JOHNS HOPKINS MEDICINE

# ManagedCarePartners

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# A New Era of Leadership at Johns Hopkins

With foundations in clinical care and a record of executive excellence, Kevin W. Sowers is named next president of Johns Hopkins Health System.

You might say **Kevin Sowers**, who was recently appointed president of the Johns Hopkins Health System and executive vice president of Johns Hopkins Medicine, took a road less traveled to health care leadership.

A nurse who grew up on a farm in rural Ohio, living below poverty level, and who was the first in his family to attend college, Sowers had an early interest in singing and piano. To help pay for college, he spent mornings working as a music therapist for a county nursing home and evenings as an orderly, bathing nursing home residents and helping put them to bed. That's where he fell in love with nursing.

"When I became a nurse," he says, "Nurses were not allowed to become presidents of health systems or even hospitals. It was not even common for a man to become a nurse." But Sowers says his experience as a nurse in oncology—a discipline chosen after his grandfather was diagnosed with a glioblastoma and Sowers was inspired to make a difference in cancer patients' lives—coupled with a long administrative career at Duke University Health System, prepared him well for the Johns Hopkins roles.

"I know what it means to collaborate with a team of people to execute a plan of care for complex patients," Sowers told a packed room at a Johns Hopkins Town Hall meeting. "I also know what it means to educate a generation of learners. I understood the importance of clinical trials, taking things from the bench to the bedside. It prepared me for the three missions of the academic enterprise, but it also prepared me for managing the complexity of the enterprise."

Sowers joined Johns Hopkins in February after 32 years with Duke, the last eight of which he served as president and CEO of Duke University Hospital. He succeeds Ronald R. Peterson, who served in the dual Johns Hopkins positions for the past 20 years before deciding to retire. Peterson's career at Johns Hopkins spanned 44 years.

After considering all viewpoints, Sowers says he's not afraid to tackle tough decisions. A champion of diversity and of expressing gratitude for all employees' roles in working toward common goals, Sowers says he looks forward to helping develop new care delivery models that meet the challenges of today's evolving health care climate.

Sowers joined Duke University Medical Center Hospital in 1985 as a staff nurse in oncology and held several faculty and nursing leadership positions, as well as numerous senior leadership posts across the Duke University Health System. Active in many professional and community organizations, Sowers is an American Academy of Nursing Fellow and has collaborated on numerous research efforts as well as consulted internationally. He has also held leadership roles in the American Heart Association, Susan G. Komen and the Oncology Nursing Society.

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>
> —KEVIN SOWERS

Sowers earned his bachelor's degree from Capital University School of Nursing and a master's degree from Duke University School of Nursing. He has published extensively and speaks on issues such as leadership, organizational change, mentorship and cancer care. ■

# From the Office of Managed Care

**Patricia Brown**
*President, Johns Hopkins HealthCare*

## Evolving Approaches

Greetings, colleagues. I can't start this column without mentioning one of the biggest sea changes in Johns Hopkins' recent history: the retirement of my esteemed colleague Ron Peterson. I'm sure many of you have had the pleasure of working with Ron in one capacity or another over his 44 years of service to Johns Hopkins and 20 years in the dual roles of president of the Johns Hopkins Health System and executive vice president of Johns Hopkins Medicine.

I'd like to take the opportunity to introduce you to Kevin Sowers, former president and CEO of Duke University Hospital, who stepped into these roles in February. As you'll see in our cover story, Kevin brings a fresh perspective to our ongoing discussions of value in health care. Starting as a staff nurse in oncology, Kevin spent 32 years with Duke, gradually taking on bigger roles. His history there includes overseeing operations of a 1,000-bed teaching hospital, implementing a strategic plan and leading several major building projects. Through it all, he has been admired for his collaborative spirit and his ability to partner effectively with people at all levels of the organization.

Kevin said he wasn't necessarily looking for a new job when he visited Johns Hopkins. However, he was so impressed by the employees he met who have dedicated themselves to developing new care delivery models and other solutions to address the necessary changes in health care, he couldn't turn down the opportunity to join in! This enthusiasm for our work, combined with Kevin's broad experience and commitment to our academic mission, make him the perfect leader for our health system.

Meanwhile, our widespread work in high-value care marches on. Our "Meet Your Partners" section introduces you to Pamela Johnson and Susan Peterson, who are co-directing the Johns Hopkins High Value Practice Alliance. Formed with the goal of engaging our students and residents in research to support high-value diagnostic tests and to ensure that unnecessary tests can be safely reduced in practice, the alliance's efforts already have led to several published papers and the deployment of clinical decision-support tools to guide ordering of imaging tests. Along the same lines, we'll tell you about online modules developed here that introduce wise ordering of medical tests to third-year medical students and how multidisciplinary clinics for lung cancer, like the one we have here at Johns Hopkins, can save thousands of dollars in hospital and professional fees.

I'm thrilled to see so many of my colleagues jumping on this bandwagon. It's going to take a village, so they say, to meet the changing demands of the marketplace. ■

HIGH-VALUE CARE

# The Hopkins Virtual Patient Teaches Medical Students High-Value Care

A few years ago, the directors of the basic medicine clerkship at the Johns Hopkins University School of Medicine were concerned that in the current era of high-value care, third-year medical students were not necessarily learning how to order medical tests appropriately. So clerkship leaders **Amit Pahwa** and **Danelle Cayea** banded together to create an online case-based module called the Hopkins Virtual Patient.

Through the program, says Cayea, director of the medicine core clerkship program and associate vice chair for education for the Department of Medicine, students evaluate three hypothetical patients: one with acute kidney injury, one with an exacerbation of chronic obstructive pulmonary disease and one who developed a blood clot in her leg following surgery.

After reviewing information about each case, students select the tests they feel are appropriate to order from a drop-down menu. The menu also lists the Medicare allowable fee or average wholesale price, to provide experience with Maryland's Global Budget Revenue and its capitated payment system that reimburses a fixed fee per patient. Upon completion of the module, which takes about one to two hours, students receive a score based on the appropriateness of the tests they chose and the money they spent. The work was funded with a $50,000 Berkheimer Faculty Education Scholar Grant from Johns Hopkins' Institute for Excellence in Education.

One reason they developed the course, says Pahwa, associate director of the core clerkship in pediatrics and director of the advanced clerkship in internal medicine at The Johns Hopkins Hospital, is that much of patient care learning lies in apprenticeship, where students observe how their supervising physicians manage patients. But everyone has his or her own approach, and some of those approaches may include practices that are not evidence-based, says Pahwa.

In addition, students spend their clerkship on a large inpatient team. While that's great for patient care, it's tough for educators to determine which parts of a care plan were suggested by students, making it difficult to assess how well students are learning value-based care.

As Pahwa and Cayea brainstormed how to teach these concepts, Pahwa's wife—a pediatrician and "superuser" of the Epic electronic medical record system—had an inspired idea: Why not establish a virtual learning playground where students could practice ordering tests without affecting the hospitals' bottom line?

The scores received on the module don't impact students' grades, but do train them in appropriate test ordering patterns for the three conditions presented in the modules, says Pahwa. Overall, he notes, the better students perform on the modules, the better they tend to do in the clerkship itself: "What that indicates is that these modules help tell students how well they're doing in seeing patients, talking to them and eliciting information to order tests appropriately."

The modules may be adopted by MedU (soon to become Aquifer), a national provider of web-based medical education materials.

MEET YOUR PARTNERS

# **Pamela Johnson** and **Susan Peterson**,

**Pamela Johnson** says she was the type of kid who loved science and always knew she was going to be a doctor. **Susan Peterson** did too, but spent her undergraduate years studying the value aspects of medicine and health care management. About two years ago, the two joined forces to co-direct a new concept at Johns Hopkins: the High Value Practice Alliance.

The multispecialty group, which grew out of the Graduate Medical Education Committee, was formed in 2015 to engage students and residents in quality improvement work designed to reduce unnecessary tests and treatments. The projects are largely multidisciplinary.

"I'm a radiologist, but if I observe areas where patients are not benefitting from imaging and want to reduce utilization, I can't do it myself," says Johnson, vice chair of quality and safety for the Department of Radiology and one of the physician leads of the Johns Hopkins Health System High Value Care Committee. "It has to be a team effort."

The work quickly took off, she says, with their committee amassing support from some 30 faculty members in departments as varied as surgery, neurology and anesthesiology and critical care medicine. Johnson has subsequently observed systemwide growth of these types of initiatives, sparked by the creation of the Health System High Value Care Committee in 2016 by **Redonda Miller**, Johns Hopkins Hospital president, and **Renee Demski**, JHH vice president of quality. "It was like you had this pile of kindling wood and a match," says Johnson. "These providers are really very passionate about what they're doing. The creation of this

# One-Day Lung Cancer Clinic Improves Outcomes and Cuts Costs

When Russell Hales joined Johns Hopkins' Department of Radiation Oncology in 2010, he noticed a disturbing pattern among patients with lung cancer. By the time they came to see him, many already had visited the campus for tests or specialist consultations eight different times.

"Often they would see me four weeks after being told they probably had cancer," Hales says. "They were frustrated. They were stressed. They were scared their tumor was spreading as we were continuing to work things up."

In 2011, Hales and colleagues established an all-day multidisciplinary clinic for patients with lung cancer, in which patients have a history taken and receive education and counseling about the disease. While patients take a lunch break, a group of lung cancer specialists discuss each patient's case to form a consensus treatment plan, which is described to patients before they leave for the day.

To measure if the clinic yielded cost savings and a reduction in tests, radiation oncologist **Ranh Voong**, Hales and colleagues studied billing records from 308 patients (139 seen in the multidisciplinary clinic and 169 who were not) with newly diagnosed non-small cell lung cancers treated at Johns Hopkins from 2008 to 2014. The results, presented at the 2017 American Society for Radiation Oncology (ASTRO) meeting, demonstrated that the clinic reduces unnecessary health care resources for these patients.

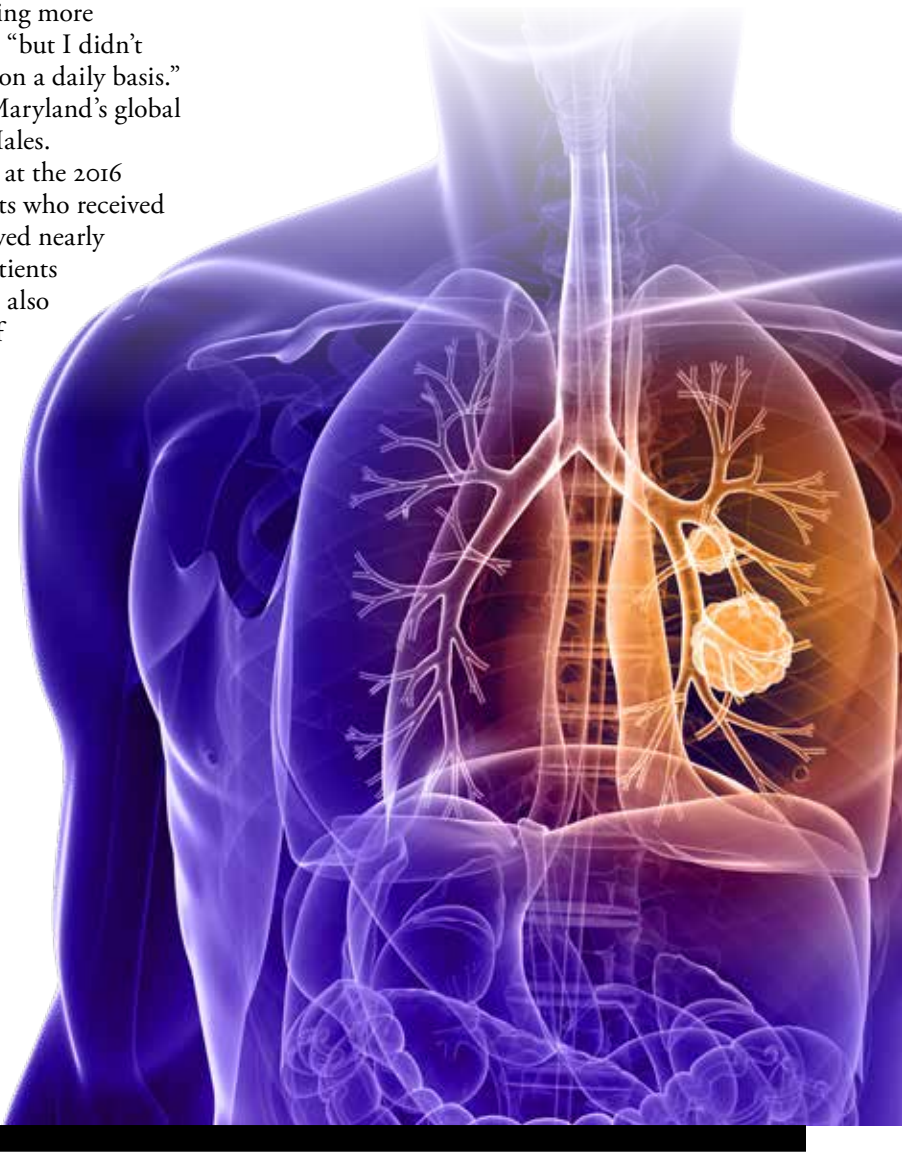
While there was no significant difference in the frequency of PET/CT or MRI scans between patients seen or not seen in the multidisciplinary clinic, multidisciplinary clinic (MDC) patients saw fewer health care providers (an average of 4.8 versus 6.7) and received fewer other exams (an average of 3.7 versus 2.8) than non-multidisciplinary clinic (non-MDC) patients. The associated professional fees dropped from $10,558 among non-MDC patients to an average $8,858 among MDC patients, a difference of $1,728, or 16 percent. Total charges among patients being worked up lowered from an average $25,833 among non-MDC patients to $19,994 among MDC patients, a difference of $5,839, or 29 percent.

"I had an inkling that we were being more efficient with resources," says Voong, "but I didn't think that we would save that much on a daily basis." The savings is "a really big deal" in Maryland's global budget revenue environment, adds Hales.

Previous work presented by Hales at the 2016 ASTRO meeting showed that patients who received care at the multidisciplinary clinic lived nearly 10 months longer on average than patients not seen in the clinic. Clinic patients also began cancer treatment an average of seven days sooner than non-clinic patients, and were significantly more likely to receive concurrent chemotherapy and radiation, if ordered, within a few days of each other.

The studies indicate the multidisciplinary clinic is "a win-win situation" for patients, says Voong. "If they're living longer and they're saving money, why are we not doing it? It provides more evidence that coordinated, single-day multidisciplinary clinics should be highly looked upon, and perhaps should be adopted more often."

Hales credits nurse Peggy Lang for ensuring smooth operations of the clinic, and medical student J.P. Senter for help with the research analyses. ■



Clinic patient workup charges alone lowered by 29 percent. "I had an inkling that we were being more efficient with resources, but I didn't think that we would save that much on a daily basis."

—RANH VOONG

# Co-Directors, Johns Hopkins High Value Practice Alliance

committee further legitimized their work and empowered them."

Critiques of health care frequently note that a big component of the high expense is unnecessary practice, so in addition to reducing costs of care for patients, Johnson wants to help build trust between patients and providers by informing patients about the work being done at Johns Hopkins and other institutions across the country. She'd also like to see physicians have more of a say in which quality measures to track.

"We're really trying to make changes in practice from a quality-driven approach, and that's how it has to be," Johnson says. "It can't be driven by cost; it has to be driven by quality, but the costs will follow." Engaging the housestaff in this work is the best way to ingrain high-value care principles into their future practice, she adds.

In one such quality improvement project, emergency medicine residents determined that coagulation studies were not helpful in caring for patients with chest pain. By adding a pop-up message in the electronic health record questioning why a physician was ordering coagulation studies, they reduced use of the test, with an estimated savings of $50,000. "It shows how powerful some of these things can be," says Peterson, associate medical director for patient safety and quality in the Department of Emergency Medicine.

Johnson received her bachelor's degree in biology from Harvard University and medical degree from Jefferson Medical College. She completed a residency in radiology at Johns Hopkins and joined the faculty in 2001 from Thomas Jefferson University Hospital.

Peterson holds a bachelor's degree in health

**Pamela Johnson**

**Susan Peterson**

and societies from the University of Pennsylvania. Following medical school at Johns Hopkins, she stayed on for a residency in emergency medicine and clinical research fellowship. Peterson joined the Johns Hopkins faculty in 2013. ■

## BITS, BYTES & BRIEFS

### Blueprint to Reduce Wasteful Blood Transfusions

By analyzing data from randomized clinical trials comparing blood transfusion approaches, Johns Hopkins experts, along with colleagues at Cleveland Clinic and NYU Langone Medical Center, endorse recommendations for blood transfusions that reduce blood use to improve patient safety and outcomes. Published in *JAMA Internal Medicine*, the report also provides a how-to guide for launching a patient blood management program.

"In summary, there is no benefit in transfusing more blood than necessary, and some clinical trials actually show harm to patients," says **Steven Frank**, professor of anesthesiology at the Johns Hopkins University School of Medicine. "All this does is increase risks and cost without adding benefit."

### U.S. Hospital Charges Vary Widely for Outpatient Cancer Care, Medicare Records Show

An analysis of recent Medicare billing records for more than 3,000 hospitals across the United States shows that charges for outpatient oncology services such as chemo infusion or radiation treatment vary widely and exceed what Medicare will pay by two-fold to sixfold.

A report of the findings, published in the *American Journal of Managed Care* on Feb. 17, emphasizes the need for fair and transparent pricing of cancer-related medical services to protect patients from unpredictable financial burdens at a time when they are most vulnerable, according to researchers who conducted the analysis.

The researchers call for "standard pricing" legislation to reduce financial burdens of vulnerable patients.

## HOPKINS IN THE NEWS

### Johns Hopkins and the United Arab Emirates Launch Sheikh Khalifa Stroke Institute

**A new institute for stroke research and clinical care was announced by the United Arab Emirates (UAE) Embassy in Washington, D.C., and Johns Hopkins. The Sheikh Khalifa Stroke Institute, funded by a $50 million gift from the United Arab Emirates, will focus Johns Hopkins' efforts to leverage advances in engineering, artificial intelligence and precision medicine to better diagnose, treat and restore function to patients. The gift is believed to be the largest ever for a stroke-specific initiative.**

**"We are grateful for the UAE's gift, which enables us to leverage our considerable strengths in neurology, physical medicine and rehabilitation—in combination with our expertise in biomedical engineering and patient safety—to develop new tools for stroke diagnosis, treatment and recovery. These efforts will improve the health of millions of people in Baltimore, the UAE and around the world, with the added benefit of bringing down health care costs," says Paul Rothman, M.D., dean of the medical faculty and CEO of Johns Hopkins Medicine.**

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