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A headband prototype from Johns Hopkins may offer a home-based treatment to curb symptoms.

Dome

JOHNS HOPKINS MEDICINE

A publication for the Johns Hopkins Medicine family

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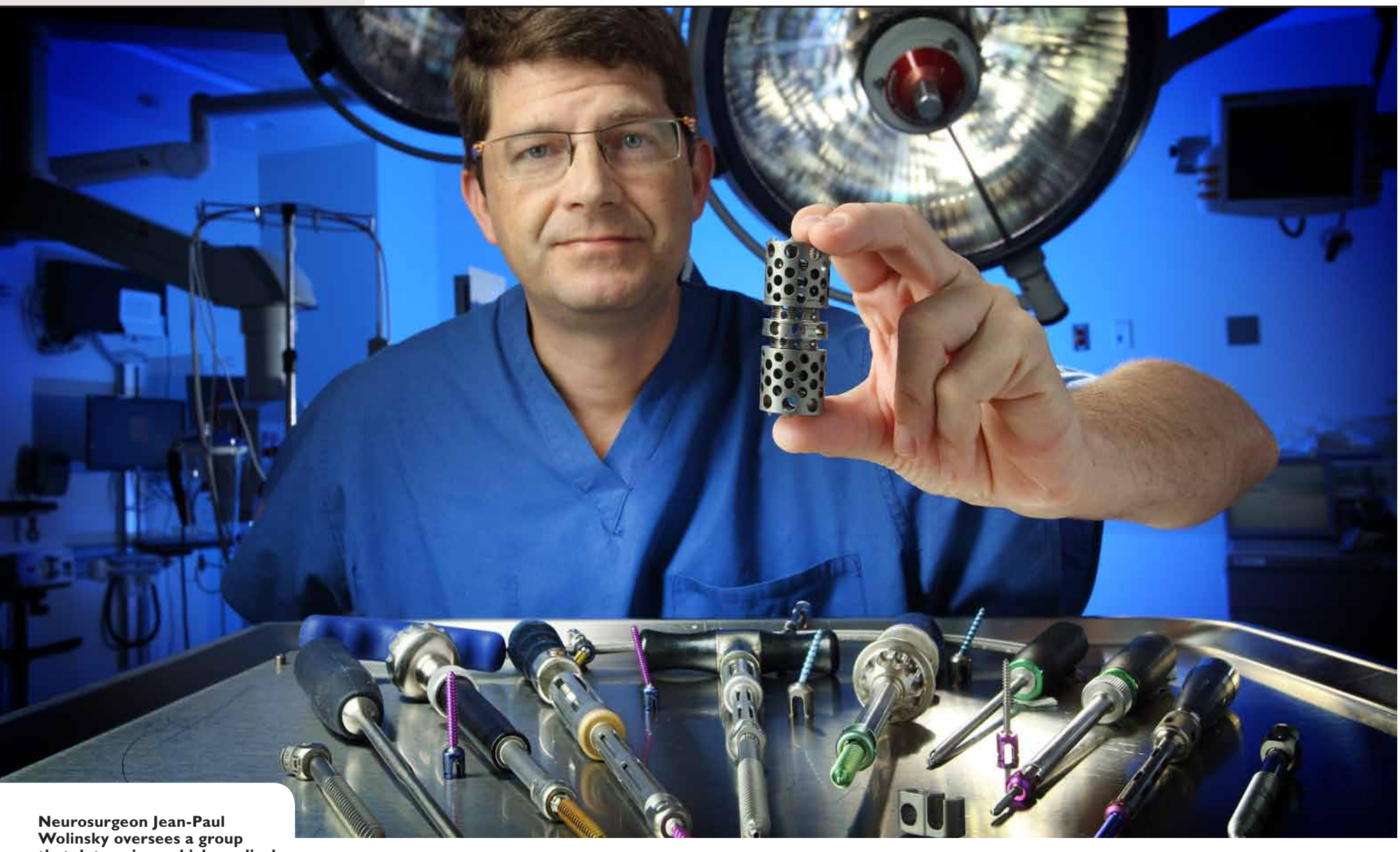


Neurosurgeon Jean-Paul Wolinsky oversees a group that determines which medical products are used in operating rooms at The Johns Hopkins Hospital. Here, he holds up a cage used to reconstruct the vertebral column.

Finding True Value

Collaboration between spinal surgeons and Johns Hopkins' purchasing department leads to annual savings of $3.3 million for Johns Hopkins Medicine.

Learn more about the strategic priority for performance online at hopkinsmedicine.org/strategic_plan.

NEUROSURGEON JEAN-PAUL WOLINSKY EXAMINES SURGICAL IMPLANTS—a synthetic knee, a tiny screw to hold vertebrae in place, an artificial skin patch—with the same scrutiny one might use to shop for a new car.

He asks, "Can I get the best price from its seller? Does it provide the most value for what it costs?" And, with the cautious concern of a surgeon—or a car shopper who's also a new parent—"Is this the safest product possible?"

Wolinsky, who repairs spines and removes spinal tumors, also guides decisions about which surgical items The Johns Hopkins Hospital should use. As chair of the operating room's value analysis committee, he oversees items ranging from bone graft substitutes to needles and thread. If he and his team think a product is too expensive, they'll see if another functions as well, and as safely, at a lower price.

Last winter, Wolinsky applied his powers of discernment to a similar task that affects purchasing for the entire health system. As a member of Johns Hopkins' Spine Clinical Community, he helped lead a group of about a dozen surgeons, nurses, anesthesiologists and other clinicians to determine what Johns Hopkins should pay as the true value—instead of the list price—for products used in spinal surgery at all Johns Hopkins member hospitals.

Their effort produced a new pricing schedule, effective since April, which is expected to save $3.3 million annually and end the practice of health system hospitals being charged different prices for the same item. When contracting manager Tom Frasca informed vendors that, going forward, all Johns Hopkins affiliates would pay the same price

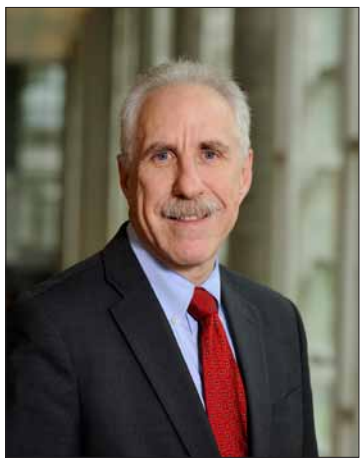
(continued on page 4)

Published by Johns Hopkins Medicine Marketing and Communications

The Promise of Opportunity

Johns Hopkins Medicine takes aim at poverty and unemployment.

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



Days after the civil unrest in April, Johns Hopkins Medicine leadership sent a survey to our faculty and staff. The survey had two questions. The first concerned the potential impact of the riots on Baltimore's image. The second, more vital question: "What are the opportunities for Johns Hopkins?" In other words, what can we do to help the city we love and serve?

A consensus emerged: We need to apply our Johns Hopkins resources and ingenuity to address the vast gaps in our city between the haves and the have-nots. One person wrote, "If we can figure out how to bypass a brain aneurysm, we can figure out how to connect the 'two Baltimores' and make them one."

It won't be easy. In the city's most distressed ZIP codes, 21202 and 21217, unemployment exceeds 20 percent, and more than 30 percent of residents live in poverty. That's why Johns Hopkins has formed seven different task forces with diverse mandates but, ultimately, a single goal: strengthening families and whole neighborhoods by creating better opportunities for all.

Each task force is approaching the problem from a different angle. One is working to expand our already robust youth mentoring program. Another is exploring what we can do to promote the opening of new recreation centers, senior centers and other facilities. Others are focused on improving social support and access to health care.

Of course, these groups are not making plans in isolation. We've had several sit-downs with community leaders and residents to hear about their top priorities and which existing programs we should support, rather than inventing new ones. One theme that has come up over and over in these conversations is that people want to work! They want satisfying careers, and they want to be role models for their children.

To that end, we have launched HopkinsLocal (see article, top right), which will direct more money into businesses that hire locally, putting paychecks in the pockets of the people who live in our neighborhoods. Through this program, we can use our economic leverage to move more people in our city toward a living wage.

This initiative is wholly consistent with our mission at Johns Hopkins Medicine. As hospitals develop strategies to improve population health, we must address the root causes of poor health, including poverty. Study upon study links poverty to higher rates of cancer, infant mortality, cardiovascular disease, diabetes and other conditions.

The inverse is true as well: Steady jobs improve physical and mental health. With secure work, people have access to health insurance, more nutritious food, stability, reduced stress and safer homes. So these targeted hiring and contracting programs are really in line with our mission.

To keep large numbers of people in our region healthy, it makes sense to keep them working. HopkinsLocal is just the beginning. We look forward to including you in our efforts to help solve some of the pressing issues that Baltimore residents face. ■

Johns Hopkins Builds Economic Hope in Baltimore

New initiative to focus on building, hiring and buying locally.

Johns Hopkins recently unveiled a new effort to use its collective purchasing and hiring power to strengthen Baltimore by promoting economic growth and job opportunities for city residents.

HopkinsLocal is a commitment to increase design and construction contracts with local minority- and women-owned businesses, to expand the number of new hires that come from city neighborhoods where employment opportunities are needed, and to build relationships with more city-based vendors. The initiative, which includes The Johns Hopkins University and the Johns Hopkins Health System, will also enhance Johns Hopkins' ongoing efforts to support diversity in its workforce and among its business partners.

BUILD: Johns Hopkins will work to expand participation from certified minority, women and other disadvantaged businesses across its portfolio of construction projects. It will implement a local hiring policy to require contractors to make a good-faith effort to hire local residents for new jobs that result from construction projects.

HIRE: The university and health system will increase employment of city residents while supporting the growth and retention of local and underrepresented employees. The two entities will aim to ensure that 40 percent of new hires in targeted jobs are from selected ZIP codes that are in need of economic opportunities. They will also focus on recruitment of Baltimore residents for positions at all levels and on expanding partnerships with organizations that help identify and prepare individuals for careers with Johns Hopkins.

BUY: Johns Hopkins will increase spending with local businesses, including those owned by minorities and women, by as much as $6 million over the next three years. It will increase outreach to local and disadvantaged businesses to engage them in the competitive bidding process and support employees to buy local by providing a directory of prescreened vendors from which to purchases goods and services.

—Marian Callaway

Learn more at http://hopkinslocal.jhu.edu.

Sibley Opens Bigger, Calmer, More Efficient ED

Every year, roughly 40,000 patients spend time in Sibley Memorial Hospital's Emergency Department. Judging by its Press Ganey patient satisfaction scores, most of them are pleased with their visit.

But additional space and upgrades were necessary to meet a growing demand for services, according to Jennifer Abele, the department's medical director. After three years of planning and construction, Sibley opened its new ED in September. Located on the first floor of New Sibley, the building next to the hospital, the space has expanded by 9,000 feet.

Thanks to input by physicians, nurses, staff members and patients, the facility is designed to be patient friendly and comfortable as well as highly efficient and effective, says Sibley's president and CEO, Richard "Chip" Davis.

Its improvements include:

- A registration representative and nurse to greet patients together so that evaluation and registration begin simultaneously
- Sliding glass doors and curtains on all 22 patient rooms to provide a quieter, more private environment
- Six "fast-track" rooms to expedite patient treatment for minor problems
- A new CT scanner in the department to speed up diagnoses
- Interior and exterior decontamination showers (The interior shower, located in a specially equipped decontamination room, will isolate patients exposed to dangerous infectious diseases. The eight exterior showers can process up to 100 people per hour in cases of hazardous materials exposure, mass accidents or radiation exposure, and it is the largest permanent structure of its kind in Washington, D.C.)

With such enhancements, the department's patient satisfaction rates should continue to be high. In recent years, it has boasted a rating in the 95th percentile, placing it in the top 5 percent of all emergency departments nationwide. Abele attributes these high grades to "superb" levels of care and to the staff's commitment to seeing patients within 30 minutes of their arrival.

So far, the news is even better. Since the new ED opened, wait time averages 22 minutes.

—Judy F. Minkove

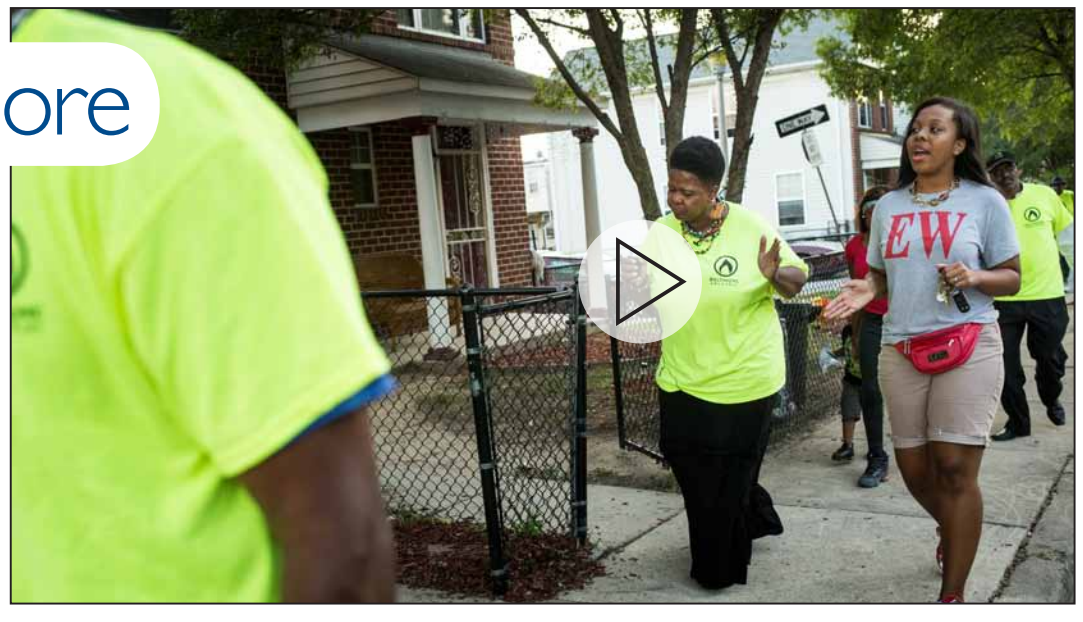
Watch a video on the new ED at bit.ly/sibleyemergencydept.

New Video Series Spotlights Employee Volunteers

#TimeForBaltimore

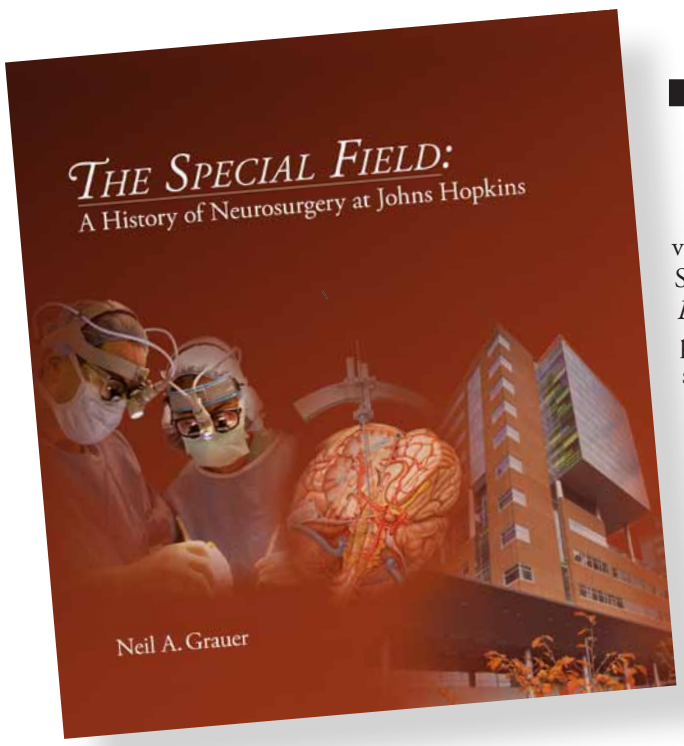
Friday evenings after work, JaSina Wise travels to Baltimore communities plagued by crime and poverty. Wise, a project coordinator in the schools of medicine and public health, has been the designated singer for the community prayer walks since they started about three years ago. Follow her on a prayer walk in Sandtown-Winchester, and learn why she gives her time to Baltimore.

Read the story; see the video: hopkinsmedicine.org/dome.



Neurosurgery: Ready for Its Close-Up

New book celebrates the achievements of the Johns Hopkins Department of Neurosurgery.



The Special Field: A History of Neurosurgery at Johns Hopkins offers a first-of-its-kind account of the growth and achievements of the Department of Neurosurgery since its founding more than a century ago, with particular emphasis on the 21st century.

In part, the book commemorates the 110th anniversary of neurosurgeon Harvey Cushing's landmark paper, "The Special Field of Neurological Surgery," which appeared in the *Bulletin of The Johns Hopkins Hospital*. Cushing, then an associate professor of surgery at Johns Hopkins, heralded a new medical specialty when he asserted that neurosurgery was unique and required the undivided attention of its prospective practitioners. When Walter Dandy took over Johns Hopkins neurosurgery in 1912, he ensured that excellence in neurosurgery and impressive advances in its practice would become synonymous with Johns Hopkins.

The book details how the pre-eminence of Johns Hopkins neurosurgery was maintained by Dandy's successors, A. Earl Walker and Donlin Long, and has reached greater heights under the current department director, Henry Brem.

The Special Field is written by Neil Grauer, a senior writer in the Marketing and Communications Department and designed by David Dilworth, associate director of graphic design. Grauer's many books include *Leading The Way: A History of Johns Hopkins Medicine* and *Centuries of Caring: The Johns Hopkins Bayview Medical Center Story*. Lavishly illustrated, this 432-page history provides a lively account of how Johns Hopkins moved into the forefront of neurosurgical research, education and patient care. It is available for $65 in the 1830 Building's bookstore and on Amazon.

—Staff report

One patient's account of her successful surgery for meningioma:

The growth nestling in my cranium had been developing steadily for 10 to 15 years, eventually becoming the largest tumor the surgeon had ever seen. Multiple operations, the location of the tumor and the near-death challenge preceded a mystical walk in the forest that may have predicted the subsequent changes in my behavior …

Read more: hopkinsmedicine.org/dome.

Entering the Medicare Market, Johns Hopkins HealthCare Offers an Advantage

Johns Hopkins HealthCare has introduced two Medicare Advantage health care plans—Johns Hopkins Advantage MD and Advantage MD Plus.

Medicare Advantage plans are offered by private companies to provide both Medicare Part A (hospital insurance) and Medicare Part B (medical insurance) to adults 65 and older. Both plans will also cover prescription drugs.

Johns Hopkins HealthCare saw this as an opportune time to enter the Medicare market, with about 10,000 Americans reaching age 65 every day. In addition to the growing market, Maryland has one of the lowest Medicare Advantage penetration rates in the country: Only 11 percent of the eligible population is enrolled in a Medicare Advantage plan, compared with the national average of 34 percent.

"Johns Hopkins Advantage MD is the only Medicare Advantage plan in Maryland that provides members with the complete suite of Johns Hopkins providers and hospitals, plus access to thousands more throughout the state," says Victoria Fretwell, vice president of program development and chief of staff at Johns Hopkins HealthCare. "Members will also be able to talk to a real nurse 24 hours a day, seven days a week and get help setting up initial appointments with Johns Hopkins specialists through our no-cost specialty appointment line."

MEMBERS WILL BE ABLE TO TALK TO A REAL NURSE **24** HOURS A DAY, **SEVEN** DAYS A WEEK.

To create the new plan, Johns Hopkins HealthCare established a subsidiary company called Hopkins Health Advantage Inc., which holds the insurance license for the Medicare Advantage plan.

Advantage MD, a preferred provider organization plan, will provide comprehensive benefits, including coverage for doctor and specialist visits, prescription drug coverage, preventive care, outpatient surgery, urgent and emergency care, diagnostic services, chiropractic care and acupuncture. It also covers preventive dental, routine vision and hearing, and home health care.

Advantage MD Plus will offer the same coverage as Advantage MD, but members can also join the Silver&Fit fitness program—which offers free access to participating exercise centers—and will have access to hearing aid services and lower copays on many services.

Annual open enrollment is Oct. 15 to Dec. 7. Coverage begins Jan. 1, 2016. Both plans will serve Baltimore City as well as Anne Arundel, Baltimore, Calvert, Carroll, Howard, Montgomery, Somerset, Washington, Wicomico and Worcester counties.

—Kris Moody

Finding True Value

(continued from page 1)

With the support of clinician expertise, the purchasing department was able to lower the price for various screws—samples shown above—used in spinal surgery at Johns Hopkins hospitals. For example, one screw's price was lowered from around $1,000 to about $800.

for each spinal implant product, the Spine Clinical Community's value analyses powered his arguments, providing expert rationale for lower prices.

Clinician-Driven Savings

This kind of cross-departmental collaboration is just one example of how the health system's supply chain initiative (see sidebar) has saved more than $30 million in the past two years. The goal is to produce a total of $80 million to $100 million in nonlabor savings by 2019.

"For our savings initiative to be a success, it's absolutely critical that we involve our clinicians," says Ron Werthman, senior vice president and chief financial officer of Johns Hopkins Medicine.

The Spine Clinical Community was formed in 2014 to bring together spine surgeons based in orthopaedics and neurosurgery from Johns Hopkins' Baltimore and Washington area hospitals. Its goal, like that of the other 18 official clinical communities, is to improve patient outcomes while reducing costs. Since 2011, the Armstrong Institute for Patient Safety and Quality has chartered the communities and provided them with project management, analytics and administrative support.

"Cost savings cannot be driven from a purely financial perspective—decisions must be clinician-driven to ensure patient safety and best practices," Werthman says.

He points to another physician-led effort by the Blood Management Clinical Community that has reduced the number of red blood cell units transfused unnecessarily at Johns Hopkins member hospitals. Although standard protocol has been to infuse two units at a time, one at a time is more appropriate in most cases, says Steven Frank, medical director of the health system's Blood Management Program.

Once all hospitals have fully implemented the Why Give Two When One Will Do? campaign and evidence-based criteria for transfusions, the health system hopes to reduce blood use by 10 percent—for an annual savings of $2.8 million.

One System, No Silos

This collaborative, cross-system approach to supply sourcing and use is a cultural change, says Zishan Mustafa, the supply chain's director of finance.

"We've been operating in silos for a long time," with each hospital and department making its own decisions about supply purchasing and use, he explains. "Working together as an integrated team across all health system affiliates and departments with the support of our clinicians, we can realize significant savings while maintaining or even improving patient outcomes."

The key is drawing upon the expertise that Johns Hopkins clinicians collectively hold. A product analysis prepared by a dozen or more surgeons from across Johns Hopkins Medicine holds significant sway during supply contract negotiations. "Without it, vendors can more easily charge a premium for a product that isn't unique," says Sibley Memorial Hospital neurosurgeon Joshua Ammerman, a clinical lead for the Spine Clinical Community.

Because such savings initiatives are clinician-driven, patient safety and care remain at the core of every financial decision. And the work pays off again, when clinicians are working in the operating room.

Wolinksy says that spinal surgeons across Johns Hopkins Medicine carry a "sense of reassurance" from their product analysis. "Now we know we're using only the best for our patients."

—Laura Thornton

SUPPLY CHAIN TEAMWORK

The Johns Hopkins Health System enterprise supply chain team is responsible for ordering, contracting and delivering supplies and services to hospitals, departments and affiliates throughout Johns Hopkins Medicine.

Roughly 280 staff members across the system serve on supply chain integration teams that include quality oversight provided by the Armstrong Institute for Patient Safety and Quality, human resources, policies and procedures, information technology, staff development and training, finance, and communications. Teams of experts from various departments review cost categories, such as computers, communications, linen, food and laboratory, to review best practices and evaluate costs charged by current vendors.

The supply chain initiative aims to achieve savings by consolidating purchasing activities throughout the system. In fiscal year 2015, it managed close to 4,000 active supplier contracts.

As supply chain integration moves forward, the Armstrong Institute will help to guarantee that safety in patient care comes first in purchasing decisions. Physicians must approve all medical devices and medical equipment before any agreements are final.

Waste Not, Want Not

Inventory app expected to help All Children's Hospital pathology department save more than $400,000 in five years.

JumpStock, an inventory management app, is helping the Department of Pathology and Laboratory Medicine at All Children's Hospital to eliminate waste, save money and prevent the department from running out of vital supplies. The digital inventory tracking system is expected to save close to $410,000 over the next five years, according to Beth Carberry, the hospital's innovation developer.

Manual tracking of supplies relies on guesswork about what's in stock, and Carberry found the department was overstocking supplies by about 6.8 percent. Eliminating overstock minimizes the possibility that supplies will expire and go to waste.

"You always want to have the least amount of money sitting on the shelf while maintaining adequate supplies to prevent any interruption in patient care," she says.

The app has already reduced the amount of overstock in the department. Its immunology division, for example, decreased the value of its inventory from close to $177,000 in mid-April to $159,000 by mid-July—a 10 percent reduction. During the first quarter of JumpStock use, there has been no waste related to outdated, incorrect or overordered product.

Manual tracking—"eyeballing"—can also lead to uneven amounts of supplies, Carberry says. There may be three months' worth of some supplies on hand but only three days' worth of other items. If supplies aren't in stock, patient specimen diagnoses can be stalled.

JumpStock keeps track of supplies, notifying clinical laboratory staff when to reorder items. If an item is recalled, JumpStock knows exactly how many items in stock are affected, and how many and when recalled items were used.

This inventory management system can also interact with SAP, the Johns Hopkins Health System's primary supply ordering system, which will be introduced to All Children's Hospital in January 2016.

Once all of the laboratory's six divisions are using JumpStock, Carberry hopes to combine their orders for common items. For example, petri dishes used by the immunology and microbiology divisions could be ordered together to get a lower, bulk price and save on shipping costs.

The new inventory management and bulk ordering plans follow the supply chain department's initiative to decrease waste and increase cost savings while maintaining or improving patient outcomes.

—Laura Thornton

Impact of Jump Inventory Management System

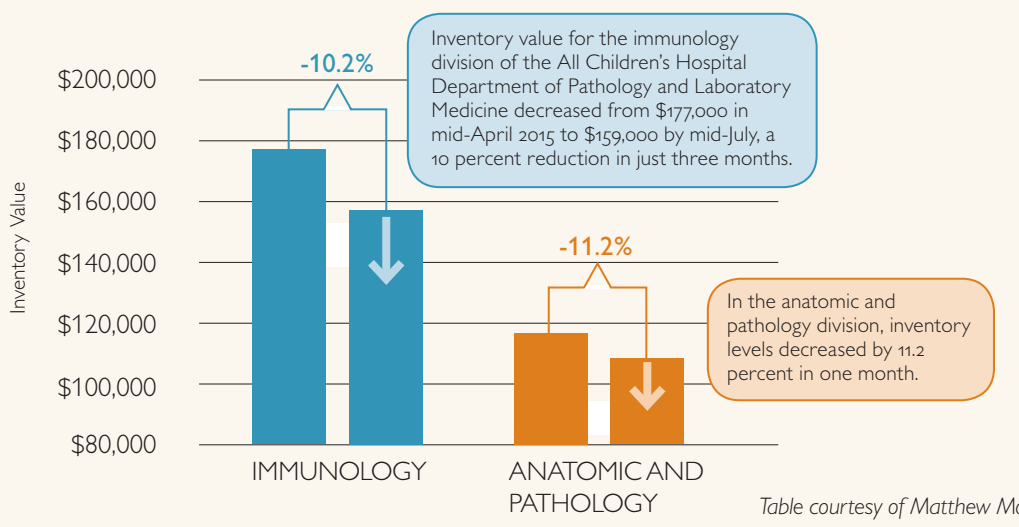


Table courtesy of Matthew Morrow.

Immunology lab supervisor Matthew Morrow checks inventory using the JumpStock app.

Q&A Advocating for Big Causes

Colleen Gioffreda has achondroplasia, a form of dwarfism that is one of the most common skeletal dysplasias—disorders of cartilage and bone growth. The same disease that has marked her life has inspired her job as senior program coordinator for the Greenberg Center for Skeletal Dysplasias in the McKusick-Nathans Institute of Genetic Medicine at the Johns Hopkins University School of Medicine.

It has also motivated her achievements as the national adoption coordinator for Little People of America (LPA), where she has helped place more than 220 children with skeletal dysplasias since 2004.

Gioffreda was invited to Capitol Hill last June to testify about the discrimination faced by people with disabilities who wish to adopt. Later, she traveled to the White House to participate in a celebration of the 25th anniversary of the passage of the Americans with Disabilities Act. She recently spoke to *Dome* about the Greenberg Center and her advocacy work.

Colleen Gioffreda celebrates the anniversary of the passage of the Americans with Disabilities Act at the White House.

You first visited the Greenberg Center as a patient when you were a child. Now you help inform families and patients as to what to expect from their condition and its treatment. What special issues do they face?

Sometimes kids need surgeries or special care, such as screening for sleep apnea and physical accommodations at school. Then, when they get older, the main concerns are social issues, such as bullying. We provide parents with resources and information to overcome these problems. For example, a teenage girl with skeletal dysplasia may need help building self-esteem and accepting her own body.

When I was treated here, I was very lucky to have minimal health issues. It meant a lot to my parents to know they were not alone in this process. The staff here helped them understand that everything was going to be fine with me, and that I could do anything I wanted to do. Now my children see specialists here. The center provides a great community.

How hard is it for people with special needs to adopt children in the United States?

Little People of America found 12 children who remained in the foster care system, even though we had many families who were ready and willing to adopt them. For example, one family tried to adopt a child with dysplasia who also had a breathing tube.

When the social worker found out that the family members were little people, she told me she thought they couldn't handle a child with a tracheostomy. Many times in the adoption process, we depend on the perspectives of social workers. And if they are not open-minded, it makes the process hard. I try to work with one case at a time, to get each child home to a family.

Is the international adoption process equally difficult for disabled parents with disabilities?

I plan to go to China in the spring to do outreach through the Greenberg Center and LPA. Julie Hoover-Fong, the director of the Greenberg Center, may go on the trip as well. We will visit orphanages and work with adoption agencies to advocate for people with disabilities who wish to adopt. The highest numbers of children who are adopted internationally come from China, but that country still has some discriminatory practices against people with special needs who wish to adopt. For example, parents with disabilities are only able to adopt children who have the same disability. In other words, a person with achondroplasia, like me, wouldn't be able to adopt a child with vision impairment. We have to work closely with agencies to try to overcome this type of obstacle.

—Iveliz Martel

'Pathways': A Fresh Take on Residency Training

A business major at Harvard University, Sarah Johnson worked briefly on Wall Street before realizing that she still felt called to her childhood dream of becoming a doctor. Shifting gears, she earned acceptance to the University of Pennsylvania School of Medicine and, in 2012, matched in medicine at Johns Hopkins.

Now, thanks to the Pathways Program, a new tracklike update to the Osler medicine residency program, the third-year resident finds herself reconnecting with her business brain.

SHERRIE FORNOFF

Jessica Briggs, left, Sarah Johnson and Neil Aggarwal praise the new residency training options.

"WE'RE NOT AWARE OF ANY ONE PROGRAM IN THE NATION THAT OFFERS ALL THESE OPTIONS."

—NEIL AGGARWAL
OSLER PROGRAM ASSOCIATE DIRECTOR

Part of the strategic plan developed at the Department of Medicine's 2014 educational retreat, Pathways aims to help create and nurture leaders across the health care spectrum, explains Osler program director Sanjay Desai. Senior faculty members identify second- and third-year residents with a strong aptitude in one of three areas: patient safety/quality improvement (QI), global health and scientific discovery. These trainees are offered a "pathway" to incorporate individualized coursework, hands-on experiences and sophisticated mentorship into their chosen field of interest, culminating with a research project.

Johnson, one of several residents focusing on patient safety/QI, is looking at ways to tackle the hospital's skyrocketing medication costs, such as using more generic drugs. "This pathway gives me more exposure to administrative issues and how to rein in costs," she says.

It also provides an opportunity to formalize her interest in patient safety, giving her a leg up for a career combining academic, administrative and clinical medicine.

"We want to leverage everything Hopkins, as an institution, has to offer to each of our residents," Desai says.

Neil Aggarwal, Osler program associate director, leads the scientific discovery pathway and oversees the broader program. Sara Keller directs the patient safety/QI pathway, and Yuka Manabe, the global health pathway.

"We're not aware of any one program in the nation that offers all these options," he says.

Third-year resident Jessica Briggs says the program builds on her passion for global health. The Texas native lived in Uganda for a year on a clinical research scholarship and recently returned from a six-week stint there, aided by the Johns Hopkins Center for Global Health. Briggs is seeking ways to decrease the time between diagnosis and treatment for Ugandan patients with tuberculosis.

She's also working to set up a four-week rotation for a Pathways elective in Uganda. "It's amazing what you can learn from residents who work in extremely resource-limited environments," she says. "Pathways makes the Osler program more competitive and will help attract more people interested in global health."

Since Pathways debuted in July, five of the residents have expressed an interest in patient safety/QI; eight in global health; and six to 10 in the scientific discovery track.

"A lot of our residents have a strong background in science—some have Ph.D.s," Aggarwal says. "We want to enhance their experience and link them with mentors to develop long-term relationships."

Interest is growing in all three arenas, says Aggarwal, even as more potential elective tracks, like health administration, are under consideration. Current research projects include how to streamline care for patients on warfarin who resist follow-up, how to encourage heart failure medication adherence and how to manage scant medical resources overseas.

For Johnson, the experience has already proven enriching. "Pathways shows that this residency program is very responsive to change."

—Judy F. Minkove

CUSP: The Next Generation

Comprehensive Unit-based Safety Program teams highlight latest improvements.

Although the distance between a patient's room and a hospital unit's medication room is typically the length of a hallway, that distance can seem far greater when nurses are interrupted nearly every step of the way. Alarms, patient needs, physician requests, phone calls and other right-away demands can turn a simple walk to the medication room into an obstacle course.

Last year, nurses on the Neurosciences Critical Care Unit (NCCU) at The Johns Hopkins Hospital identified a safety problem that resulted from the heavily regulated way in which patient-specific insulin delivery devices—insulin pens—were being handled and stored. They decided to launch a Comprehensive Unit-based Safety Program (CUSP) project to discover how to bridge the gap between the rule and the reality.

The rule: Both Johns Hopkins and the Joint Commission require that, between uses, insulin pens be placed in patient-specific containers in the unit's medication room.

The reality: Unexpected interruptions often caused nurses to pocket the insulin pen and make a mental note to return it to its regulated container later.

While the storage policy made good safety sense, the CUSP project revealed that the pocketing practice led to medication errors. Now, thanks to the work of the NCCU's team, eight units throughout The Johns Hopkins Hospital are testing the effectiveness of mounting a clear plastic lockbox directly in a patient's room to hold a multidose insulin pen.

A Johns Hopkins Patient Safety Innovation

Designed by Peter Pronovost, director of the Armstrong Institute for Patient Safety and Quality, CUSP is a five-step patient safety improvement program that works by empowering staff members to assume the responsibility for safety in their units. Since beginning at Johns Hopkins in 2001, the program has spread throughout the hospital, the Johns Hopkins Health System and other medical centers around the world.

The Armstrong Institute holds quarterly meetings to highlight and share examples of successful CUSP projects throughout the hospital and to suggest other areas to tackle. An issue that often comes up is finding better ways to prevent patients from falling, says patient safety coordinator Paula Kent.

One recent fall prevention project, based in the hospital's medical progressive care unit, found that laxatives given to patients without regard to time of day posed a greater risk that patients might fall during unassisted trips to the bathroom at night. The CUSP team proposed only prescribing this medicine during waking hours. It also suggested that nurses execute "purposeful rounding" each hour to assess which individual patients were high risk for falls.

Thanks to 90 percent compliance to the new medication protocol and nearly 80 percent compliance to the purposeful rounding routine, that unit saw an overall decline in both patient falls and their resulting injuries. In March, April and June, there wasn't a single patient fall on the unit.

Far-Reaching Success

Such results make it desirable to adopt CUSP. Melinda Sawyer, assistant director of patient safety, says the program has taken hold not just at Johns Hopkins—there are now 66 units in the hospital that participate—but at 1,800 hospitals across the United States. Health care facilities in Europe and Asia are also taking up the program and, thanks to a partnership with the World Health Organization, Sawyer will soon travel to Uganda to share CUSP.

"CUSP has been a huge culture change wherever it's been adopted," she says. "It's a way for front-line staff members to point out problems without worrying about how it will affect their jobs."

At any given time, she says, dozens of CUSP projects are underway throughout The Johns Hopkins Hospital and Health System. At Sibley Memorial Hospital, for instance, 29 CUSP teams have formed since the end of 2012.

One recent success at Sibley is a fall prevention project in the skilled nursing unit where many patients recovering from orthopaedic surgery require assistance. To help educate patients and families, Sibley's fall prevention team produced a one-page guide explaining that medication, illness and unfamiliar surroundings can all contribute to falls.

"CUSP gets embedded into hospital unit culture pretty easily," says Laini Talcott, chief of staff at Sibley. "Since it's unit-based, there isn't a need to gather hospitalwide committees, which are hard to schedule. CUSP allows local teams to work together."

—Patrick Smith

"CUSP HAS BEEN A HUGE CULTURE CHANGE WHEREVER IT'S BEEN ADOPTED. IT'S A WAY FOR FRONT-LINE STAFF MEMBERS TO POINT OUT PROBLEMS WITHOUT WORRYING ABOUT HOW IT WILL AFFECT THEIR JOBS."

—MELINDA SAWYER
ASSISTANT DIRECTOR OF PATIENT SAFETY, THE ARMSTRONG INSTITUTE FOR PATIENT SAFETY AND QUALITY

Veterans Day Commemoration

Join colleagues, patients and visitors for The Johns Hopkins Hospital's annual Veterans Day Commemoration on **Wednesday, Nov. 11, at 11 a.m.** in the Peterson Family Courtyard, between the Sheikh Zayed Tower and the Phipps Building (inclement weather location: Zayed 2117, next to the Chevy Chase Bank Auditorium).

The guest speaker is Col. James Ficke, Johns Hopkins Medicine's director of orthopaedic surgery and The Johns Hopkins Hospital's orthopaedist-in-chief. Among his positions with the U.S. Army, he served as the senior orthopaedic surgeon at a hospital in Mosul, Iraq, where he treated more than 600 U.S. soldiers and Iraqi patients in 2004 and 2005.

The event is sponsored by the Department of Spiritual Care and Chaplaincy, the Veterans For Hopkins group, and the Johns Hopkins Medicine Marketing and Communications Department. It will be live-streamed to various Johns Hopkins Medicine locations. For more information about Veterans For Hopkins at The Johns Hopkins Hospital, contact Ed Cramer, ecramer3@jhmi.edu. Watch a video: bit.ly/Hopkinsveterans.

Documentary Website Features Johns Hopkins Hospital Nurses

Six Johns Hopkins Hospital nurses are among 50 R.N.s nationwide featured in Dying in America, a new media project produced by the same team that created *The American Nurse Project*. The first phase consists of a website—dyinginamerica.org—featuring interviews with nurses who work in end-of-life care. The producers plan to follow up with a feature documentary, to be released in theaters in 2016 or early 2017. In the series of interviews, director Carolyn Jones asks nurses about the challenges and rewards of end-of-life care. Johns Hopkins Hospital nurses also participated in her prior project, which included a book, film and website. For Dying in America, the Department of Nursing solicited nominations from across nursing units.

Motility Mysteries … Solved!

Gastroenterologists and other specialists share their most vexing cases.

Motility difficulties can be maddeningly hard to pin down. Often, symptoms that manifest as gut troubles are actually signs of illness somewhere else.

Is a patient's nausea related to gastric issues? Or are the symptoms the result of an allergy? When symptoms overlap specialties, patients can get lost in a maze of appointments, testing and crossed signals.

Enter the Johns Hopkins Center for Neurogastroenterology, also called the Motility Center. Here, a team of physician detectives from a variety of specialties—including pathology, surgery, psychiatry, gynecology and others—works together to puzzle over the clues and solve difficult-to-diagnose medical cases.

"For most patients with what we call 'functional GI disorders,' nothing's going to leap out of the endoscopy that says 'here's the problem,'" says gastroenterologist John Clarke. "Our center is designed to deal with problems we can't solve with endoscopy or imaging alone."

He and colleague Jay Pasricha relish the opportunity to join forces in tackling motility mysteries that have stumped some of the best around the country.

"In many ways, neurogastroenterology represents one of the last and most exciting frontiers in medicine," says Pasricha. "The enteric nervous system, the brain inside our gut, is increasingly being recognized as a key player not only for digestive disorders, but also for metabolic conditions, such as obesity and diabetes, as well as anxiety and depression."

Consider three cases that the team has cracked.

Case #1: The Strange Case of the Teacher Who Woke in the Night

By the time Sherry (all patient identities have been changed) visited the Motility Center at Johns Hopkins, she'd spent nearly half her life with a puzzling condition that could incapacitate her with no warning.

The 27-year-old teacher would wake up around 1 a.m. with powerful nausea and vomit every 10 or 15 minutes for hours. The nausea spells came at unpredictable intervals; they could happen once a month or once a week. Sherry had been suffering this since the age of 15. But between bouts of the unexplained illness, she felt fine.

Over the years, she'd visited both primary care doctors and specialists, who searched for problems in her stomach and her intestines. But no one found anything out of the ordinary, and nothing brought relief.

It didn't take long for Clarke to develop a theory: "She showed some of the signs of cyclic vomiting syndrome."

Though literature on the syndrome says nothing about the late-night onset of Sherry's episodes, many of the other symptoms fit. Sherry even related a history of marijuana use in her teens. "Sometimes, but not always, cyclic vomiting syndrome can be associated with prior marijuana use," says Clarke.

He got her started on amitriptyline, "an old type of antidepressant that literature says shows a benefit for cyclic vomiting syndrome."

Five months after her first visit to the Motility Center, Sherry told Clarke that since starting the amitriptyline, she's had no more crippling nausea and vomiting. "This is the longest she's gone between episodes," Clarke says. "She had debilitating symptoms for 12 years. Now they've stopped."

Case #2: A Study in Swallowing

Rhonda's heartburn was out of control. Diagnosed with acid reflux disease, the 24-year-old had boosted her proton pump inhibitor medicine to twice a day. But she continued to suffer episodes of severe heartburn, and her doctor instructed her to increase her Nexium to three times daily.

The heartburn became so acute that Rhonda had to sleep sitting up in a chair. Sometimes, her condition even made it difficult to swallow.

When she visited the Johns Hopkins Motility Center, Rhonda's existing diagnosis of refractory reflux didn't quite add up, says Clarke. The fact that she got little or no relief from prescription-strength gastric acid reducers sounded like a problem of physiology rather than other common reflux causes.

Rhonda's case had one more twist to it: She refused to have surgery.

Whatever surgical options Clarke's team might have explored could have involved scars, a deal-breaker for Rhonda, who insisted on nonsurgical approaches.

Clarke called on Bronwyn Jones, a gastrointestinal radiologist and the director of the Johns Hopkins Swallowing Center. Jones performed a cine-esophogram, a swallowing study in which doctors use video X-ray technology to watch a barium solution make its way down a patient's esophagus.

Jones says that acid reflux, while common, "is emerging as a kind of catch-all diagnosis. It's the first thing a lot of people point to when something goes wrong in the esophagus. I think it's overdiagnosed."

The cine-esophagram produces both still and moving X-ray images of the patient's swallow, following the radioactive liquid's journey down the esophagus, until it makes a gentle left turn into the patient's stomach.

The test made Rhonda's doctors suspect her problems might have more to do with muscle spasms than with gastric acid.

They performed an esophageal menometry test, in which a pressure-sensitive tube measures the strength of a patient's esophageal muscle contractions. That test revealed the real problem: a condition called achalasia.

The smooth muscle fibers in Rhonda's esophagus could not relax, causing weakness in her lower esophageal sphincter. The condition led to her severe reflux problems—and explained why heartburn medicine couldn't bring her relief.

Rhonda remained committed to a nonsurgical solution for her problem. So Clarke performed endoscopic dilatation to stretch and relax her esophageal muscles. Clarke says Rhonda is not symptom-free "but is still doing much better than when initially diagnosed."

Case #3: The Boy Who Didn't Like Ice Cream

Every few months, 36-year-old Kent felt like he had something stuck in his throat. Solid foods were always the culprit and, now and then, the problem was severe enough that Kent had to vomit to clear whatever was lodged.

He'd undergone barium tests in the past, and nothing problematic turned up.

Kent had reflux issues since childhood. The problem was worst when he drank milk or ate ice cream. He'd feel a burning in his chest and unusually congested.

When Kent visited Johns Hopkins, Clarke followed the clues in the direction of a diagnosis. "His history with milk and dairy products sounded allergy-related," Clarke says. The doctor also learned that Kent had a family history of asthma.

"We did an upper endoscopy and found esophageal rings," Clarke says. A biopsy revealed that Kent also had a high number of a particular type of white blood cell in his esophagus. Taken all together—the rings, the allergy, the family history and the biopsy results—Clarke's suspicions were confirmed.

"The patient had something called eosinophilic esophagitis (EOE), an allergic, inflammatory condition," Clarke says. "It's becoming a much more common diagnosis, especially among young adults."

About 80 percent of people with the condition have a history of asthma or allergies, says Clarke. Treatment for EOE begins by eliminating dietary elements—one by one—that could serve as triggers. If no dietary source can be pinpointed, next steps involve topical steroids and stretching the esophagus.

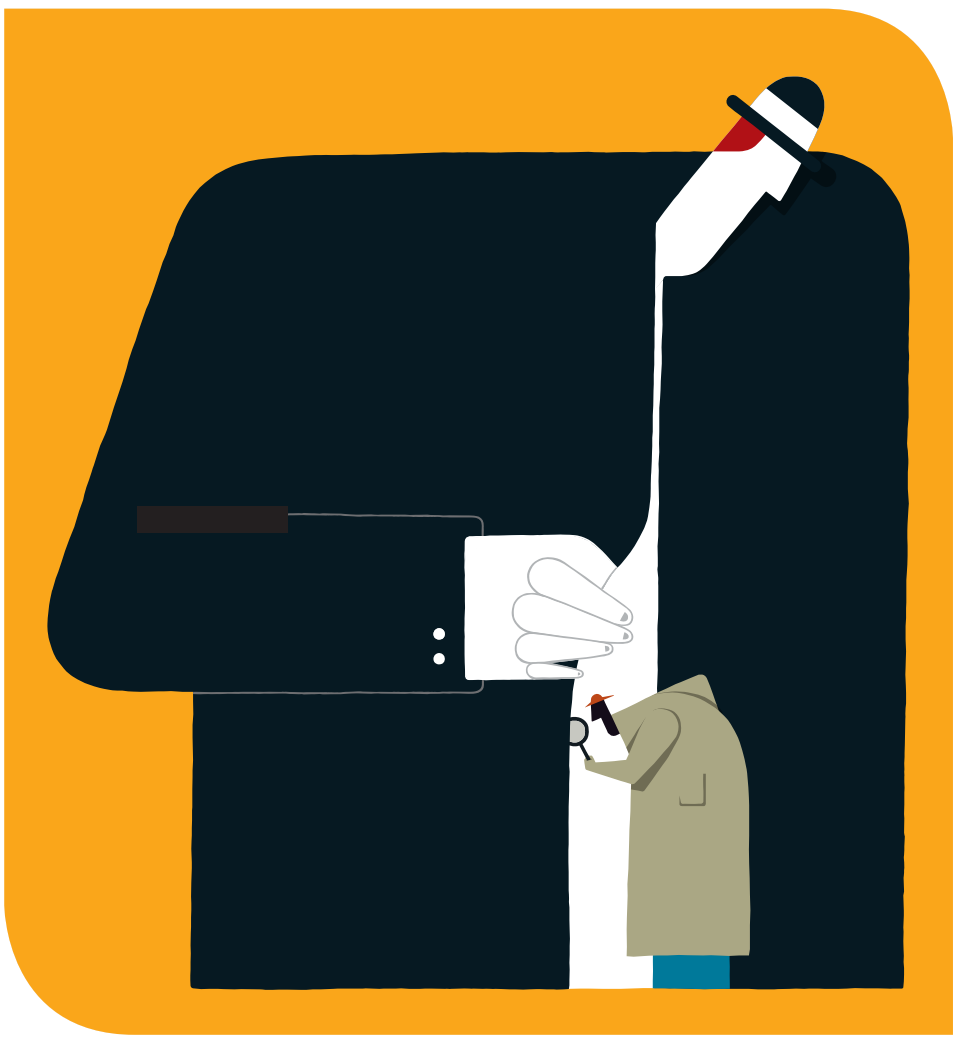
After the diagnosis, Clarke and the GI team hit the mark on the first try.

"Given the strong association with milk in terms of his symptoms," Clarke says, "we told him to stay away from milk and milk products."

Kent reports that, almost four years later, he feels almost completely better and experiences the problem now only as a rare nuisance.

"Sometimes the answers are simple and we can stop there," Clarke says. "No milk or ice cream. Mystery solved."

—Patrick Smith



"OUR CENTER IS DESIGNED TO DEAL WITH PROBLEMS WE CAN'T SOLVE WITH ENDOSCOPY OR IMAGING ALONE."

—GASTROENTEROLOGIST JOHN CLARKE

Leadership Appointments

Three longtime associate deans have been promoted to senior associate dean positions: **Michael Amey, M.A.S.**, a 40-year Johns Hopkins veteran who began his career as a financial manager for the university in 1975; **James Erickson, M.B.A., C.P.A.**, a member of the Johns Hopkins Medicine financial team for 28 years; and **Mary Foy, B.B.A.**, registrar of the school of medicine, who began her 52-year Johns Hopkins career as an assistant registrar.

Eloiza Domingo-Snyder, M.S., has been named the new director of diversity, inclusion and cultural competency for Johns Hopkins Medicine and the Johns Hopkins Health System. Domingo-Snyder came to Johns Hopkins from Cincinnati Children's Hospital Medical Center. She has more than 14 years' experience in cultural competence, diversity, inclusion, education, corporate and nonprofit organizations, government, law enforcement and health care.

Victoria Handa, M.D., professor of gynecology and obstetrics, has been named director of the department at Johns Hopkins Bayview Medical Center and deputy director of gynecology and obstetrics at the Johns Hopkins University School of Medicine. An internationally recognized leader in female pelvic medicine and reconstructive surgery, Handa is director of the Division of Female Pelvic Medicine and Reconstructive Surgery and holds a joint appointment in the Department of Epidemiology at the Bloomberg School of Public Health.

Mark Shaver, M.B.A., has been promoted to vice president of business development and strategic alliances for Johns Hopkins Medicine. He works with a wide range of faculty and senior leadership across the institution to lead the exploration, expansion, development and management of business opportunities with corporate and strategic partners.

MERIT Recognized

MERIT (Medical Education Resources Initiative for Teens), created by Johns Hopkins medical students in 2010 to provide internships and learning opportunities in health care for Baltimore high school students, has received a $1 million grant from the Maryland State Department of Education's 21st Century Community Learning Centers program. Both The Johns Hopkins Hospital and Johns Hopkins Bayview provide support for MERIT.

Hospitals' Quality Award

The Johns Hopkins Hospital, Johns Hopkins Bayview, Howard County General Hospital, Sibley Memorial Hospital and **Suburban Hospital** have received the Quest for Quality Award from Morrisey Associates, a designer and provider of health care management software. The award recognizes the hospitals' success in the rapid implementation of centralized credentialing services and overall commitment to excellence.

Center Accreditation

The Center for Bariatric Surgery has received national accreditation as a Comprehensive Bariatric Center with Adolescent Qualifications from the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program. The American College of Surgeons and the American Society for Metabolic and Bariatric Surgery combined their national bariatric surgery accreditation programs into one to achieve a single national accreditation standard for bariatric surgery centers.

Graduate Education Honors

The Division of Geriatric Medicine and Gerontology has been ranked the nation's #1 graduate program in geriatric medical education by *U.S. News & World Report*. The magazine provides rankings of more than 1,400 of the best colleges and universities and hundreds of best graduate school programs.

EAST BALTIMORE

Lisa Cooper, M.D., M.P.H., professor of medicine, and her research team have been chosen by the National Institutes of Health to receive a $12.2 million research grant from the Patient-Centered Outcomes Research Institute. Cooper, who is nationally recognized for research on eliminating health disparities, will use the award to compare ways for improving blood pressure control in specific populations and to close gaps in health outcomes for these groups.

Kay Redfield Jamison, Ph.D., professor of psychiatry and co-director of the Johns Hopkins Mood Disorders Center, has received the Institute of Medicine's 2015 Rhoda and Bernard Sarnat International Prize in Mental Health. The award recognizes outstanding achievement in improving mental health. Jamison, a best-selling author and recipient of numerous national and international scientific prizes and literary awards, was cited for her insights into affective disorders and suicide.

Peter Pronovost, M.D., Ph.D., senior vice president for patient safety and quality, has been named to *Modern Healthcare* magazine's list of the 100 Most Influential People in Healthcare for 2015.

Sophan "Sophie" Sok-Tyong, clinic coordinator for the Department of Otolaryngology–Head and Neck Surgery, has received the inaugural Practice Manager of the Year Award from the Organization of Facial Plastic Surgery Assistants, an affiliate of the American Academy of Facial Plastic and Reconstructive Surgery. Sok-Tyong has served as a plastic surgery assistant and administrator for more than 10 years at the Johns Hopkins Outpatient Center.

Notable Nurses

Judith Ascenzi, D.N.P., R.N., A.P.R.N.-C.N.S., of the pediatric intensive care unit at The Johns Hopkins Hospital, has received the 2015 Preceptor Star Award at the school of nursing's Shining Star event celebrating Johns Hopkins nursing. **Grace Nayden, R.N.**, of the coronary care unit at The Johns Hopkins Hospital, received the Rosenwald Star Award for her accomplishments as a critical care nurse. **Laurie Rome, R.N.**, received the Johns Hopkins Nurse Star Award for being a "change agent in pediatric oncology nursing."

Sharon Kelley, M.N.A., N.E.A.-B.C., has been named director of nursing for ambulatory services at Johns Hopkins Bayview. She will oversee nurse credentialing, planning, organizing and the clinical nursing functions for the service. Over the course of her long career, which began at Baltimore City Hospitals—now Johns Hopkins Bayview—Kelley has served in numerous leadership positions.

Tracey Long, M.S.N.-M.P.H., R.N.-B.C., C.P.H., a psychiatric and public health nurse and a study coordinator for health work environment grants, has been chosen to serve as one of 20 nurses from Maryland universities, colleges and health care agencies in the 2015–2016 Nurse Leadership Consortium program at the University of Maryland School of Nursing's Nurse Leadership Institute. A statewide initiative funded by the Maryland Health Services Cost Review Commission, the program aims to develop nurse leaders who will advance changes in nurse education and practice to improve the health of Marylanders.

Marketing and Communications

The Johns Hopkins Medicine Marketing and Communications Department has received a Public Relations Society of America National Capital Chapter Thoth Award for excellence in crisis communications. The award recognizes the department's extensive team effort by staff members in public affairs, internal communications, videographers, website management, graphic design and social media to prepare materials to describe Johns Hopkins' response to the 2014–2015 Ebola virus disease outbreak in West Africa and to address concerns raised by misinformation in the media.

ALL CHILDREN'S HOSPITAL

Melvin Almodóvar, M.D., has been named chief of the Division of Cardiovascular Critical Care and director of the 22-bed cardiovascular intensive care unit at the Johns Hopkins All Children's Heart Institute. He previously was medical director of the cardiac ICU in the Department of Cardiology at Boston Children's Hospital.

Marcos DeLeon, M.I.M., has been named vice president of human resources. He will guide leadership development, employee engagement and other initiatives for the 3,000 employees based at the hospital's main campus in St. Petersburg and its outpatient locations in eight Florida counties. Prior to coming to All Children's, DeLeon was chief human resources officer at Truman Medical Centers in Kansas City, Missouri.

Veronica Martin, D.N.P., R.N., has been named vice president and chief nursing officer. A 20-year nursing veteran, Martin previously served as corporate chief nursing officer for Shriners Hospital/Health System.

The Leadership Executive Academic Development (LEAD) curriculum has received a $100,000 grant from The Hearst Foundation. The hospital's first national grant, it will help fund LEAD, a two-week program for first- and second-year medical residents focused on patient safety, personalized approaches to care, communication, ethics, cultural competency and the business of medicine.

CHRIS MYERS

FOUR-LEGGED VISITOR—Stephanie Cooper Greenberg and her 3-year-old Dalmatian, Olive, pay a visit to Johns Hopkins Hospital patient Laura Hicks. Cooper Greenberg and Olive are part of Pet Partners, an animal therapy program based on research that says visits from pets can relieve some of the stress, pain and anxiety related to illness and hospital stays. The pair is one of 15 volunteer dog-handler teams who visit patients in units throughout The Johns Hopkins Hospital. Cooper Greenberg estimates that the teams visited the hospital 150 times in two-hour shifts last year. During their shifts, the teams visit as many as 20 patient rooms. Extensive training and certification is required to become part of Pet Partners at Johns Hopkins. Learn more: johnshopkinsmedicine.org/dome.

Dome

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