuss ways of regaining and maintaining positive feelings about their work.

The statistics for physician burnout are alarming: More than half of the physicians—54 percent—who responded to a

national survey in 2014 reported losing enthusiasm for their work and feeling that it was no longer meaningful. The survey of 6,880 physicians, conducted by the American Medical Association and Mayo Clinic, showed that burnout was 9 percentage points higher than it had been three years earlier.

Burnout not only “saps the joy from practice” but can also compromise patient care, says Redonda G. Miller, president of The Johns Hopkins Hospital. “If you can’t take good care of yourself, it’s harder to take care of others.”

She shared these thoughts at the leadership retreat held in May at the Chevy Chase Club in Chevy Chase, Maryland. The daylong program was organized by plastic surgeon Diane Colgan, chair of the Suburban Hospital medical staff, and featured speaker J. Bryan Sexton, director of Duke University’s Patient Safety Center and former co-director of the Johns Hopkins Quality and Safety Research Group.

The 2014 study found that practitioners at the front lines of medicine exhibited the highest levels of burnout. But physicians across all specialties are twice as likely as other professionals to report symptoms of burnout. (See the accompanying chart showing burnout by specialty, based on a 2015 survey by Medscape.)

What’s more, burnout is contagious, says Sexton. He cited one study that found some neonatal intensive care units (NICUs) with high levels of burnout and some with low ones. But within each NICU, there was little variability in burnout level. Team members from the same NICU had similar levels of burnout, especially when they had worked together for at least six months.

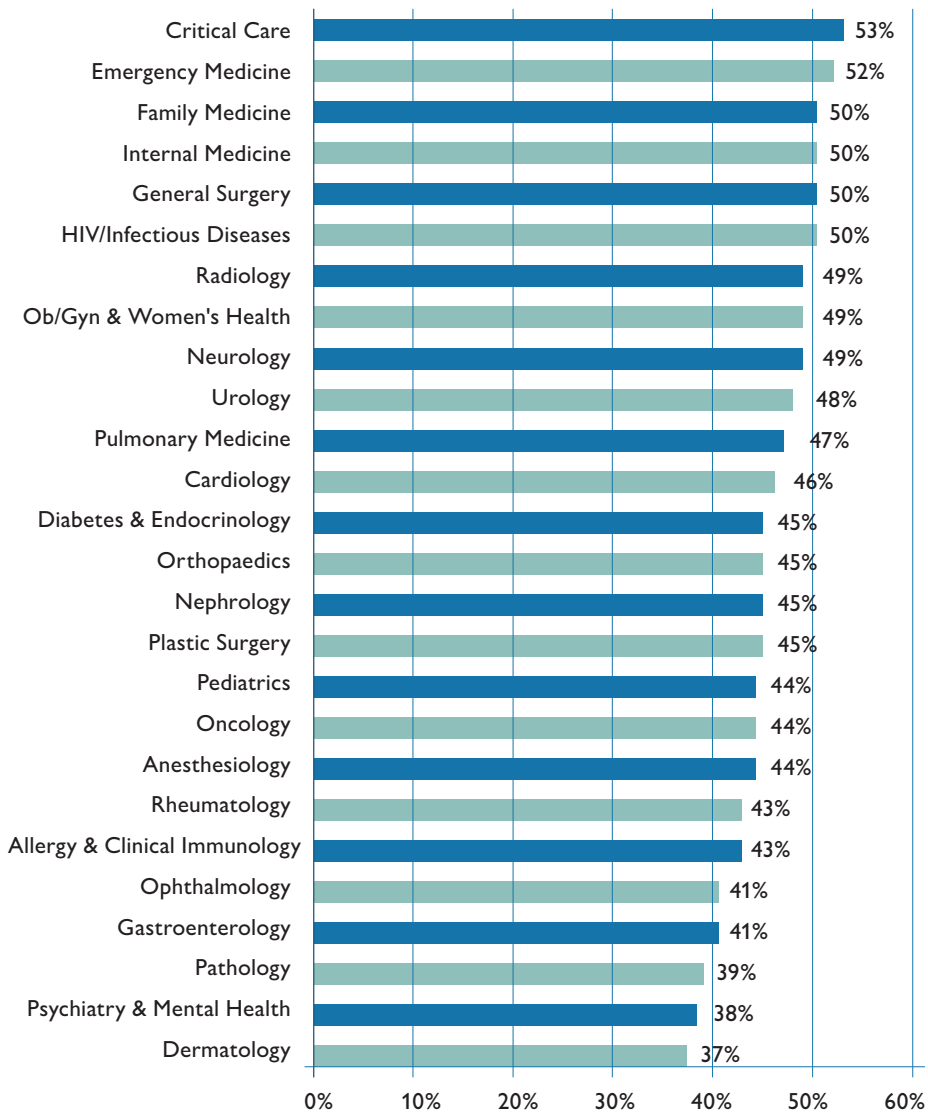
Sexton blamed long hours, poor work-life balance, and an often overwhelming amount of paperwork and documentation for contributing to career exhaustion. He offered two exercises to help physicians reconnect with their love of medicine and clinical practice. He advised them to:

- Write down three things that went well that day, just before going to bed. For example, one entry might be, “My first patient was on time and showed improvements in symptoms.” Also, provide details of what you did to create or contribute to this event and how it made you feel.
- Write a letter expressing gratitude to a person who has had a positive and lasting impact on your life and share the letter, preferably by reading it aloud to its recipient. If the person is deceased, read the letter aloud to someone who knew that person well.

Both exercises seek to extract the gold from the dross in medical practice by encouraging physicians to see beyond drudgery and frustration to focus on what’s meaningful and fulfilling in their work.



## Percentage of Burned-Out Physicians by Specialty



Source: Physician Burnout: It Just Keeps Getting Worse. Medscape. Jan. 26, 2015.

## What Is Burnout?

Burnout has three components:

- **Emotional exhaustion:** Physicians pull back emotionally from their work. They feel they have given all they can.
- **Cynicism and negative feelings about patients:** As emotional exhaustion sets in, physicians lose a sense of empathy with patients and may see them in a negative light.
- **Negative self-perception:** Physicians feel unhappy about themselves and their accomplishments at work.

Burnout is a factor in job turnover, absenteeism and low morale. And it’s correlated with physical exhaustion, insomnia, increased use of alcohol and drugs, and family conflicts.

Source:  
The Measurement of Experienced Burnout,  
Christina Maslach and Susan E. Jackson, 1981.

Sexton urged his listeners to help colleagues realize their strengths and reach their full potential. “Such meaningful connections are the strongest guard against burnout,” he said. “Chase meaning to get happier—and to rediscover your love of medicine.”

—Christina DuVernay



## Our World-Class Employees Are Going for Gold

The Johns Hopkins Hospital and Health System Corporation will recognize more than 900 employees who have been a valuable part of the workforce for 10, 20, 30, 40 or 50 years at the annual Employee Appreciation Service Awards Ceremony. Taking place **Monday, Sept. 12, from noon to 1:30 p.m.** in Turner

Auditorium on the East Baltimore campus, the ceremony recognizes employees’ dedication to being the very best, aptly marked by the theme, “Our World-Class Employees Are Going for Gold.” Recipients of the Baker-King Awards, the Edward A. Halle Prize for Excellence in Patient Service and the Human Resources Presidential Leadership Award will also be named during the celebration.

## Sibley Trading Post

When Sibley Memorial Hospital nurse Heather Rizzo observed that computers, chairs, copiers and fax machines were routinely discarded by various departments and units that no longer needed them, she reasoned that other groups could use these items and save Sibley from additional purchases. With the support of the Sibley Innovation Hub, the pre-surgical testing

clinical coordinator has established Sibley Trading Post, a website that lists equipment and supplies that are available for reuse. She says, “My goal is to have every department use this tool to post items that are no longer wanted or needed—and hopefully to include any supplies that are expiring but can be utilized by other departments so that waste will also be reduced.” For more information, contact Rizzo at hrizzo1@jhmi.edu.

# Making a Dent in Baltimore's Hepatitis C Epidemic

Johns Hopkins clinic celebrates 1,000 patients cured.

**B**EFORE SHE ADDRESSED her hepatitis C condition last year, Margaret Renea says her life was in a downward spiral. The 54-year-old South Baltimore native's drinking was out of control. Her marriage was in trouble, and her hepatitis C was only making matters worse.

Then, in just 12 weeks, Renea gained a new future. She became one of the first 1,000 patients to be cured of hepatitis C at The Johns Hopkins Hospital—a milestone celebrated last May.

"This virus is a big problem, and the solutions are not simple," says Mark Sulkowski, medical director of the Johns Hopkins clinic. "Still, we're thrilled with the success we've had. We're definitely making a dent."

In 2014, nearly 20,000 Americans died of illnesses related to the virus—more than from HIV, pneumonia and tuberculosis combined. Baltimore has a higher rate of infection than most U.S. cities, with an estimated 60,000 cases.

But in the past two years, the outlook for people infected with the hepatitis C virus has improved dramatically. In October 2014, the U.S. Food and Drug Administration approved new drugs that inhibit the virus' ability to reproduce. Depending on the strain of hepatitis, one pill a day for between eight and 24 weeks can completely clear the virus from a patient's system.

Experts have called the treatment miraculous. Instead of managing multiple medications, patients take a single-dose combination of new antivirals that inhibit the virus' replication.

## Stigma-Free Care

The leading cause of liver transplants in the United States, the virus attacks and inflames the liver and can lead to cirrhosis, liver failure and liver cancer. Most people infected with the virus show no symptoms until they sustain liver damage, which can take decades. Prior to 1992, before donated blood was screened for the hepatitis C virus, blood transfusions could transmit the disease. Today, it is spread mainly via shared needles.



Margaret Renea calls her first visit to Oluwaseun Falade-Nwulia at the East Baltimore Specialty Clinic "a life-changer."

To ensure that patients can avoid the stigma that often accompanies the condition, the Johns Hopkins clinic has a purposefully vague name: the East Baltimore Specialty Clinic.

"We don't want patients to have to walk around the hospital asking directions to the hep C clinic," says Sherilyn Brinkley, a nurse practitioner who manages the clinic.

Nestled deep in the Alfred Blalock Building, one of the oldest sections of The Johns Hopkins Hospital, the clinic brings together physicians, nurses, pharmacists, case workers and community health workers.

Brinkley says that the program is designed to help underserved people. "We break down the barriers those patients face—things like transportation and insurance. Those are things that we take care of for patients so that they can concentrate on getting better."

Still, the process can be daunting. Sulkowski and his colleagues present

**"WE'RE THRILLED WITH THE SUCCESS WE'VE HAD. WE'RE DEFINITELY MAKING A DENT IN HEPATITIS C."**

—MARK SULKOWSKI  
MEDICAL DIRECTOR OF THE  
EAST BALTIMORE SPECIALTY CLINIC

patients' treatment plans in manageable pieces, coaching and counseling them along the way.

"Maybe the patient has been through treatment before, unsuccessfully," Sulkowski says of a common occurrence. "We make sure they know that this is going to be different. You're not just going to walk out of here with a bottle of hepatitis C treatment. Through counseling, through peer groups, through our nurses and our community health workers, we'll be with you every step of the way."

## 'A Life-Changer'

The new medicine is not cheap, at roughly \$1,100 per dose. A 24-week regimen costs \$189,000. Sulkowski says that sometimes, cases need to be submitted to insurance or government payers multiple times. But clinic staff members work hard to find the dollars to cover patients' treatments, no matter their insurance status.

Many cured patients remain connected to the clinic through a peer support group called The Cure Club. For example, some patients need to avoid alcohol because of compromised liver function. Others with histories of opioid abuse or drug use involving needles must avoid re-

lapse and a risk of reinfection. The Cure Club is led by a counselor who has been through the program. It gathers cured patients and those in various stages of the medication regimen to talk about their experiences and encourage one another.

Such support begins with a patient's first visit to the clinic. Renea says that appointment was a "life-changer." Her doctor, Oluwaseun Falade-Nwulia, listened patiently to Renea's story of depression and alcoholism.

"Then, Dr. Falade said something that broke me down," says Renea. "She said, 'I believe in you.' I cried and cried."

Two weeks later, with Falade's help, Renea was approved by her insurance for treatment and began an easy, once-a-day pill regimen. Until recently, patients undergoing treatment for the hepatitis C infection endured a noxious cocktail of antivirals and interferon, leaving many who took it feeling sick and run down. The treatment rarely led to a cure, aiming instead at merely tamping down the virus.

Renea reports mild nausea on the first day of her treatment but no side effects after that.

Three months after taking her first pill, Renea was free of hepatitis C. She hasn't had a drink in nearly a year, and she returns to the clinic for her checkups every few months. She feels like herself again—cheerful and outgoing.

"I'm so grateful to my doctor and to everyone at the clinic," she says. "Those are some very special people. They really care about me."

—Patrick Smith

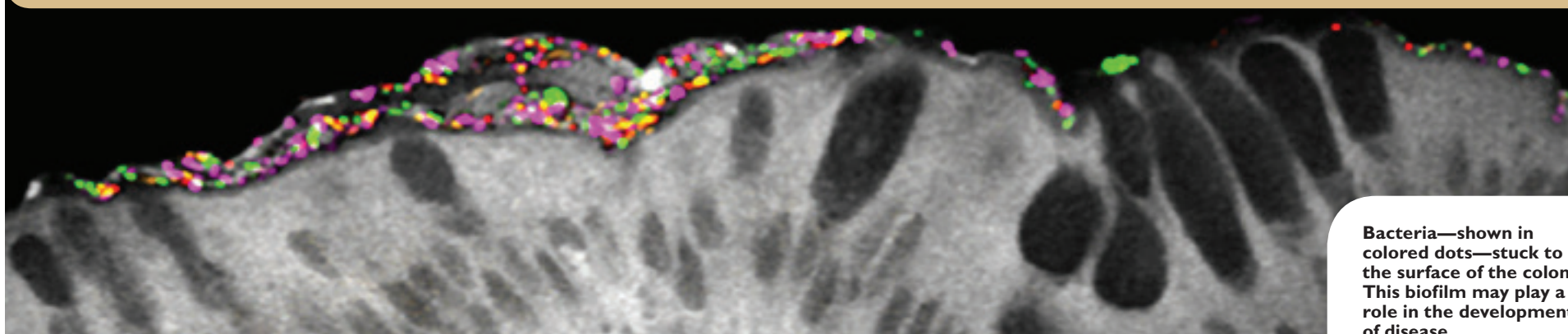
**Despite the cure, hepatitis C still kills more Americans than any other infectious disease. A recent U.S. Centers for Disease Control and Prevention study discovered a sharp surge in new hepatitis C infections. An estimated 30,000 new infections will happen in the United States this year.**



**The East Baltimore Specialty Clinic took an unusual route to spread the word that hepatitis C doesn't have to be a death sentence. Medical director Mark Sulkowski's team purchased targeted advertising on local radio stations and signs on Maryland Transit Authority buses. Clinic staff members reported that their phones lit up as a result of the ads.**

—Patrick Smith

Learn more about hep C treatment at Johns Hopkins: [hopkinsmedicine.org/medicine/viralhep](http://hopkinsmedicine.org/medicine/viralhep).



Bacteria—shown in colored dots—stuck to the surface of the colon. This biofilm may play a role in the development of disease.

## New Clues to Colon Cancer Lie in Biofilm

Two Johns Hopkins physicians study the gut’s microbial ecosystem for earliest-ever biomarker.

IT’S FAIRLY COMMON KNOWLEDGE that a long-term diet of high-fat red meat and a sedentary lifestyle can be a dependable recipe for colon cancer.

But why? What is it about red meat or a high-fat diet that promotes cancer in the colon? And why is a lack of exercise such a risk?

Johns Hopkins researchers Cynthia Sears and Francis Giardiello are taking a look at the microbiome—the colony of trillions of bacteria that live in the human gut—for answers.

“The bacteria in the colon may be influenced by what you eat,” Giardiello says, “and that can give you certain populations of bacteria that then predispose you to colon cancer.”

So Sears, professor of medicine, oncology and molecular microbiology and immunology, and Giardiello, professor of medicine and former director of the Johns Hopkins Division of Gastroenterology, teamed up to focus on the coating of bacteria that sometimes sticks to the walls of the colon—biofilm—rather than looking at the bacteria that move through the colon. Does the sticky coating of bacteria that clings to the walls of our intestines play a role in cancer?

The pair was recently awarded a five-year, \$4.3 million research grant from

the National Institutes of Health for the first-ever comprehensive study of the colon’s biofilm as it relates to cancer. Among their goals: Determine just how the triggers—a carnivorous diet, smoking, obesity, diabetes, chronic colitis, a lack of exercise—contribute to the gut environment that can lead to colon cancer.

The Sears laboratory identified that all cancers from a certain part of the colon show biofilms and that bacteria were stuck in layers in these cancers.

“We suspect that biofilm formation increases cancer risk and can be a very early cancer marker,” Sears says. “The goal is always to catch it as early as possible.”

If their hypothesis is proved, Giardiello and Sears will have discovered the earliest-ever marker in the progression of colon cancer.

The landmark study began in August. Two thousand patients undergoing routine screening colonoscopies at four sites in Maryland and Pennsylvania will be asked to volunteer for the study.

“We are going to evaluate these patients going through colonoscopy,” Giardiello says, “checking for these biofilms in their colon in work done in the Sears laboratory, and see if they associate with colon cancer or polyps.”

Giardiello says 141,000 Americans a year get colon cancer. And every year, 50,000 people die in the U.S. of the disease. While genetics plays a role, he estimates that 70 to 80 percent of colon cancer cases are the result of a poor diet and not enough physical exercise.

Giardiello and Sears also plan to study the biofilm’s durability.

“If you find it once in, say, January and then rescope the patient in July, are the biofilms still there? And are they the same? Are they durable?” he asks. “If that’s the case, then that also could be a biomarker for colon cancer risk.”

Sears’ previous research has found that certain *Bacteroides fragilis*—a common gut bacteria—can be, in large numbers, particularly noxious to the lining of the colon.

“The bacteria are causing inflammation,” she says. “And that inflammation can lead to cancer.”

—Patrick Smith



Cynthia Sears and Francis Giardiello



IF THEIR HYPOTHESIS IS PROVED, GIARDIELLO AND SEARS WILL HAVE DISCOVERED THE EARLIEST-EVER MARKER IN THE PROGRESSION OF COLON CANCER.

## PATIENT- AND FAMILY-CENTERED CARE



## ‘Pokemon Go’ Gets Kids Out of Bed, on the Mend

Mobile game keeps pediatric patients moving to capture Pokémon characters in real life.

WHEN BRIANNA BOYD TOOK HER FIRST post-surgery steps in the corridor of the Johns Hopkins Children’s Center, she found a welcome distraction to pain—right at her fingertips.

Launching the “Pokemon Go” game on her iPhone for the first time, the 19-year-old patient discovered a small, cartoon-like creature just down the hall. After a few tries, she captured it, and then another, and another. And by midmorning: “I wanted to get up as much as I could to find as many Pokémon as I could!” she laughs.

“Pokemon Go” is a free, augmented-reality mobile app that brings to life the trading card game and TV series of the late 1990s and early 2000s. Using a mobile phone’s GPS, it allows users to capture fictional Pokémon characters that “appear” in a real-world environment.

Child life specialists, nurses and other pediatric caregivers say the game encourages patients to keep moving while they’re in the hospital. Research shows that mobility helps with the healing process, lessens anxiety and depression, and ultimately decreases the amount of time patients have to stay in the hospital.

Children’s Center nurse manager Nancy Stanley says “Pokemon Go” is also useful as a coping mechanism for patients. “It helps them not think about what’s happening medically, and it’s an opportunity for interaction outside of hospital activities, medical needs and the plan of care.”

The game allows child life specialists like Gina Pizzano to build rapport with all the kids who are playing, especially teenagers. “Sometimes it can be hard to connect with them, and this is a great way to do it,” she says.

—Katelynn Sachs

**Business Leader of the Year**



**Ronald R. Peterson**, president of the Johns Hopkins Health System, and executive vice president of Johns Hopkins Medicine and recently retired former president of The Johns Hopkins Hospital, has been named Business Leader of the Year for 2016 by Loyola University's Sellinger School of Business and Management. The award honors business executives who embody Loyola's Jesuit commitment to community and service in the leadership of their organization.

**New Suburban Hospital President**



**Jacqueline "Jacky" Schultz, R.N., M.S.N., C.N.A.A.**, has been appointed president of Suburban Hospital. A 30-year veteran of the health care industry, Schultz was chosen by the hospital's board of trustees to assume its top post after having served as interim president since last October. Schultz came to Suburban in 2005 and has held a wide variety of key administrative positions, including chief nursing officer, senior vice president for patient care, senior vice president for clinical operations, executive vice president and chief operating officer.

**New Strategic Communications Director**

**Cynthia Gutierrez-White** has been appointed director of strategic communications for Johns Hopkins Medicine. Previously, she was the American Red Cross' senior official spokesperson for Spanish-language media. Prior to that, she was the senior public and media relations specialist for Miami Children's Hospital.

**Berman Institute of Bioethics**

**Jeffrey Kahn, Ph.D., M.P.H.**, has been named the Andreas C. Dracopoulos Director of the Berman Institute of Bioethics. Since 2011, Kahn has been the Robert Henry Levi and Ryda Hecht Levi Professor of Bioethics and deputy director of policy and administration at the institute. He succeeds **Ruth Faden, Ph.D., M.P.H.**, founder of the institute and its director since 1995. An acclaimed leader in the field, Kahn has focused on the intersection of ethics and health and science policies.

**Trailblazers**



**Tina Cheng, M.D., M.P.H.**, director of the Department of Pediatrics, and **Lillie Shockney, R.N., M.A.S.**, University Distinguished Service Professor of Breast Cancer and administrative director of the Johns Hopkins Breast Center, each received a Women in Business Trailblazers in Healthcare Award from Baltimore's Center Club. Cheng has developed award-winning models of primary care to address the needs of vulnerable children, adolescents and families. Shockney, a two-time breast cancer survivor, has worked tirelessly to improve the care of breast cancer patients around the world.

**Blumenthal Awards**

The seventh annual **Stanley L. Blumenthal M.D. Cardiology Research Awards** for postdoctoral fellows; graduate, medical, nursing and public health students; and house staff awarded the following: First prize for Basic Science Oral Presentation went to **Shira Ziegler**, who is in the M.D./Ph.D. program; second-place prizes went to **Stephen Chelko, Ph.D.**, and **Mark Ranek, Ph.D.** First place in Clinical/Translational Research Oral Presentation was given to **Seamus Whelton, M.D., M.P.H.** First place for Basic Science Poster Presentation went to **Guobao Chen, Ph.D.**; second place went to **William Schmidt, Ph.D.**; third prize went to **Olurotimi Mesubi, M.B.B.S.** Winners of the Clinical/Translational Research Poster Competition were **Taylor Purvis**, a first-year medical student; second prize, **Renato Quispe, M.D., M.P.H.**; and third prize went to **Tom Metkus, M.D.**

**EAST BALTIMORE**



**Pablo Celnik, M.D.**, professor of physical medicine and rehabilitation, has been named the Lawrence Cardinal Shehan Chair of Physical Medicine and Rehabilitation and director of that department after having served as interim director for 18 months. Celnik will also serve as physiatrist-in-chief for The Johns Hopkins Hospital.

**Jennifer Nickoles** has been appointed chief of staff for the school of medicine. She succeeds **Christine White**, who retired at the end of June. Previously the director of the Office of Faculty Research Resources, Nickoles will work closely with **Dean/CEO Paul Rothman, M.D.**, and other school of medicine leaders to coordinate administrative and strategic functions, as well as oversee a broad range of activities within the dean's office.

**Suzanne Topalian, M.D.**, professor of surgery and oncology, director of the Melanoma Program, and associate director of the Bloomberg-Kimmel Institute for Cancer Immunotherapy, will share the 2016 Taubman Prize for Excellence in Translational Medical Science in recognition of her immunotherapy research. Topalian will split the \$100,000 award with **Jedd Wolchok, M.D., Ph.D.**, chief of the Immunotherapeutics Service at the Memorial Sloan Kettering Cancer Center.

**David Valle, M.D.**, professor and director of the McKusick-Nathans Institute of Genetic Medicine, has received the American Society of Human Genetics' 2016 Arno Motulsky-Barton Childs Award for Excellence in Human Genetics Education. The award recognizes Valle's exceptional contributions to human genetics education internationally. Valle holds joint appointments in the departments of Pediatrics, Molecular Biology and Genetics, Ophthalmology, and Biology.

**JOHNS HOPKINS BAYVIEW MEDICAL CENTER**



**Michelle D'Alessandro, R.N., D.N.P., N.E.A.-B.C.**, has been appointed director of nursing for medicine. She has 19 years of experience in nursing and 11 years of holding



**LIGHTS, MUSIC, MAGIC:** As Lakelyn Kestner spins, purple and red lights mimic her movements. Music surrounds her like applause. Three-year-old Lakelyn, born with a defect in her abdominal wall, seems to forget her surgeries and illnesses as she dances in front of the Interactive Musical Planetarium. The device, installed May 10 on the ground floor of the Johns Hopkins Children's Center, inspires children to wave their arms, throw pretend fireballs and break into giggly dance moves.

"Lakelyn is so girly," says her mother, Britney Leppert. "As sick as she's been for a huge portion of her life, she loves to dance, loves to twirl, loves sparkly things and things that light up." "She was in her glory."

Learn more about the planetarium and see more photos at [hopkinsmedicine.org/dome](http://hopkinsmedicine.org/dome).

leadership positions in nursing at Johns Hopkins Bayview.



**Elizabeth Ferrugia, M.C.S.W.**, has been named director of performance improvement and training for support services. Her duties will include implementing initiatives to enhance data collection and analysis, as well as overseeing support services' education and training programs. Previously, she served as manager of clinical services for the Johns Hopkins Bayview Care Center and was manager of performance improvement for support services.



**Morning Gutierrez, R.N., B.S.N.**, has been named assistant patient care manager for surgery and orthopaedics. Gutierrez is a 19-year nursing veteran at Johns Hopkins Bayview.



**JoRon "Joe" Johnson, M.B.A.**, has been appointed director of supply chain management. Having come to Johns Hopkins Bayview from The Johns Hopkins Hospital, where he led the surgical supply chain for two years, Johnson will oversee supply services, the central store room, receiving, materials distribution, linen distribution and mail services.

**HOWARD COUNTY GENERAL HOSPITAL**



**Mohammed Shafeeq Ahmed, M.D., M.B.A.**, has been named vice president of medical affairs and chief medical officer. Serving as the hospital's designated medical safety and quality officer, he will oversee the integration of services and quality care standards with those of Johns Hopkins Medicine. An obstetrician and gynecologist, Ahmed most recently served as chief operating officer/chief medical officer at Baystate Health's Eastern Region, located in Springfield, Massachusetts.



**Mary Ann Davis** has been appointed senior marketing and communications manager at Howard County General. Most recently, she spent nine years as digital marketing administrator and copywriter for Carroll Community College.

**JOHNS HOPKINS COMMUNITY PHYSICIANS**



**Jennifer Bailey, R.N., M.S.**, has been promoted to vice president for quality and transformation, and **Christopher Herzog** has been promoted to chief financial officer. Bailey will maintain her positions as senior director for ambulatory quality with the Office of Johns Hopkins Physicians and the Armstrong Institute for Quality and Patient Safety, and Herzog will retain his position as vice president of finance.

**JOHNS HOPKINS ALL CHILDREN'S HOSPITAL**



**Sylvia Ameen** has been appointed the new vice president for marketing and communications. Previously, she was interim chief marketing officer and vice president of the All Children's Hospital Foundation, which she joined in 1989.

**JOHNS HOPKINS MEDICINE INTERNATIONAL**



**Dinesh Ganesan, M.B.A.**, has been named vice president and chief financial officer. Previously, he was CFO for the U.S. employer segments and provider network at Cigna, a global health services company.

**Dome**

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