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Reference: 1. Nasso G, Piancone F, Bonifazi R, et al. Prospective, randomized clinical trial of the FloSeal matrix sealant in cardiac surgery. *Ann Thorac Surg.* 2009;88:1520-1526.

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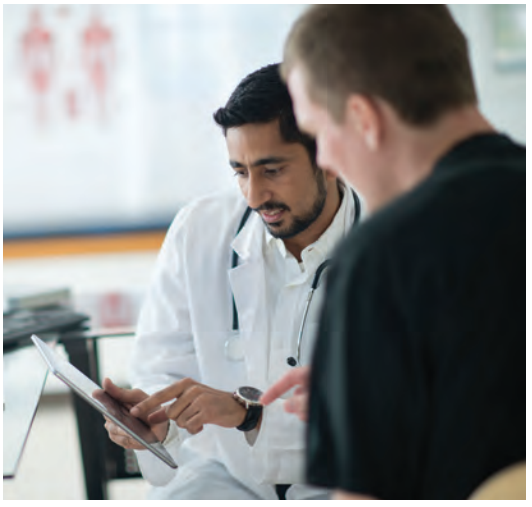

ON THE COVER:
Reggie Washington, M.D.

Photography by Christina Kiffney

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Mail: THE SOURCE, c/o HealthTrust, 1100 Charlotte Ave., Suite 1100, Nashville, TN 37203
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HealthTrust is committed to strengthening provider performance and clinical excellence through an aligned membership model, and the delivery of total spend management advisory solutions that leverage our operator experience, scale and innovation. Headquartered in Nashville, Tennessee, HealthTrust (www.healthtrustpg.com) serves approximately 1,600 acute care facilities and members in more than 26,000 other locations, including ambulatory surgery centers, physician practices, long-term care and alternate care sites.

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Made For life

Advancing HealthTrust's Clinical Agenda

HealthTrust created the Physician Advisors Program two short years ago, and it has already become foundational to the way we manage clinically sensitive products. Engaging practicing physicians in this way is the only logical approach we, as an organization, can take to further healthcare's triple aim of optimal cost, quality and outcomes.

The next order of business is to broaden the role of clinical evidence and big data in managing healthcare costs, as well as identifying needed research related to treatment trends and practices that improve patient outcomes. To that end, the search is underway for the next physician leader to continue driving the clinical agenda. We wish nothing but the best for our soon-to-depart Chief Medical Officer (CMO) **Michael Schlosser**, M.D., who has assumed the position of vice president of clinical excellence and CMO for HCA's National Group. He has graciously agreed to serve as HealthTrust's interim CMO during this time of transition and to help onboard his successor.

Physician-led Sourcing Strategies

Under Dr. Schlosser's watch, HealthTrust's Physician Advisors Program has grown to include over 140 physicians in 27 subspecialties across 21 health systems.

An example of the value of this program was reflected recently by the engaged physicians who were part of developing the contracting strategy for almost 20 categories within the cardiovascular space, including peripheral stents, carotid stents, peripheral balloons, guidewires and IVC filters.

Looking at the category of carotid stents and embolic protection specifically, HealthTrust's clinical evidence team directly consulted with more than 20 practicing interventional cardiologists, interventional radiologists and vascular surgeons, and invited feedback from the at-large physician community.

Physician advisors identified areas of high variation without clinical need or benefit. As a result of intensive evidence review and practical experience with a number of the products, and discussion with HealthTrust's Cardiology and Radiology advisory boards, they concluded that there were few clinical differences between products and brands. This type of clinical input enables our strategic sourcing team to negotiate contracts that optimize a balance between price and product coverage. The team then publishes information on these clinically sensitive product decisions as clinical evidence reviews found on our member portal.

Forums for Clinical Education and Learning

In addition to managing and growing the Physician Advisors Program, the physician services team at HealthTrust also oversees clinical data and analytics, and clinical research and education. Through inSight Advisory, HealthTrust also offers a number of related services, including medical device management, care redesign, clinical data and benchmarking, physician engagement, consulting on bundled payment programs, patient engagement and the collection of patient-reported outcomes. The team recently assumed editorial and operational responsibilities for this quarterly member publication, *The Source*.

"Through inSight Advisory, HealthTrust also offers a number of related services, including medical device management, care redesign, clinical data and benchmarking, physician engagement, consulting on bundled payment programs, patient engagement and the collection of patient-reported outcomes."

Physician services also hosts a number of learning events throughout the year in the cardiovascular, orthopedic, spine and osteobiologics service lines as well as forums for member systems to come together to discuss and debate various approaches to clinical issues. Many of the events provide the opportunity to showcase the expertise of a number of our physician advisors, with meetings often scheduled in conjunction with annual industry conferences—American Academy of Orthopaedic

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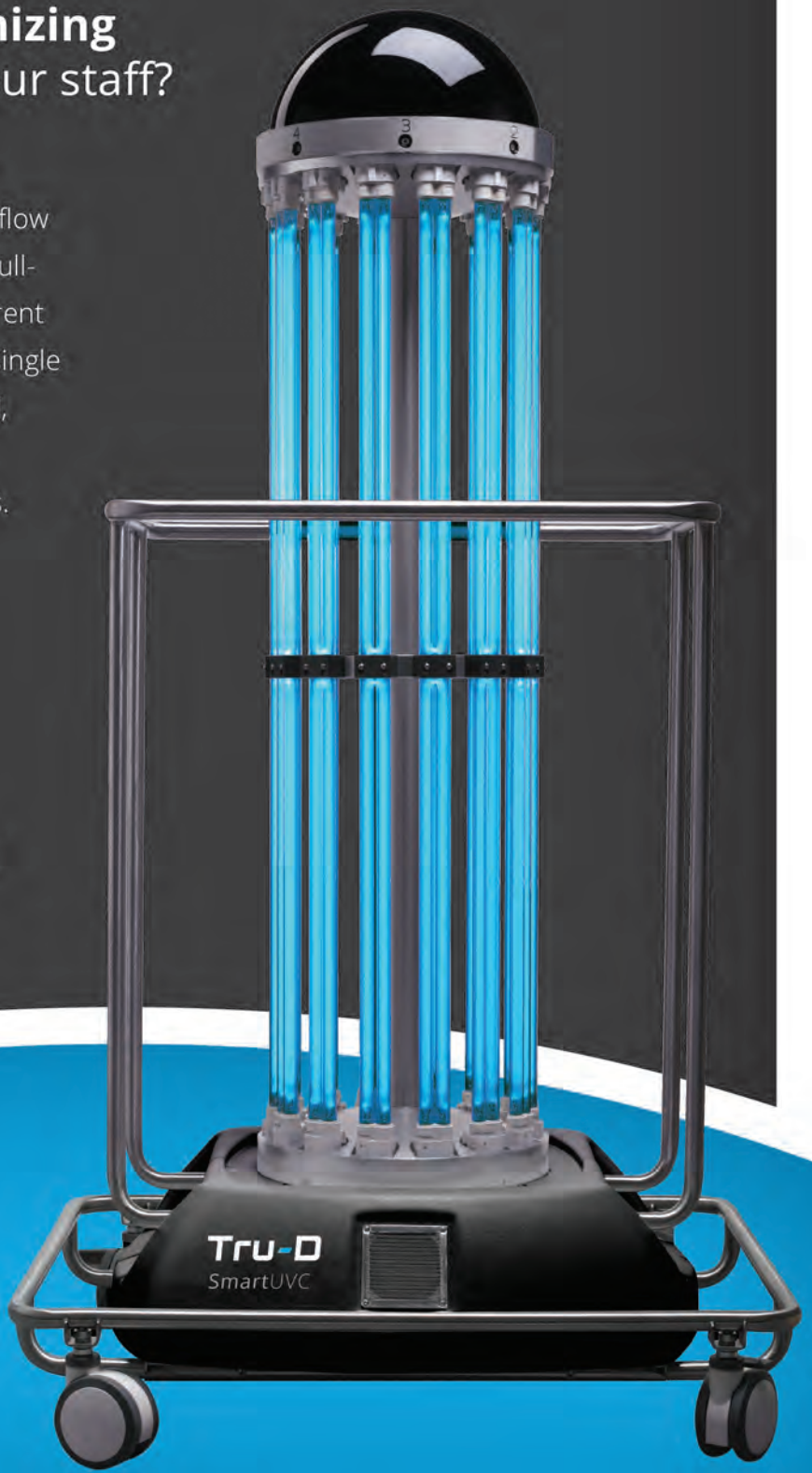

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A Time of Transitions: Good Things Behind, Better Ahead

As many of you have heard by now, I recently accepted the position of vice president of clinical excellence and CMO of HCA's National Group. With my tenure as CMO of HealthTrust coming to a close in the near future, I wanted to take this opportunity to thank the membership as well as our physician advisors (we're now up to 144!) for their work and engagement on our clinical agenda over the past two-plus years. The success we have enjoyed is a direct result of amplifying the voice of clinicians and physicians in the contracting process.

My successor will be in a great position to further drive evidence-based contracting and physician engagement, while taking bold new steps to link cost, quality and outcomes through our clinical supply database efforts. It has been a joy to work with the physician services team, HealthTrust as a whole and you—as individuals, care providers and our partners in driving ever-greater levels of value for the patients we serve. I look forward to watching HealthTrust initiate positive change in the healthcare industry for many years to come.

One of the bigger challenges on the immediate horizon relates to the implementation of MACRA (Medicare Access and CHIP Reauthorization Act of 2015). The payment reform law creates new opportunities and reasons for health systems to partner with physicians around quality and cost-of-care initiatives. Yet recent surveys indicate half of physicians have never heard of MACRA and only one-third understand its requirements, and they continue to overwhelmingly prefer fee-for-serve compensation. This is a strong signal that hospitals need to help improve physician readiness for the new law to better align for success under value-based payment models.

The intent of MACRA is to deliver better care at a lower cost to the patient, while melding together existing Medicare reporting and pay-for-performance programs. But it could take a few years for providers to become fully fit to deliver cost-effective, outcomes-based healthcare, and all stakeholders will be feeling the burn as they start working together in new and unfamiliar ways.

Starting in 2019, payments to physicians and eligible clinicians will by default be merit-based—meaning they need the wherewithal to accurately collect and report on performance metrics. Under the merit-based incentive payment system (MIPS), quality measures will initially account for 60 percent of their overall performance score, advancing care information (formerly meaningful use) 25 percent and clinical practice improvement activities 15 percent. In the following two years, resource use (cost as calculated by CMS) comes into play, and in 2021 quality and cost will each comprise 30 percent of composite scores. Hospitals that employ physicians can defray some of the costs associated with the new reporting requirements, but are also at risk for any payment adjustments. Investments in technology and process improvement are inevitable for all facilities.

Organizations might also participate in advanced alternative payment models (APMs), which require financial risk-sharing and coordinated care, to help physicians meet the required revenue or patient-count thresholds. But expertise in managing risk, building care networks, and data integration and analytics will all be required competencies. Only about 10 percent of physicians are expected to use an advanced APM initially, although they're highly incentivized to eventually make the transition. In the APM track, participants automatically receive a 5 percent bonus each year from 2019 to 2022, with the opportunity to earn additional quality-based bonuses without having to take on any downside risk (other than what they've assumed outside of MACRA). In contrast, the MIPS scoring system is a zero-sum game with an even number of winners and losers.

MACRA has a lot of the same underlying incentives as other value-based payment models such as bundled payments (*see page 30*), including rewards for providing a more predictable, patient-centered approach and satisfying care experience (*see page 38*). Together, they will be fundamentally changing the trajectory of the healthcare industry's movement toward payments tied to quality, which gets back to one of HealthTrust's core competencies and evokes my optimism for our collective future.

Michael Schlosser, M.D., FAANS, MBA
Chief Medical Officer, HealthTrust

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Value Analysis

The Journey to Maturity

The industry's ongoing transition from fee-for-service to value-based healthcare requires that hospitals be more clinically focused and fiscally responsible than ever before. This, too, has created a shift from supply chain- to evidence-based purchasing. But how do organizations go about maturing their value analysis program to achieve increasingly greater process rigor, transparency and physician engagement?

LOWERING COSTS NOT THE ONLY GOAL

Traditionally, supply chain decisions were based largely on cost. Given the changing healthcare landscape, physicians, registered nurses and other clinicians are more often being introduced into the decision-making process which, at its optimum, simultaneously focuses on achieving the best financial, quality and patient outcomes.

Attaining full value analysis maturity is no easy feat—only one in 10 organizations fall into this category—but it delivers the most rewards. The requirements include sustained top-down support, a clinical evidence review process, engaged physicians across multiple specialties and geographies, and a physician with the requisite skills to lead the charge. Indications marking achievement include:

- Everyone understands and embraces the rules for introducing new products
- Standardization initiatives are the norm
- Best utilization practices are embraced

FROM REACTIVE TO STRATEGIC

"The information age has brought value analysis to a new level because clinical evidence is more readily available," explains **Victoria Alberto**, vice president of clinical resource management at HealthTrust. "Better access to clinical studies helps us identify the products that produce the best outcomes and marry the financial with the clinical. Good data takes center stage because it 'creates an epidemic of common sense.' "

Identifying clinical variation from best practices is an exercise that should happen using a multidisciplinary team of experts by service line, Alberto continues. Supporting evidence is easier to interpret when physicians bring their real-world experience and data analysis mindset to the product selection process—more quickly getting at an accurate calculation of long-term value. The team thinks broadly with questions such as, "How might this eliminate downstream care?"

A value analysis journey can be prompted by a number of factors, some of which might include a service line that is gearing up or sunsetting, a change in physician leadership or a contract that is ready to expire. Regardless of the impetus, it's critical (and sometimes challenging) to get clinicians to commit to the product evaluation process, and communicate policies and procedures across departments. It helps to start with easy wins to build confidence for tackling the next phase of maturity. The ultimate goals are to move supply expense management from being reactive to strategic and to develop a culture of accountability.

THE FOUR LEVELS OF VALUE ANALYSIS MATURITY

Years of experience operating one of the nation's largest IDNs, and consulting with many other provider organizations—from stand-alone facilities to multi-hospital systems—gives HealthTrust a unique perspective on the requirements for successfully maturing a value analysis program. Maturation happens in four overlapping phases:

1 Foundational

Facilities that have insufficient infrastructure for value analysis (e.g., decision-making resides solely with supply chain, no formal product evaluation process, no upfront clinician involvement) will need to start by establishing a framework. Even

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ISTOCK

Where Is Your Organization on the Maturity Curve?

HealthTrust's value analysis maturity questionnaire asks members to consider some of the following:

- **Do you have a physician leader (other than your CMO) to chair the value analysis committee?**
- **Does your organization have a process specific to change management? Does it have a program to help personnel understand the cause for change?**
- **Is the program able to achieve consensus on decisions and then support them?**
- **Are team members networking with one another and sharing best practices across departments and hospitals?**
- **Do they have the problem-solving skills to handle complaints and resistance to change?**

To review the questionnaire, contact Victoria Alberto, VP, clinical resource management, HealthTrust, at victoria.alberto@healthtrustpg.com.

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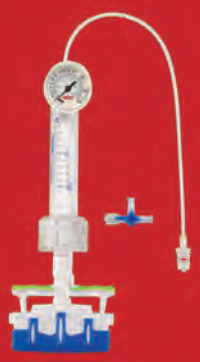

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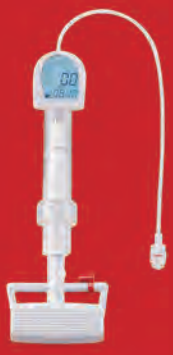

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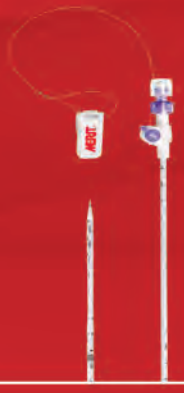

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then, team members need time to become accustomed to the new normal before organizations are ready to move to the next level of maturity.

Implementation Goals: Value analysis charter, standard agenda, multidisciplinary committee and product evaluation process

2 Standardization/Utilization (3–5 percent savings)

For standardization initiatives to succeed, the value analysis team needs to keep both the supply chain department and outside distributors in the loop about impending changes so they can make the necessary inventory adjustments. If product conversions are a possibility, the team also needs to decide which hospital departments will first evaluate the new products and then develop a communication plan about any pending changes. The plan should cover any necessary education and training as well as conversion assistance.

Implementation Goals: Communication plan, assigned accountabilities, monitoring of key metrics and initial focus on easy wins

3 Optimization (15–20 percent savings)

In this phase, spend data is examined in the context of best practices, clinical outcomes and the patient experience. Within the facility or health system, products and services are largely standardized, and processes are consistent. All major service lines also have a clinician or physician to champion the reduction of unwarranted clinical practice variation.

Implementation Goal: Decreased clinical practice variation across specialties

4 Clinically Integrated Decision-making (20 percent savings)

A value analysis program can engage physicians and empower them to assist in—or lead—the product selection, optimization and utilization processes that improve patient outcomes and payer reimbursement. The value analysis committee has the means, and the resolve, to examine spend data in the context of best practices. The rationale for product selections and changes is also effectively communicated.

Implementation Goals: Lower staff frustration, better allocation of space (due to lower inventory levels) and high level of physician engagement

HealthTrust offers subject matter expertise combined with analytics—plus a proprietary database of more than 1,000 best demonstrated practices—to help members move their way up the maturity curve. Our methodologies focus on engaging physicians and key stakeholders to equip them with an effective, repeatable and sustainable means to stay ahead of continuous cost and quality pressures. ●

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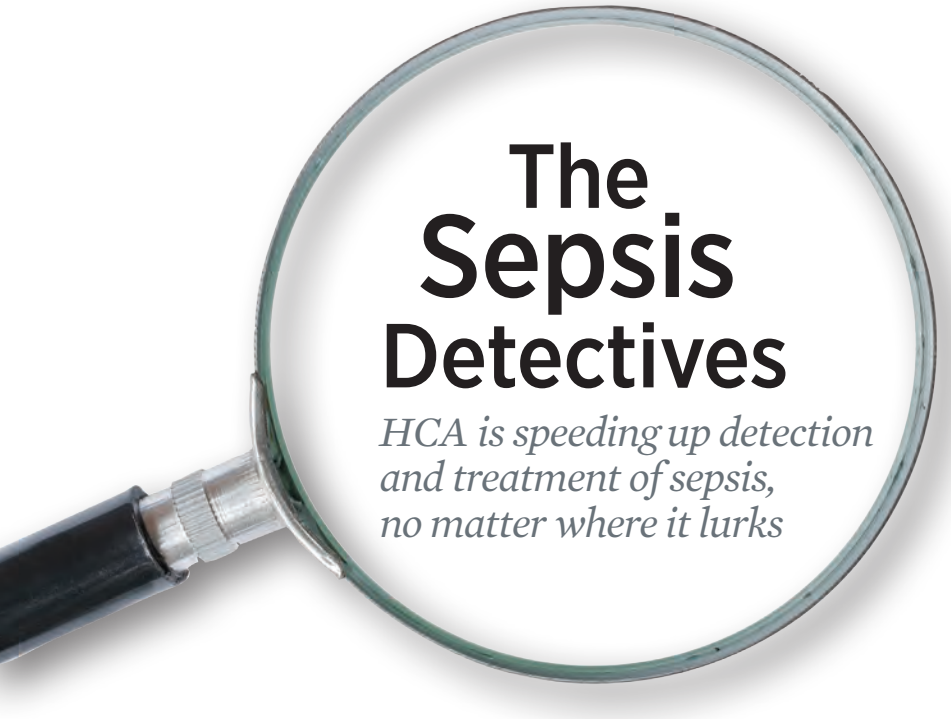

The Sepsis Detectives

HCA is speeding up detection and treatment of sepsis, no matter where it lurks

Despite advances in modern medicine, sepsis—a life-threatening condition whereby the body responds to infection by injuring its own tissues and organs—continues to be the leading cause of preventable death in U.S. hospitals. More than 1 million Americans are diagnosed each year. But detecting sepsis early can be challenging, experts say, because the symptoms often mimic those of other conditions.

"Diagnosing sepsis very often requires detective work," says **Angie Mitchell**, director of nursing services within the clinical operations department at HealthTrust.

The key, she says, is to assess patients as early as possible. If they are presenting with any potentially "septic" symptoms, such as fever, chills, rapid breathing, increased heart rate, rash or disorientation, it's important to closely monitor their hemodynamic status, begin early antimicrobials, run lab work, and continue to frequently reassess their condition to identify even the most subtle of changes.

Checklists can help, adds **Kenneth Sands**, M.D., chief epidemiologist and chief patient safety officer at HCA. "Using checklists can ensure that the diagnosis of sepsis is under consideration. Diagnosing sepsis really involves a constellation of findings, and piecing those findings together is an important part of detecting it."

Although anyone can get sepsis, the risk is higher in people with weakened immune systems, comorbidities, or who are suffering from a severe burn or physical trauma, Sands says. It is estimated that the mortality rate can be 40 percent.

"Using checklists can ensure that the diagnosis of sepsis is under consideration."

Kenneth Sands, M.D.

In January 2017, the Surviving Sepsis Campaign published the fourth revision of the *Surviving Sepsis Guidelines* in both the *Critical Care Medicine* and *Intensive Care Medicine* journals. In addition to major recommendations related to antimicrobial stewardship, resuscitation and managing infections, the patient-centered guidelines strongly encourage hospitals and healthcare facilities to implement programs that include screenings in order to detect sepsis earlier and treat it effectively.

Pulling Together a Patient-centered Team

HCA is implementing initiatives to detect sepsis even earlier, treat it more quickly and decrease mortality rates. Through supplier relationships, data analytics, training and education, and dedicated healthcare professionals, HCA is tackling the challenge of sepsis from all angles.

At the center of HCA's care plan is a sepsis coordinator, a dedicated healthcare provider—typically a nurse—who works in collaboration with the medical staff to provide care to suspected or confirmed septic patients, doing rounds in both the emergency and inpatient units.

Many people are involved in the detection and treatment of sepsis, Sands explains. "Obviously there are emergency physicians, because many patients presenting symptoms of sepsis go to the emergency department (ED). But nurses are important because they monitor patients' vital signs and administer medication and fluids; infectious disease specialists are essential because they determine the appropriate way to give antimicrobials; pharmacists are needed to make decisions about medication management; laboratory scientists analyze tests and blood cultures; respiratory therapists are necessary for several patients requiring respiratory support; and so on. It's very much a team effort," he says.

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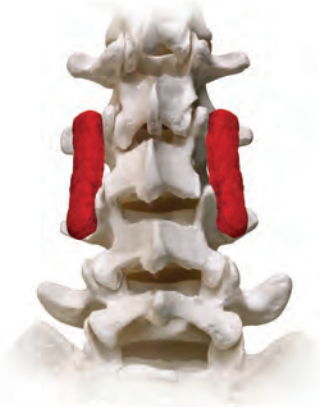

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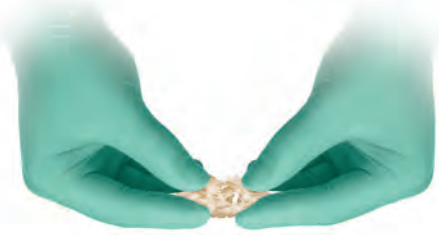

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Utilizing Technology in the ED

At HCA, physicians and nurses in the ED use an automated system to assess patients, Sands says. When entering a patient's symptoms and vital signs into the computer, the program prompts the user with questions. The computer program is trained to recognize patterns and predict outcomes based on the information provided by the nurses and physicians.

"The program may ask, 'Does the patient have a high temperature or an unusually low temperature?' A certain combination of questions answered 'yes' will alert the physician that the patient qualifies for sepsis treatment," Sands explains.

However, he adds that physicians must still use clinical judgment. "The program simply ensures that we are addressing the possibility of sepsis, and it helps identify vital sign elements that might lead to a diagnosis," he says.

Once a patient is identified as having sepsis, treatment must start immediately. For every hour that treatment is delayed, the risk of mortality is increased by 8 percent.

Broad-spectrum antimicrobials (*see sidebar below*) and fluids are given intravenously to ensure they get into the patient's bloodstream quickly and efficiently.

Fluid resuscitation is a central component of sepsis management—the body needs extra fluids to keep blood pressure from dropping too low and causing the patient to go into shock. Intravenous fluids allow medical staff to monitor how much fluid is being administered and control which type of fluid the patient receives.

The HCA clinical services group is introducing a new device for EDs. The noninvasive ClearSight system monitors hemodynamic factors, giving clinicians immediate insight into a patient's condition, explains **Lyndsey Wagner**, the team's project manager.

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Administering Antimicrobials to Fight Sepsis

IV antimicrobials should be administered as soon as possible if sepsis is strongly suspected or identified—preferably within one hour. Research shows that each hour delay in the administration of antimicrobials is associated with an increase in mortality, explains **Marcus Dortch**, senior director of clinical pharmacy services at HealthTrust.

It's recommended that empiric broad-spectrum therapy be given with one or more antimicrobials to patients presenting with sepsis to cover all likely pathogens—including bacterial, fungal or viral.

"It is believed that the benefits of administering early antimicrobials far outweigh any potential consequences," says **Kenneth Sands**, M.D., chief epidemiologist and chief patient safety officer at HCA.

The *Surviving Sepsis Guidelines* published in *Critical Care Medicine* and *Intensive Care Medicine* journals suggest combating delays by using "stat" orders or including a minimal time element on antimicrobial orders. Other suggestions include "sequencing antimicrobial delivery optimally or using simultaneous delivery of key antimicrobials, as well as improving supply chain deficiencies."

If antimicrobials cannot be compounded and delivered quickly from the pharmacy, Dortch recommends storing ready-to-use or premixed bags in automated dispensing cabinets on unit floors to ensure prompt administration.

"Every dosage needs to be treated as if it is an emergency, and that may mean hand-delivering medication from the pharmacy or preparing the dose on the unit floor," Dortch says. "The quicker you administer medication, the more likely the patient will successfully respond to treatment."

If there are market shortages, hospitals may have opportunities to get access to allocated supplies by working with their GPO and wholesalers, Dortch says. However, if there is a critical drug shortage, it's crucial that only patients in dire need of the medication be the ones to receive it.

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STERIS

Continued from page 16

Developed by Edwards Lifesciences (**HealthTrust Contract No. 2143**) the system is comprised of the ClearSight finger cuff and the EV1000 clinical platform. The finger cuff monitors hemodynamic factors such as stroke volume, stroke volume variation, cardiac output, systemic vascular resistance and continuous blood pressure. It then transmits that information to the EV1000 platform. Clinicians can choose which facts they want to monitor on the platform, and also set up alarms or targets for hemodynamic optimization.

"Using the system helps clinicians monitor how much fluid the patient needs and determine when to give the patient more," Wagner adds.

ClearSight was first introduced in November 2016 as a pilot program at Brandon Regional Hospital and Blake Medical Center, in HCA's West Florida division. Data from the pilot program revealed a greater than 50 percent decrease in mortality, says **Bob Foster**, assistant vice president of emergency services at HCA.

Leveraging Clinical Data and the Laboratory

Although no single test yet exists that accurately diagnoses sepsis, the laboratory plays an active role in early detection. Lab scientists help identify a number of biomarkers that can determine whether a patient has sepsis or another type of systemic inflammation, explains **Belinda Vanatta**, director of laboratory services at HealthTrust.

Elevated levels of biomarkers like lactate and procalcitonin—a peptide precursor of the hormone calcitonin—are strong indicators of sepsis, Vanatta says. But these aren't the only tests that should be ordered. Often, a C-reactive protein test, blood cultures, complete blood count tests and cerebrospinal fluid analyses are used to detect or rule out sepsis, according to the American Association of Clinical Chemistry. When analyzed along with hemodynamic factors, the ability to detect sepsis is greatly improved.

HCA's Clinical Excellence Facility Interface Team (ceFIT) is using these lab tests to build an algorithm for early detection of sepsis. Working alongside a team of data scientists with the Clinical Services Group Data Science Team, the ceFIT team has developed SPOT (Sepsis Prevention and Optimization of Therapy), a program that analyzes every inpatient's temperature, pulse rate, respiratory rate and white blood counts, as well as lactate levels, antibiotic use and blood cultures, explains **Adam Mindick**, senior consultant for the ceFIT team.

The program monitors the lab results and vital signs of all inpatients every 15 minutes, adds **Anna Harb**, the director of the ceFIT team. If the SPOT program detects that a patient potentially has sepsis, an alert is sent to the facility's sepsis coordinator. That can help the bedside caregiver complete a sepsis screening more quickly.

Though the team is still fine-tuning the algorithm, recent data has shown that SPOT can detect sepsis approximately 12 hours prior to a nurse documenting a positive sepsis screen, Mindick explains. The goal is to detect sepsis even faster, and when that happens, the team will work to expand the program.

Keeping the Goal in Mind

Sepsis continues to be one of the most dangerous—and expensive—conditions that a hospital treats, and part of preventing it has to do with patient education. (*See sidebar above.*)

"It's important that we educate patients, especially those with underlying conditions, about how to lessen their chances of developing sepsis," Sands says. "If patients have catheters in place, ensure they know how to care for them. If they recently had surgery, make sure they understand postoperative care instructions." ●

Preventing Sepsis

Though sepsis can't always be prevented, there are some measures that people can take to avoid it. Promoting better knowledge about sepsis among the general population can help people get treatment earlier, suggests **Kenneth Sands**, M.D., chief epidemiologist and chief patient safety officer at HCA. The Centers for Disease Control and Prevention recommends healthcare providers share these three tips with their patients:

1 **Get vaccinated** against the flu, pneumonia and any other infections that could lead to sepsis.

2 **Prevent infections** that can lead to sepsis by cleaning scrapes and wounds, and practicing good hygiene (e.g., handwashing).

3 **Remember that time matters.** If you have a severe infection, watch for signs of sepsis—shivering, fever, extreme pain or discomfort, clammy or sweaty palms, confusion or disorientation, shortness of breath, rapid breathing and a high heart rate—and if they appear get yourself to the nearest emergency department.

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The 340B Drug Pricing Program

Pharmacy Leaders Face Reimbursement and Compliance Challenges

The 340B Drug Pricing Program requires drug manufacturers participating in Medicaid to provide outpatient drugs at significantly reduced prices to eligible healthcare organizations or covered entities, such as safety-net hospitals. This program was originally set up in 1992 to provide support to safety-net hospitals that take care of a large number of the poor and indigent in their communities to stretch scarce dollars to help take care of those patients. The 340B program was expanded under the Affordable Care Act (ACA), adding eligibility for critical access hospitals, sole community hospitals, rural referral centers and freestanding cancer hospitals, explains **Vincent Jackson**, PharmD, vice president of HealthTrust's pharmacy services group.

In early January, the U.S. Health Resources and Services Administration (HRSA) published a final rule updating the price structure for the 340B Drug Pricing Program. The rule, known as "340B Mega Guidance," was set to become effective in March. However, on Jan. 30, President Trump instituted an executive order banning new government regulations and 340B Mega Guidance was withdrawn.

The rule would have provided clarifications regarding enrolled cover entities, patient and physician eligibility, drug manufacturer participation and participating contract pharmacies, Jackson says. Since it has been withdrawn, further guidance could potentially be issued through Apexus (HRSA-designated vendor for the program), HRSA Office of Pharmacy Affairs or HRSA audit findings.

While the Mega Guidance rule was under review, some hospitals raised concerns about the proposal, and the American Hospital Association argued that redefining patient eligibility for the 340B program would have inappropriately narrowed the number of drugs that qualify for 340B pricing. "It's anybody's guess whether [the Mega Guidance rule] will ever come out, and if it does, it could be totally different from what we thought it might be," says **Michael Bonck**, R.Ph., pharmacy manager at CHI Franciscan Health's St. Joseph Medical Center in Tacoma, Washington.

For now, the rule is off the table, but with the new administration's call to repeal and replace the ACA, the future shape of 340B could still be in question. In the meantime, covered entities are focused on maintaining compliance and communicating the value of the program to decision-makers.

MAINTAINING COMPLIANCE

In recent years, the 340B program has been the subject of increased scrutiny, with the Office of Pharmacy Affairs (OPA) undertaking over 500 audits of covered entities since 2013, Bonck says. More compliance audits are planned.

Participating in the program offers hospitals deep discounts on drugs for qualifying patients, but it also requires multiple levels of reporting and compliance. For instance, on a regular basis, covered entities must undertake internal audits to ensure that their data clearly separates medications used for eligible patients of GPO hospitals from eligible 340B patients of non-GPO hospitals, Bonck says.

The program originally permitted covered entities to use one contract pharmacy, but in 2010 that expanded to as many as needed to best serve their patient population. "Some have over 100 contract pharmacies, which can increase their risk if they're not auditing each of those," Bonck says. "If 340B contract pharmacy buy-backs are purchased incorrectly through the 340B entity's TPA administrator, the contract pharmacy or the TPA administrator is not at risk; the covered entity is at risk since it's ultimately responsible for any errors."

In addition, every new clinic operating under a 340B-eligible entity must be registered with OPA, a process that can take up to 18 months. If a "child site" (e.g., outpatient center or clinic operating under a parent hospital) is not properly registered and is using 340B, the parent site will be in breach of regulations.

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With all the ongoing audits, covered entities are wise to participate in regular internal audits to ensure their processes are compliant with 340B regulations. For instance, at CHI Franciscan, one full-time employee is focused solely on 340B compliance, doing spot audits throughout the system.

"IF THE ACA WERE REPEALED WITHOUT A REPLACEMENT FOR 340B, RURAL HOSPITALS WOULD NO LONGER BE ELIGIBLE FOR THE PROGRAM AND THAT WOULD TRANSLATE INTO SEVERAL MILLION DOLLARS OF INCREASED COSTS FOR MANY HOSPITALS."

Michael Bonck, R.Ph., pharmacy manager at CHI Franciscan Health's St. Joseph Medical Center

COMMUNICATING VALUE

Although the 340B program requires rigorous reporting and compliance, it is highly valued by qualifying hospitals, and many are working to educate legislators about its importance. Bonck visited Capitol Hill in July 2016 following the 340B coalition meeting to share with lawmakers how the program supports poor and underserved patients.

"If the ACA were repealed without a replacement for 340B, rural hospitals would no longer be eligible for the program and that would translate into several million dollars of increased costs for many hospitals," Bonck says. "In Oregon, CHI Franciscan would incur about $1 million to $1.5 million in increased costs."

While a potential replacement plan for the ACA is still being debated, Bonck predicts a "huge backlash" if 340B isn't included. For instance, when the 21st Century Cures Act originally included anti-340B legislation, tremendous support for 340B from over 400 hospital administrators resulted in that language being stripped from the bill.

In addition to educating lawmakers about the number of patients who benefit from discounted drugs through 340B, Bonck also communicates about the program's lack of cost to taxpayers. "These costs are not to the government; they are costs to the pharmaceutical industry," he says. ●

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Changes to Radiology Reimbursements on the Horizon

What Providers Need to Know

In November 2016, the Centers for Medicare & Medicaid Services (CMS) released final 2017 rules for hospital outpatient facilities and provider payments. Contained in these rules were two key provisions that significantly affect radiology reimbursements. One threatens the financial viability of off-campus imaging facilities, while the other requires providers to adopt new IT capabilities.

"Understandably, both of these changes have radiology departments rattled," says **Luann Culbreth**, director of radiology and cardiovascular services at HealthTrust.

SITE-NEUTRAL PAYMENTS

Effective Jan. 1, 2017, the CMS introduced a site-neutral payment policy for hospital-owned, off-campus facilities located more than 250 yards from the hospital's campus and acquired on or after Nov. 2, 2015. Facilities that fit these criteria are no longer paid under the Hospital Outpatient Prospective Payment System (HOPPS) rate. Instead, imaging services performed at these facilities fall under the Physician Fee Schedule (PFS) or Ambulatory Surgical Center Payment System, which are typically lower than the HOPPS rate. In some cases, reimbursements are cut by more than 50 percent. (*See chart.*) According to the Association for Medical Imaging Management (AHRA), this change should reduce Medicare Part B expenditures in 2017 by $330 million.

Exempt from this new policy are off-campus emergency departments and so-called grandfathered facilities, which were operational prior to Nov. 2, 2015. According to Culbreth, some hospitals may have to close these off-campus locations, or they'll divert their Medicare patients to facilities not affected by the new policy and pull certain services from those off-campus locations.

"Moving forward, imaging leaders must consider the impact of site-neutral payments on their decisions to expand service offerings, relocate facilities or acquire existing facilities," explain Erin Lane and Pooja Desai in a November 2016 article by The Advisory Board Company.

CLINICAL DECISION SUPPORT AND APPROPRIATE USE CRITERIA

Delayed one year from its original start date on Jan. 1, 2017, the clinical decision support (CDS) mandate requires radiology facilities to implement CDS software programs based on appropriate use criteria (AUC) developed by qualified entities.

The CMS has identified the first 11 qualified provider-led entities. These organizations, which include the American College of Cardiology, American College of Radiology and CDI Quality Institute, are responsible for maintaining AUC, which is accessed through a clinical decision support mechanism (CDSM).

"Evidence-based AUC for imaging can assist clinicians in selecting the imaging study that is most likely to improve health outcomes for patients based on their individual clinical presentation," explains the CMS in the final rule. "The ideal AUC is an evidence-based guide that starts with a patient's specific clinical condition or presentation (symptoms) and assists the clinician in the overall patient workup, treatment and follow-up. Imaging would appear as key nodes within the clinical management decision tree."

The mandate applies to outpatient advanced imaging modalities such as CT, MRI and PET scans. The ordering physician must use AUC through a CDSM, and the entity that performs the exam must include a variety of related data elements on Medicare imaging claims. "That's part of the twist to this," Culbreth says. "If the ordering physician doesn't use appropriate use criteria, the healthcare organization providing the service incurs financial penalties."

Certain emergencies are exempt from the mandate, because the CMS recognizes there can be situations when consulting AUC could delay action and jeopardize the health or safety of the patient. Providers in rural areas may also be exempt by filing a significant hardship exception with the agency.

The CMS is expected to release an approved list of CDSMs this summer, while AUC data elements and claims processing instructions should be finalized in November.

And therein lies the problem. "Nobody's

Continued on page 26

REIMBURSEMENT IMPACT ON OFF-CAMPUS IMAGING

HCPCS Code	Description	HOPPS Rate	PFS TC	% Change
71020	Chest X-ray	$60.80	$16.83	-72%
72147	MRI Chest/Spine	$454.32	$232.73	-49%
70450	CT Head/Brain	$112.49	$73.40	-35%
76700	Ultrasound Abdomen	$153.58	$83.07	-46%
73120	Hand X-ray	$100.61	$17.54	-83%
70551	MRI Brain Stem	$272.83	$156.46	-43%
72127	CT Neck/Spine	$235.95	$208.02	-12%

Because payments for the Physician Fee Schedule technical component (PFS TC) and Ambulatory Surgical Center System are typically lower than Hospital Outpatient Prospective Payment System (HOPPS) payments, calendar year 2017 Medicare Part B expenditures will likely be $330 million lower than previous estimates. *Courtesy of the Association for Medical Imaging Management*

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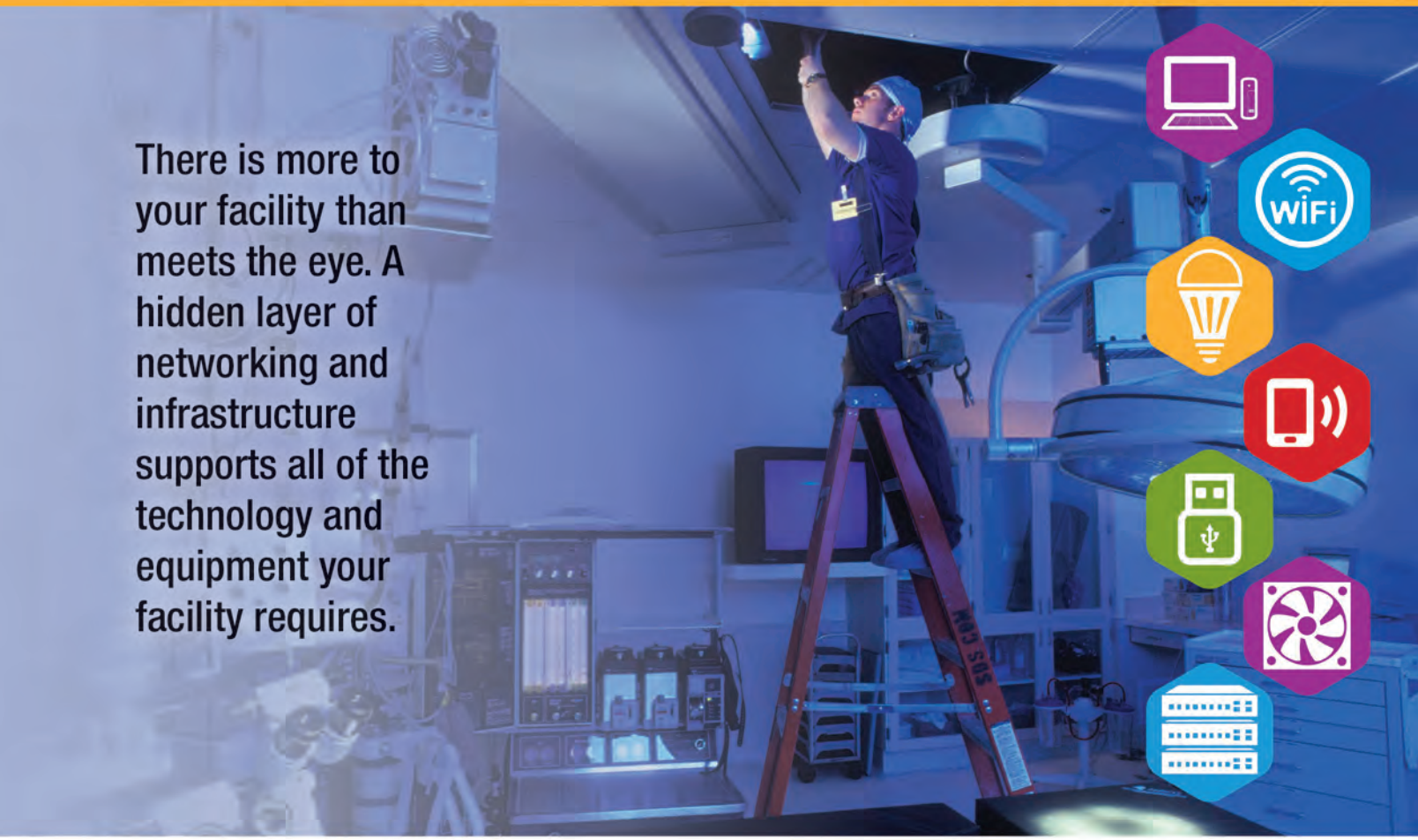

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Continued from page 24

arguing against appropriate use criteria, which could help avoid unnecessary care and costs," Culbreth says. "What has most radiology departments concerned is the timeline for compliance. In most hospitals, there's a 12- to 18-month lead time with IT projects, and many other competing priorities. Radiology departments can't request to get on the schedule now, provide details in November and expect something to be implemented by January. That's a completely unrealistic timeline."

According to a recent AUC/CDS readiness survey by the AHRA, 61 percent of providers have not implemented or begun to implement CDS, and 73 percent indicated it would take their organization six to 18 months to fully implement once the budget was approved.

While the CMS has not released any information on approved suppliers, it has said a CDSM may be "fully integrated with or part of a provider's certified electronic health record system, partially integrated or entirely outside of it."

The AHRA AUC/CDS readiness survey found that 30 percent of providers expect the total investment in clinical decision support to be over $100,000.

Culbreth says a CDSM that integrates with an EHR system would be ideal in the long term, but providers may need to consider a more basic solution to comply with the looming CDS mandate.

"Initially, this just impacts Medicare payments, so depending on your payer mix, it may not make sense to put capital dollars toward a project like this right now," Culbreth says.

Kathryn Keysor, director of economics and health policy for the American College of Radiology (ACR), says ACR Select, the organization's computer-based imaging decision support system, has submitted an application to the CMS to be one of the qualified CDSMs. It would be an online portal giving providers free access to ACR appropriate use criteria.

XR-29 PENALTY GROWS

NEMA (National Electrical Manufacturers Association) Standard XR-29-2013 went into effect Jan. 1, 2016, requiring providers to upgrade their CT scanners or face a 5 percent technical component reduction to reimbursement for diagnostic CT procedures performed in physician office and hospital outpatient settings using radiology equipment not in compliance. The reduction increased to 15 percent on Jan. 1, 2017.

An AHRA survey conducted in Q1 2016 found that 59 percent of its member facilities were compliant with XR-29 by the initial deadline; 67 percent expected to be compliant by January of this year.

Culbreth adds that with XR-29, as with AUC/CDS, it may be less financially penalizing for providers to take the lower reimbursement, at least initially. ●

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How to understand and successfully participate in new CMS bundles

In 2015, the U.S. Department of Health and Human Services set an ambitious goal of tying 50 percent of traditional, fee-for-service Medicare payments to an alternative payment model by 2018. To reach that goal, the Centers for Medicare & Medicaid Services (CMS) continues to expand its episode payment models. Also known as bundled payments, these provide a single payment for an episode of care, incentivizing providers to take accountability for both the cost and quality of care.

In 2013, the CMS launched the Bundled Payment for Care Improvement (BPCI) initiative that included four voluntary bundled payment models for 48 different conditions. As of April 2016, there were 1,522 participants, concentrated in two models. That's when the CMS launched its first mandatory bundled payment model—Comprehensive Care for Joint Replacement (CJR)—specific to total hip, partial hip replacement, and knee replacement surgeries with or without hip fracture, which are being performed at approximately 800 hospitals. At the end of 2016, it finalized rules for three new bundled payment models and one incentive-based payment model:

- Acute Myocardial Infarction (AMI) Model
- Coronary Artery Bypass Graft (CABG) Model
- Surgical Hip and Femur Fracture Treatment (SHFFT) Model
- Cardiac Rehabilitation (CR) Incentive Payment Model

Beginning Oct. 1, 2017, approximately 1,095 hospitals will participate in the AMI model, 1,096 hospitals in the CABG model, 865 hospitals in the SHFFT model, and 1,320 hospitals in the CR Incentive Payment Model. These mandatory bundles share many similarities, but they also have some important differences, as outlined in the chart on page 34.

"We don't think providers are going to have much trouble understanding CABG patient population," says **April Simon**, vice president of clinical consulting and analytics for HealthTrust. "We have been studying these patients for a long time, and we generally know what happens to these patients during their hospitalization and for 30 days post-procedure. The additional 60 days of follow-up is going to be new, but we don't see any initial surprises."

NAVIGATING THE UNKNOWN

But Simon does highlight the challenges in managing the AMI model. "Many times providers don't know what the next 90 days will hold," she says. "HealthTrust has done some research to give our members an idea of what those 90 days currently entail; however, this is new territory and the readmission rates in this patient population is very high for both what appears to be planned and unplanned readmissions."

The HealthTrust studies were presented at the American College of Cardiology annual scientific meeting. "Medicare Reimbursement Associated With AMI

With the proliferation of value-based payment models that make reducing complications and preventing readmissions a financial imperative, providers are wondering what's at stake for their facilities and IDNs.

"Many providers know that complications and readmissions impact their ability to be successful, but tracking this information and analyzing it in a meaningful way can be difficult, says **April Simon**, vice president of clinical consulting and analytics for HealthTrust. "Focusing on process changes also requires time and attention."

Simon has amassed a large body of scientific work that helps to quantify the cost of various complications associated with coronary artery bypass graft (CABG), percutaneous coronary intervention (PCI), implantable cardioverter defibrillator (ICD), ablation, total hip and knee replacement, and lumber spine fusion, among others.

Some of the biggest complications in terms of cost and frequency include blood loss requiring transfusion, renal failure, respiratory distress, infection and death. By focusing efforts on reducing frequently occurring and expensive complications, hospitals can reduce their overall costs.

"Savings will vary substantially, but we have worked with large hospitals that have saved millions of dollars on the index hospitalizations, alone" Simon says. "Reducing readmissions and post-acute care days can increase those amounts significantly."

Another benefit is improved patient satisfaction scores. "Everyone's happier, including the physician, when the intended outcome occurs without the unintended consequence," she says.

No hospital is immune to surgical complications; however, hospitals can put systems in place to minimize them. These include a robust mortality and morbidity review to track and trend their occurrence—and then protocols, algorithms and appropriate provider coverage to address identified issues, Simon adds.

Once facilities have visualized and quantified the problem, the next step is to engage the medical staff. "I've worked with physicians for more than 30 years, and I'm still amazed at their ability to rapidly analyze a situation and come up with solutions," she says. "Remember, physicians are trained to quickly assess situations and act to correct. They tend to be very systematic in their approach to ruling out options prior to acting. If you can get them to participate in the process and give them solid data that they trust, they will be very creative and come up with solutions."

To keep physicians involved, run efficient meetings and be willing to brainstorm and negotiate implementation strategies. Progress cannot be made without change, which won't occur without medical staff being on board.

> "This program is most successful when we get administrators, nursing directors and medical staff all singing off the same sheet of music. If we help them set up the right structure, they'll be able to solve the next set of problems on their own."
>
> **April Simon**, vice president of clinical consulting and analytics for HealthTrust

Hospitalization and 90-Day Post-Discharge," found that a percutaneous coronary intervention increases the cost to Medicare of an AMI index hospitalization, but it is associated with lower post-acute care cost. The study also identified key comorbid conditions associated with higher total Medicare cost during an AMI episode.

Another study completed by HealthTrust and its physician advisors, "Understanding Readmissions in Medicare Beneficiaries During the 90-Day Follow-Up Period Following an AMI Admission," found that heart failure, cardiac surgery, sepsis and respiratory illnesses are the four most common reasons for readmission, accounting for more than 35 percent of all readmissions. And, the following four conditions during the index hospitalization increased the likelihood of having a readmission by more than 30 percent: end-stage renal disease, not having a PCI during the index hospitalization, Type 1 diabetes and heart failure.

In addition to CJR, many hospitals are participating in the BPCI initiative that ends in 2018. In September 2016, the CMS published its second annual report detailing early outcomes from the voluntary program. According to the report, 11 clinical episode groups show potential savings to Medicare, including orthopedic surgery—likely due to a shift among participants from more expensive institutional post-acute care to less expensive home health care—and cardiovascular surgery—likely due to a reduction in readmissions and complications.

SUCCEEDING AT BUNDLES

To be successful under any bundled payment model, hospitals need to set up the right infrastructure that enables physician alignment and leadership; the availability of accurate, meaningful and actionable data; evidence-based standardization of care; patient engagement and navigation; care channel communication; and internal cost optimization, says **Todd DeVree**, director of bundled payment solutions at HealthTrust. It's a significant but necessary undertaking that requires support and collaboration across the organization.

"It truly takes a redesign of the care model," Simon says.

Simon and DeVree are currently working with several HealthTrust members to prepare them for the latest bundled payment initiatives. They collaborate on assembling the team, analyzing data, identifying opportunities for improvement, implementing the care redesign plan and providing feedback to keep the momentum going. After implementation, HealthTrust can also help track outcomes and recommend changes to the approach based on results.

"This program is most successful when we get administrators, nursing directors and medical staff all singing off the same sheet of music," Simon says. "If we help them set up the right structure, they'll be able to solve the next set of problems on their own."

The process is unique for each member, but always starts with the same step—physician and administration alignment.

"You can identify areas of improvement to redesign care, but if physicians aren't involved then execution of the plan will not be as successful," DeVree says.

By starting with physician and administrative alignment, facilities can work with key stakeholders to establish shared objectives and identify leaders of the initiative. Gainsharing agreements are sometimes used to incentivize, especially if physicians are not employed by the hospital, but they should never be the primary tool, DeVree says.

"HealthTrust recommends aligning around clinical data, the patient experience, and analysis of outcomes such as readmissions and complications—not just implant costs," he says. "If gainsharing is utilized, it should serve to focus physician attention on those areas." **S**

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SIDE BY SIDE: A Comparison of Mandatory Bundled Payment Models

	Comprehensive Care for Joint Replacement	Surgical Hip and Femur Fracture Treatment	Acute Myocardial Infarction	Coronary Artery Bypass Graft	Cardiac Rehabilitation
	CJR	**SHFFT**	**AMI**	**CABG**	**CR**
Launch date	April 1, 2016	Oct. 1, 2017			
Program length	Five years				
Episode length	90 days				
Episode initiator	Acute care hospital				
Clinical conditions	MS-DRG 469 and 470	MS-DRG 480–482	MS-DRG 280–282 and MS-DRG 246–251	MS-DRG 231–236	Cardiac rehabilitation (CR)/intensive cardiac rehabilitation (ICR) services following AMI or (CABG) episode of care
Payment mechanism	Fee-for-service with retrospective reconciliation on annual basis				Retrospective incentive payments
Target price	3 years of historical claims data, Medicare Part A and Part B, plus a discount factor of 3%; begins with regional/local blend and phased to 100% regional by year 4				$25 per CR service for first 11 services; $175 per service thereafter
Target price discount	1.5–3%				N/A
Stop-loss limit (for most hospitals*)	Program Year 1: None; PY 2: 5%; PY 3: 10%; PY 4 & 5: 20%	Program Year 1 & 2: 5% (or optional); PY 3: 5%; PY 4: 10%; PY 5: 20%	Program Year 1 & 2: Downside risk is optional**; PY 3: 5%; PY 4: 10%; PY 5: 20%	Program Year 1: None; PY 2: 5% (or voluntary); PY 3: 5%; PY 4: 10%; PY 5: 20%	N/A
Stop-gain limit	Program Year 1 & 2: 5%; PY 3: 10%; PY 4 & 5: 20%	Program Year 1 - 3: 5%; PY 4: 10%; PY 5: 20%			N/A
Quality measures	50%–THA/TKA complications; 40%–HCAHPS; 10%–patient reported outcomes	50%–THA/TKA complications; 40%–HCAHPS; 10%–patient reported outcomes	50%–30-day mortality rate; 20%–excess days in acute care; 20%–HCAHPS; 10%–RSMR voluntary data submission	70%–30-day mortality rate; 20%–HCAHPS; 10%–STS voluntary data submission	N/A
Number of participants	67 geographic areas/ 800 hospitals	67 geographic areas/ 865 hospitals	98 geographic areas/ 1,095 hospitals	98 geographic areas/ 1,096 hospitals	90 geographic areas plus selected hospitals/ 1,320 hospitals

* Rural and sole-community hospitals, rural referral centers, Medicare-dependent hospitals and hospitals determined to be episode payment model (EPM) volume protection hospitals within an EPM have lower stop-loss limits. **Hospitals that elect downside risk in Year 2 receive a lower discount of 2 percent on their target price, as opposed to 3 percent.

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- Competitive discounting

*To be followed by maintenance infusion

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The Incremental Cost of CABG Complications

Implementing a solution for complications with CABG (coronary artery bypass graft) surgery requires physician alignment and leadership, accurate and timely data that includes benchmarks, risk assessment, and evidence-based practices to support care redesign. HealthTrust has compiled the following information to help member hospitals set benchmarks.

Incremental cost of CABG complications

ACUTE RESPIRATORY DISTRESS
$16,297

NEW ONSET HEMODIALYSIS
$11,715

POSTOPERATIVE STROKE
$14,349

REOPERATION OF THORACOTOMY
$15,358

POSTOPERATIVE INFECTION
$30,100

SEPSIS
$49,849

SHOCK/HEMORRHAGE
$9,366

In-hospital complications are the primary driver of resource consumption post-discharge.

THEY INCREASE RESOURCE UTILIZATION BY 50% ($19,000) OVER BOTH INDEX HOSPITALIZATION AND POST-DISCHARGE

THEY ARE MORE LIKELY TO DIE

THEY MORE FREQUENTLY UTILIZE POST-DISCHARGE CARE

THEY ARE MORE FREQUENTLY
READMITTED

Identifying patients at risk of complications and mitigating bad outcomes are critical steps in value-based care models.

Source: Medpar 2015

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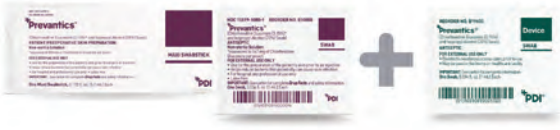

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1. Prevantics Clinical Compendium. PDI, Orangeburg, NY. 2012.
HealthTrust Contract # 2048

PATIENT CARE ENVIRONMENT OF CARE **INTERVENTIONAL CARE**

Beyond HCAHPS

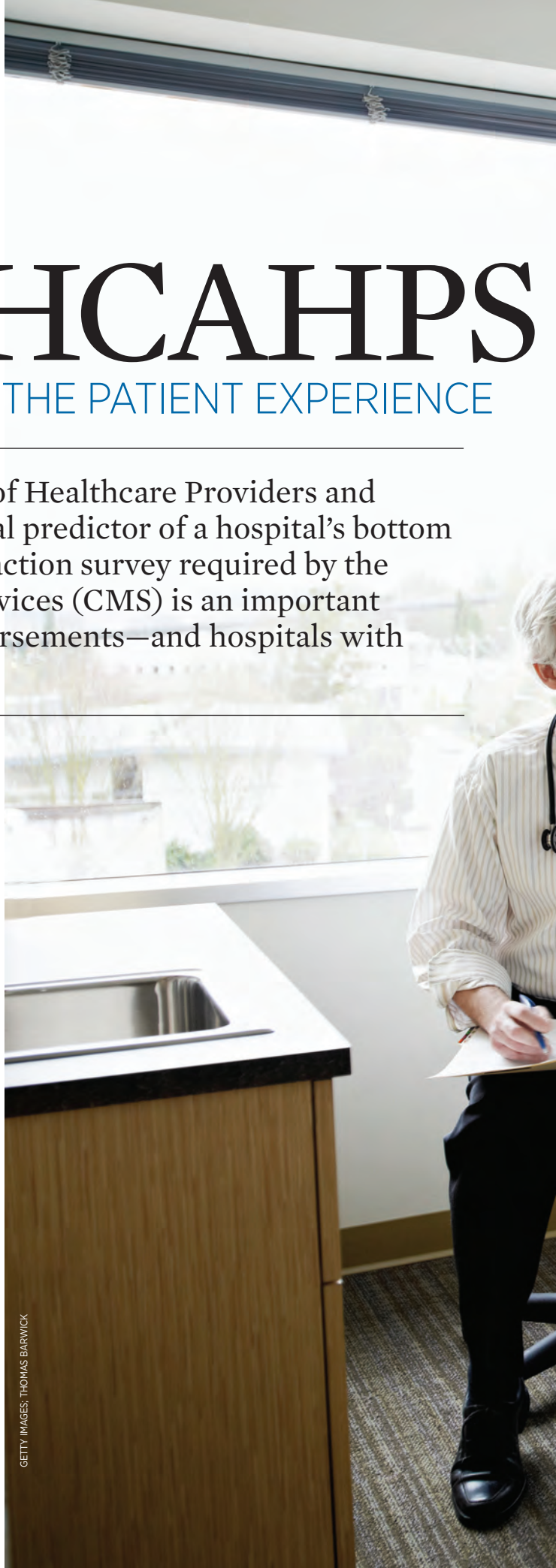
HOSPITALS AIM TO IMPROVE THE PATIENT EXPERIENCE

The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) has become a vital predictor of a hospital's bottom line. That's because the patient satisfaction survey required by the Centers for Medicare & Medicaid Services (CMS) is an important determining factor for agency reimbursements—and hospitals with lower scores are financially penalized.

Patient satisfaction rates make up 40 percent of the composite quality score that directly impacts the level of reimbursement that hospitals receive, says **Todd DeVree**, director of bundled payment solutions at HealthTrust. That score also determines whether hospitals are eligible for reconciliation payments. And just because patients in one area report high levels of satisfaction doesn't mean that's the case throughout the hospital. "The challenge for service lines is that HCAHPS is a hospital-wide measure," DeVree says. "To earn high overall patient satisfaction scores, hospitals must make it a top concern by fostering a patient-centered culture."

The National Quality Strategy, on which HCAHPS is based, focuses on six priorities that are opportunities to engage patients, caregivers and families:

1. Making care safer by reducing harm caused in the delivery of care
2. Ensuring that each person and family is engaged as partners in their care
3. Promoting effective communication and coordination of care
4. Promoting the most effective prevention and treatment practices for the leading causes of mortality, starting with cardiovascular disease
5. Working with communities to promote wide use of best practices to enable healthy living
6. Making quality care more affordable for individuals, families, employers and governments by developing and spreading new healthcare delivery models



GETTY IMAGES; THOMAS BARWICK

Scores

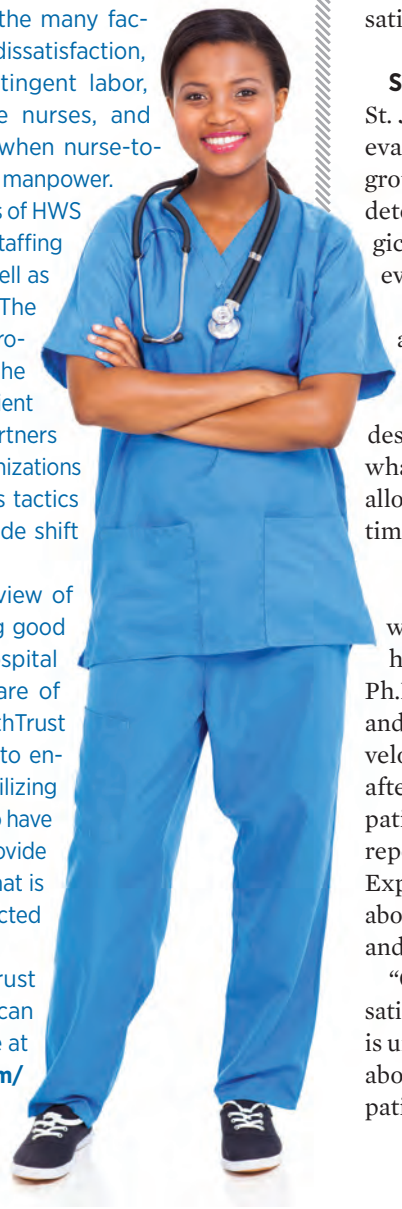
STAFFING AND PATIENT SATISFACTION

How HealthTrust Workforce Solutions Can Help

The patient experience is greatly impacted by the nurses and doctors who administer care. When patients perceive that their care providers are friendly, focused, helpful and attentive, they're more likely to rank their experience as positive than if they feel their care providers are harried, unfriendly, rushed or distracted. And medical professionals, like most employees, are better able to deliver that positive experience when they are appropriately trained, supported and given the time and tools needed to perform their jobs well.

"When healthcare professionals are empowered with the right skills, tools and environment to fulfill their mission, something incredible happens," says **Paula Phillips**, vice president of clinical operations at HealthTrust Workforce Solutions (HWS). "Patient satisfaction soars, employee collaboration takes hold and healthcare organizations deliver high-quality, sustainable care."

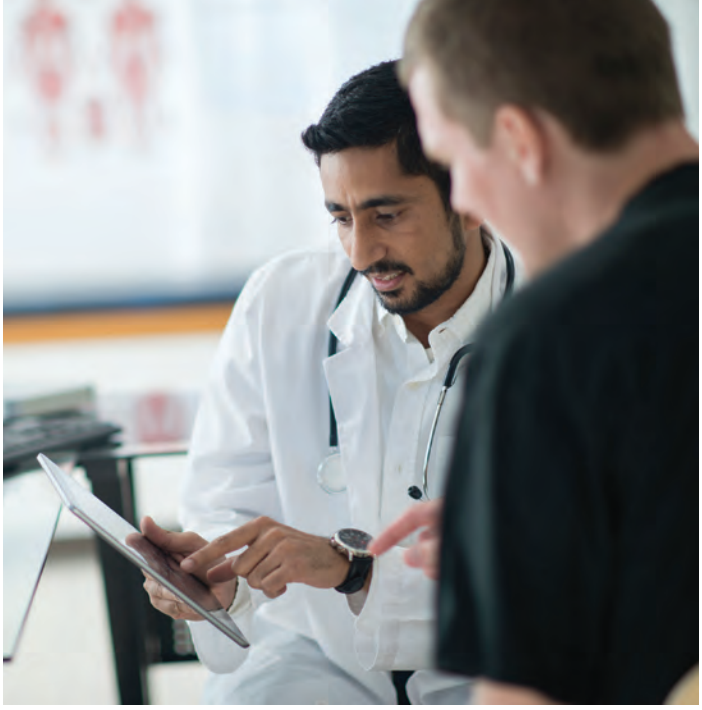
That can be a challenge given the many factors that can contribute to nurse dissatisfaction, including underutilization of contingent labor, resulting in overworked full-time nurses, and last-minute cancellation of shifts when nurse-to-patient ratios don't require the extra manpower.



The staffing and recruiting services of HWS can address these and other clinical staffing shortages and retention issues as well as executive recruitment challenges. The organization also provides training programs to ensure staff is providing the care and service that will improve patient experiences. For instance, HWS partners with the clinical leaders of client organizations to implement training that supports tactics such as hourly rounding and bedside shift reporting, Phillips says.

"We take a holistic, long-term view of career wellness and focus on taking good care of our people, just as our hospital partners focus on taking good care of their patients," Phillips says. "HealthTrust Workforce Solutions is committed to ensuring that client partners, when utilizing contract employees, receive staff who have the knowledge, skills and ability to provide an exceptional patient experience that is consistent with the standards expected of their facility."

To learn more about HealthTrust Workforce Solutions and how it can help improve the patient experience at your facility, visit **healthtrustpg.com/workforce**.



Here are a few approaches to implementing these priorities that are helping hospitals provide better care and improve patient satisfaction.

Standardize care for similar patient groups. At CHI Franciscan's St. Joseph Medical Center in Tacoma, Washington, a hospitalist evaluates prospective surgery patients to classify them into a group of patients with shared characteristics. Once patients are determined to be a fit for a specific group, or a preoperative surgical home, they are put on a pathway that will provide the best evidence-based care for their particular condition.

"Not all patients are the same," DeVree says. "Based on their age, BMI, comorbidities, activity level and even their expectations, we need to design care paths that are unique to them."

DeVree recommends using evidence and best practices to design patient-specific care paths and standardize care based on what has worked best for similar patient groups. This approach allows for providing the right care for the right patient at the right time—also known as personalized care.

Manage expectations. In addition to providing care pathways for similar patients, this type of grouping system can also help manage patients' expectations. **Gregory Brown**, M.D., Ph.D., orthopedic service line medical director for HealthTrust and an orthopedic surgeon at St. Joseph, is developing a model for predicting joint function after surgery. The predictive model combines patient demographics, comorbidities and self-reported outcomes to make those calculations. Expectations are measured by asking patients about their pain and activity levels—both current and expected a year after surgery.

Gregory Brown, M.D., Ph.D.

"One of the factors often associated with dissatisfaction after total knee replacement surgery is unmet expectations," Brown says. "By initiating a conversation about expectations preoperatively, we should be able to improve patient satisfaction."

One important feature of the predictive model is the identification of factors that patients can modify to improve their outcomes, such as weight loss, smoking cessation, diabetes management and designating a care partner. Discussing these potential modifications upfront may encourage patients to take a more active role in setting appropriate expectations and engaging in their own care. "Real satisfaction is achieved by meeting patient expectations," Dr. Brown says.

Educate patients. Not only should care providers understand patients' likelihood for a successful surgery and recovery—they should also be able to educate patients about how to achieve those ends. At St. Luke's Regional Medical Center in Boise, Idaho, spine center staff members hold a preoperative class to educate prospective patients about the operating experience and hospital stay. This class also prepares patients for their return home, including giving them exercises to improve mobility. But patients who undergo spine surgery at St. Luke's aren't only educated about the procedures before they occur. Postoperatively, like groups of patients reconvene to learn about the recovery process together. These meetings help them continue to be educated about their care and provide support to one another, boosting satisfaction with the overall experience.

Communicate proactively. Reconnecting with patients after a surgery or other procedure—rather than waiting for them to call with a problem or question—can also have a positive impact on their experience. "Check in on your patients regularly for a set period of time following their surgery," DeVree says. "Even when things are going as expected, patients appreciate the communication. Hospitals can also use this engagement to gather more intelligence that can be applied to setting expectations for future patients." **S**

CREATIVE USE OF COMMERCIAL PRODUCTS FOR SOME IMMEDIATE WINS

The care experience is impacted by everything within a healthcare facility—staff, food service, air quality, cleanliness and even the pillow they sleep on. Hospitals that understand the comprehensive nature of the encounter for patients can also better appreciate how product choices can positively affect satisfaction scores.

HealthTrust has contracts for a number of supplier products that can do just that. Among the options:

Minimizing noise pollution. Rubber flooring can help reduce noise as well as decrease leg fatigue for staff members, says **Vanessa Perutelli**, portfolio manager, strategic sourcing at HealthTrust. The use of cubicle curtains without the metal tracks can also reduce noise pollution.

For instance, AmSurg, a Nashville-based ambulatory surgery center management company, uses On the Right Track by Standard Textile (**HealthTrust Contract No. 500**), which eliminates the noise of the metal hangers on a typical track, Perutelli says. In addition, the product can be taken down or hung up by one person, without a ladder. That both saves time and encourages staff to frequently change the curtains for laundering, reducing the potential for hospital-acquired infections.

Reducing patient falls. When patients who are prone to falls must leave their room or their floor, there is always a risk to themselves and sometimes to the staff member who is guiding them. Steelcase has designed a recliner (**HealthTrust Contract No. 500171**) to be used for patient transport as well as lounging, Perutelli says. Using such furniture for dual purposes can help ensure patient safety, contributing to overall patient satisfaction.

Providing an atmosphere of hospitality. An HCA TriStar facility recently designed a spine and joint surgery recovery unit with a dining area on the floor.

"It is important for patients coming out of surgery to get moving as quickly as possible, so instead of having meals delivered to rooms, the hospital designed the floor to have a common dining area to encourage patients to walk to their food," Perutelli explains.

"This also gives the unit more of a hospitality feel, and this step has received positive reviews from patients and families."

Thirteen hospitals in one HCA division are also taking advantage of a new arrangement with Staples Promotional Products (**HealthTrust Contract No. 4064**), which will allow them to distribute branded gift blankets to patients at admission as a means "to convey warmth and concern for their welfare." It's part of a broader strategy to increase satisfaction and thus improve HCAHPS scores, says **Nikko Giovino**, manager of strategic sourcing, commercial products, at HealthTrust. The hospitals previously tried to provide the blankets on their own, but had no space to store the quarterly shipments or staff to keep up with the supply. With the new partnership, Staples manages regional warehousing of the branded blankets and delivers the requested number to each hospital on a monthly basis. In addition, Staples polywraps each blanket and includes a note from the hospital to ensure that each patient understands it is a gift, courtesy of the facility.

Bolstered by a Strategic Partnership, St. Francis Hospital Improves Heart Attack Outcomes

Heart attack patients in the Medicare population experience high mortality rates and generate substantial healthcare costs. In light of the upcoming Centers for Medicare & Medicaid Services bundled payment mandates for heart attacks and coronary bypass surgeries, the inSight Advisory–Clinical Data Solutions team at HealthTrust is proving to be a strategic asset for hospitals wanting to improve patient outcomes while ensuring cost effectiveness.

The team provides consulting and analytics in the areas of bundled payments, physician engagement, care redesign, clinical data and benchmarking, medical device management, patient engagement, patient-reported outcomes and cost optimization. St. Francis Hospital, a 245-bed acute care hospital that is part of the Bon Secours St. Francis Health System in Greenville, South Carolina, began working with the inSight Advisory–Clinical Data Solutions team to improve heart attack outcomes. St. Francis Hospital now outperforms most hospitals in the country.

AMBITIOUS GOALS FOR IMPROVEMENT

Just three years ago, St. Francis Hospital had rates of mortality and readmissions higher than national averages for acute myocardial infarction (AMI) episodes. Above-average rates of complications in heart attack patients who underwent percutaneous coronary intervention were in some cases associated with a reaction to the contrast agent used in the cath lab to help locate blockages. In severe cases, these patients could develop contrast-induced nephropathy (CIN), a condition carrying significantly higher risk of injury and death. Many providers who perform contrast procedures don't have systems in place to assist with the prevention of CIN, like St. Francis does.

To improve AMI outcomes, St. Francis set ambitious goals. Opportunities were identified to initiate protocols aimed at rapidly identifying and risk-stratifying heart attack patients, and providing timely notification and utilization of interventional procedures.

Another priority was managing AMI patients with other significant comorbid conditions that can impact clinical outcomes. For example, AMI patients who are diabetic will often have significant kidney disease. Use of contrast material in diagnosing and treating AMI can introduce stress to the kidneys, and impaired renal function and CIN carry significantly higher risk of death.

REDESIGNING THE PROGRAM

The quality team at St. Francis, led by **Christopher Smith**, M.D., medical director, in conjunction with **Ron Spencer**, RN, MSN, administrative director of cardiovascular and endoscopy service lines, worked to ensure rapid identification of AMI patients in the emergency department. The team also worked to inform the cardiology and nursing staff about risks associated with radiographic contrast materials and to put appropriate protocols and risk assessment tools in place to avoid as many adverse events as possible.

Meanwhile, HealthTrust's Vice President of Clinical Consulting and Analytics **April Simon**, RN, MSN, assisted team efforts to instill best practices in affecting cardiac outcomes. The team initiated an evidence-based algorithm for rapid identification of AMI patients and monitoring of clinical outcomes to guide team efforts, resulting in the implementation of evidence-based toolkits for reducing CIN and door-to-balloon time.

"HealthTrust and our cardiovascular team worked together to understand and address the underlying drivers of our clinical outcomes," Spencer says. "By identifying high-risk AMI patients and deploying evidence-based practices and toolkits, our program is now recognized for its best practices in quality and cost containment."

BETTER OUTCOMES

Collaboratively, the team was able to improve heart attack outcomes and reduce patients' risk for acute kidney injury from CIN. The community hospital is now in the upper 5th percentile among hospitals nationwide according to these outcomes:

- Door-to-balloon time reduced to 33 minutes
- Treatment of renal failure lowered in 2014 from $300,000 to less than $30,000
- Occurrence of acute renal failure fell to 2 percent, versus the national benchmark of 6 percent
- Readmissions dropped 3 percent, which is below the national benchmark
- Over a three-year period, 28 more saved lives than the average hospital ●

HealthTrust inSight Advisory–Clinical Data Solutions evaluates care delivery processes, identifies improvement opportunities and implements physician-approved clinical protocols—all of which can help maximize provider performance under bundled payment models. For more information, contact the inSight Advisory team at hpgsvc@healthtrustpg.com.

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- This offer is not valid for patients who are Medicare eligible and are enrolled in an employer-sponsored health plan or prescription drug benefit program for retirees (ie, patients who are eligible for Medicare Part D but receive a prescription drug benefit through a former employer)
- No enrollment form required. Pharmacist is required to provide a copy of and review GRANIX Patient Savings Program terms and conditions with the patient prior to redeeming this offer
- This is not an insurance program
- Up to $14,000 savings per calendar year
- Patients must be 18 years of age or older to participate
- Offer may not be used with any other discount, coupon, or offer
- Void if copied, transferred, purchased, altered, or traded and where prohibited or restricted by law
- Teva Pharmaceuticals reserves the right to rescind, revoke, or amend this offer at any time without notice
- Patients must show the pharmacist their primary insurance card and GRANIX prescription to participate in this offer

Find out more about the GRANIX Patient Savings Program or other available financial assistance.

Call 1-888-587-3263, Monday through Friday 9 AM to 8 PM ET.

TEVA Oncology

GRX-41061 March 2017

THE IMPACT OF EVIDENCE:

The Role of Clinical Evidence in Value-based Purchasing

The transformation of healthcare delivery relies on clinical evidence and physician engagement to drive value in the contracting process. That's why HealthTrust's physician services team conducts clinical evidence reviews in product categories that have a significant impact on patient care and are physician preference items. Input for these reviews comes from a large and growing group of practicing physicians from HealthTrust member facilities. Along with our physician advisors, HealthTrust boasts a number of clinical and non-clinical advisory boards, comprised of hands-on, facility-level representatives with expertise in their respective specialty who facilitate review of products, suppliers and emerging technologies. They also provide subject matter expertise and direction to HealthTrust's strategic sourcing team.

"HealthTrust's clinical evidence team seeks out new evidence, especially in terms of new technologies and pharmaceuticals," says **Robin Cunningham**, MSN, RN, HealthTrust's clinical director of physician services. "We research and analyze clinically relevant information and consult with appropriate physician advisors to confirm that information, especially when it falls in a clinically sensitive category."

Felix Lee, M.D., is a Sutter Health/Palo Alto Medical Foundation interventional cardiologist, assists in these efforts as cardiovascular service line medical director at HealthTrust. "We look at cardiovascular products such as wires, balloons and stents, review the clinical evidence on each, and present our findings to HealthTrust's purchasing and contracting groups."

"Eighty percent of physician decisions affect the bottom line with respect to the cost of healthcare delivery," Lee says. "If we want to impact cost with quality, physicians must be engaged."

His experience with HealthTrust as a physician advisor led to positive changes at the hospital where he practices—Good Samaritan in San Jose, California. This included increased physician engagement and establishing common standard protocols for his hospital colleagues. The catalyst for change centered on the hospital patient record. Working with 30 or 40 different order sets, he and his team at Good Samaritan quickly identified wide variability in how certain illnesses were treated, increasing lengths

Continued on page 47

Managing patients with von Willebrand disease is complicated. Their treatment doesn't have to be.

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von Willebrand Factor/Coagulation Factor VIII Complex (Human)

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wilate® helps to simplify VWD treatment with a natural 1:1 balance of VWF and FVIII that helps restore and maintain primary and secondary hemostasis for consistent and reliable control of bleeding.[1,2] And this 1:1 balance of factors in wilate® also means simple, straightforward dosing and very predictable measurements of factor activity, even after repeated infusions.[1,2]

wilate® **The Simple Solution to a Complicated Disease.**

Indications and Usage

wilate® is a von Willebrand Factor/Coagulation Factor VIII Complex (Human) indicated in children and adults with von Willebrand disease for on-demand treatment and control of bleeding episodes, and for perioperative management of bleeding.

wilate® is not indicated for the treatment of hemophilia A.

Important Safety Information

wilate® is contraindicated in patients with known hypersensitivity reactions, including anaphylactic or severe systemic reactions, to human plasma-derived products, any ingredient in the formulation, or components of the container.

wilate® is made from human plasma and carries the risk of transmitting infectious agents.

Please see adjacent page for Brief Summary of Prescribing Information.

www.wilateusa.com

References: 1. wilate® Full prescribing information. Hoboken, NJ: Octapharma; 2015. **2.** Berntorp et al. Haemophilia. 2009; 15:122-130.

octapharma®
For the safe and optimal use of human proteins

HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use WILATE safely and effectively. See full prescribing information for WILATE.

WILATE, von Willebrand Factor/Coagulation Factor VIII Complex (Human) Lyophilized Powder for Solution for Intravenous Injection Initial U.S. Approval: 2009

RECENT MAJOR CHANGES

Indications and Usage 8/2015

INDICATIONS AND USAGE

WILATE is indicated in children and adults with von Willebrand disease for:

- On-demand treatment and control of bleeding episodes
- Perioperative management of bleeding

WILATE is not indicated for treatment of hemophilia A

DOSAGE AND ADMINISTRATION

For Intravenous Use Only

- Use the following formula to determine required dosage:
  Required IU = body weight (BW) in kg x desired VWF:RCo rise (%) (IU/dL) x 0.5 (IU/kg per IU/dL)
- Adjust dosage and duration of the substitution therapy depending on the severity of the VWD, on the location and extent of the bleeding, and on the patient's clinical condition
- Dosing recommendations:

Type of Hemorrhages/Surgery	Loading Dosage (IU VWF:RCo/ kg BW)	Maintenance Dosage (IU VWF:RCo/ kg BW)	Therapeutic Goal
Minor Hemorrhages	20-40 IU/kg	20-30 IU/kg every 12-24 hours	VWF:RCo and FVIII activity trough levels of >30%
Major Hemorrhages	40-60 IU/kg	20-40 IU/kg every 12-24 hours	VWF:RCo and FVIII activity trough levels of >50%
Minor Surgeries (including tooth extractions)	30-60 IU/kg	15-30 IU/kg or half the loading dose every 12-24 hours for up to 3 days	VWF:RCo peak level of 50% after loading dose and trough levels of >30% during maintenance doses
Major Surgeries	40-60 IU/kg	20-40 IU/kg or half the loading dose every 12-24 hours for up to 6 days or more	VWF:RCo peak level of 100% after loading dose and trough levels of >50% during maintenance doses

In order to decrease the risk of perioperative thrombosis, FVIII activity levels should not exceed 250%.

DOSAGE FORMS AND STRENGTHS

WILATE is available as a sterile, lyophilized powder for reconstitution for intravenous injection, provided in the following nominal strengths per single-use vial:

- 500 IU VWF:RCo and 500 IU FVIII activities in 5 mL
- 1000 IU VWF:RCo and 1000 IU FVIII activities in 10 mL

CONTRAINDICATIONS

Do not use in patients with known hypersensitivity reactions, including anaphylactic or severe systemic reaction, to human plasma-derived products, any ingredient in the formulation, or components of the container.

WARNINGS AND PRECAUTIONS

- Anaphylaxis and severe hypersensitivity reactions are possible.
- Thromboembolic events may occur. Monitor plasma levels of FVIII activity.
- Development of neutralizing antibodies to FVIII and to VWF, especially in VWD type 3 patients, may occur.
- WILATE is made from human plasma and carries the risk of transmitting infectious agents.

ADVERSE REACTIONS

The most common adverse reactions (≥1%) in clinical studies on VWD were hypersensitivity reactions, urticaria, and dizziness.

USE IN SPECIFIC POPULATIONS

Pregnancy: no human or animal data. Use only if clearly needed.

Lactation: There is no information regarding the presence of WILATE in human milk, the effect on the breastfed infant, and the effects on milk production.

Pediatric Use: No dose adjustment is needed for pediatric patients as administered dosages were similar to those used in the adult population.

Geriatric Use: Although some of the subjects who participated in the WILATE studies were over 65 years of age, the number of subjects was inadequate to allow subgroup analysis to support recommendations in the geriatric population.

PATIENT COUNSELING INFORMATION

- Advise the patients to read the FDA-approved patient labeling (Patient Information and Instructions for Use).
- Inform patients of the early signs of hypersensitivity reactions including hives, generalized urticaria, tightness of the chest, wheezing, hypotension, and anaphylaxis. If allergic symptoms occur, advise patients to discontinue the administration immediately and contact their physician to administer appropriate emergency treatment.
- Inform patients that undergoing multiple treatments with WILATE may increase the risk of thrombotic events thereby requiring frequent monitoring of plasma VWF:RCo and FVIII activities.
- Inform patients that there is a potential of developing inhibitors to VWF, leading to an inadequate clinical response. Thus, if the expected VWF activity plasma levels are not attained, or if bleeding is not controlled with an adequate dose or repeated dosing, contact the treating physician.
- Inform patients that despite procedures for screening donors and plasma as well as those for inactivation or removal of infectious agents, the possibility of transmitting infective agents with plasma-derived products cannot be totally excluded.

To report SUSPECTED ADVERSE REACTIONS, contact Octapharma USA Inc. at 1-866-766-4860 or FDA at 1-800-FDA-1088 or *www.fda.gov/medwatch*

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Revised: August 2015

octapharma®

Continued from page 44

of stay by anywhere from three to 13 days. After evaluating the order sets and creating a new process to meet core measures, they were able to lower length of stay to only two-and-a-half days.

A METRIC A MONTH

Lee and his team pick one quality metric each month, along with recent cases to illustrate the impact of divergent practice patterns on patient outcomes. By engaging physicians around their own cases and sharing best practices, Lee has seen growing adoption of this metric-a-month approach at Good Samaritan Hospital. Over two years, 16 quality metrics have dramatically improved using this methodology, he says.

HealthTrust is fortunate to have access to rich data resources, including orthopedic and spine implant registry InVivoLink, Cunningham says. "It provides important insights that help us focus on the six dimensions of healthcare quality: safe, effective, patient-centered, timely, efficient and equitable care.

80%
of physician decisions will affect the financial bottom line with respect to the cost of healthcare delivery.

"Plus," she adds, "we have access to our members' most recent spend, which we use to determine market share for specific devices and technology. This market share information provides value in the contracting process, which results in savings for members."

HealthTrust member **Karla Barber**, RN, BSN, CVAHP, is system director of clinical value analytics for Centura Health, a 17-facility IDN based in Englewood, Colorado. Centura's previous collaboration revealed wide practice variation in osteobiologic utilization, but partnering with HealthTrust took it one step further by unveiling multiple opportunities to standardize.

The system's 2017 benchmarks include changing perioperative supply practice patterns, updating preference cards and reviewing the delivery model for spine care across the IDN. By working with one physician on standardizing just one type of implant and one kind of osteobiologic, the system has already identified over $1 million in potential savings.

The chief objective is to develop physician-led clinical standards of product use and incorporate them into everyday practice at Centura Health. "We are looking for workflow efficiencies and better ways to deliver the appropriate products for the appropriate cases across the system," Barber explains.

It's also important to look at the whole episode of care and determine how quickly physicians can return patients back to expected functionality and quality of life, Barber says.

Barber's role is to present the best possible evidence and research to decision-makers. "Physicians are scientists at heart," she says. "That's why it's important for us to gather all the best literature and analytics required to help them discuss and reach good clinical conclusions about products as inherently complex as osteobiologics. These kinds of discussions will bring about sustainable change.

"Cost and contracts are always debatable," Barber adds. "However, by focusing on data and science, we can zero in on the most important issue: a patient-outcomes-driven healthcare product."

DATA DRIVES DECISIONS

"When you work in a comprehensive wound care center, it's all about the data, which is constantly changing and being refined," says **Aron D. Wahrman**, M.D., MBA, MHCDS, FACS, plastic surgery section chief at Philadelphia Veterans Administration Medical Center and assistant professor of surgery at the University of Pennsylvania School of Medicine. "We must be up to speed on all the scientific journals devoted to new and current research in wound care, whether it's hyperbaric oxygen, vacuum-assisted closures or biologics. But it's exciting to be a part of the evolving world of biologics as well as to think of ways to improve the delivery of blood factors and utilize platelet-rich plasma."

Wahrman, who serves as a HealthTrust physician advisor, points to a whole matrix of care to consider. "Safety and efficacy are first, but there is a cost factor as well," he says. "The value proposition doesn't happen in a vacuum."

Cunningham says that during a recent cardiovascular meeting, HealthTrust physician advisors identified four categories having unnecessary variation in utilization and thus an opportunity to standardize on products offering the best overall value. Before moving forward with the contracting strategy, HealthTrust's Cardiovascular and Radiology advisory boards, the governing Supply Chain Board and the consulting HealthTrust physician advisors agreed that some of the categories held a conversion opportunity for members. Products selected for contract in these categories—carotid stents and embolic protection, peripheral angioplasty balloons, inferior vena cava filters and vascular closure assisted compression devices—met the clinical treatment needs of patients while creating value for HealthTrust member facilities.

"We define success as a comprehensive evidence review, supported by our physicians, which is helpful and meaningful to the HealthTrust membership," Cunningham adds. **S**

Visit the HealthTrust Physician Services section of the member portal to view the most recent clinical evidence reviews and other related resources.

Pint-sized Patients, **Full-sized Care**

MEETING THE NEEDS OF YOUNG PATIENTS AND THEIR FAMILIES

Children's hospitals play an important role in the healthcare delivery system, but only about 220 of them exist in the United States, or less than 5 percent of acute healthcare facilities nationwide. So when children need emergency care, parents often rely on a community hospital.

CHRISTINA KIFFNEY

How can these non-children's hospitals meet the needs of their youngest community members? And if they can't financially justify staffing a dedicated pediatric unit, what else can they do to be ready when sick children come through their doors?

Reggie Washington, M.D., has practical answers for hospital leaders asking these important questions. The chief medical officer of Rocky Mountain Hospital for Children (RMHC) at Presbyterian/St. Luke's Medical Center in Denver, Colorado, for the past six years, Washington has dedicated his career to pediatrics. He has been a private practice pediatric cardiologist for 30 years with HealthONE, an affiliation of seven hospitals in the Denver metropolitan area, and serves as a clinical professor in the department of pediatrics at the University of Colorado Health Sciences Center.

MAKE A PLAN

According to the April 24, 2013, issue of the *International Journal of Emergency Medicine*, children account for almost 20 percent of all emergency department visits in the United States. However, many emergency departments in community and rural hospitals lack specialized pediatric care. Developing a pediatric plan is the first step for community hospitals looking to increase their skill set in accommodating and caring for young patients.

"Plan ahead for the worst that could happen, just like you would with any disaster plan," Washington advises. "A sick child coming in may deteriorate very quickly, so you have to be ready for anything."

To be prepared, a facility must take three major steps:

Continued on page 50

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*Primary effectiveness endpoint in the Global SFA Real-World Registry is defined as freedom from TLR at 12 months. The primary safety endpoint is defined as Freedom at 30 days from TVR, major index limb amputation, and device- and procedure-related death (VIVA safety endpoint). Additional subgroup analyses were performed to evaluate the outcomes by gender, long lesion, and ISR subgroup. For the long lesion subgroups, freedom from TLR at 12 months by subject count was 93.2% (n=123/132). Freedom from primary safety events at 30 days by subject count was 99.3% (n=138/139).

Primary effectiveness endpoint of the LUTONIX® Long Lesion Study is primary patency defined as freedom from CEC-adjudicated clinically-driven TLR and from core-lab adjudicated binary restenosis at 12 months. Total of 102 subjects were evaluable for the primary effectiveness endpoint analysis. The Kaplan-Meier estimates primary patency at 12 months (day 365) is 68.9%. The primary safety endpoint is defined as Freedom from all-cause peri-procedural (≤30 days) death and freedom at 1 year from index limb amputation (above or below the ankle) and index limb reintervention. Total of 107 subjects were evaluable for the primary safety endpoint analysis. Freedom from primary safety events by Kaplan Meier estimates for 12 months (day 365) was 81.8%.

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1. MAKE AN IDENTIFICATION CHECKLIST

In 2009, the American Academy of Pediatrics (AAP), the Emergency Nurses Association and the American College of Emergency Physicians created a checklist designed to guide emergency departments in deciding if they're prepared to treat children, which includes:

- Appointing a pediatric physician and nurse coordinator
- Integrating a pediatric patient care review process into the emergency department's quality improvement plan
- Implementing ways to develop professional competencies in a variety of areas, such as airway management, pain assessment and treatment, and critical area monitoring—and creating ways to track those competencies
- Establishing awareness of unique pediatric patient safety concerns in policies and practices, such as making sure everyone knows to weigh children in kilograms and record that figure in a prominent place on the medical record

2. INVEST IN TRAINING

Lack of experience with pediatrics, challenges with performing technical procedures on children and difficulties calculating medical doses for children can all contribute to patient safety errors. Talk to your staff to determine who, if anyone, has experience working with pediatric patients. Make sure your nurses are trained in pediatric advanced life support, and ensure some nurses have specific training in pediatric emergency care, suggests **Shareen Taylor**, director of obstetrics and perinatal services at Twin Cities Community Hospital in Templeton, California.

3. GET THE RIGHT EQUIPMENT—AND KNOW HOW TO USE IT

Do you have the necessary supplies and medicine in your emergency department to stabilize and treat pediatric patients? Does your supply chain budget accommodate the purchase of those supplies? According to the AAP, hospitals need resuscitation carts that contain "readily accessible, easily identifiable, necessary weight- or length-appropriate emergency drugs and resuscitation equipment with easily readable lists of pediatric drug dosages." In addition, the AAP recommends that facilities have defibrillators designed for pediatric use, scales and stadiometers for both infants and older children, and thermometers and blood pressure monitors for the full spectrum of pediatric patients. But hospitals don't just need to keep these materials in stock—nurses and physicians must know how to use them.

"Facilities need to have the necessary equipment and training, and practice simulation of high-risk, less-frequent events for pediatric patients," Taylor says.

ASK FOR HELP

Rocky Mountain Hospital for Children has more than 200 pediatric subspecialty physicians on staff and, as part of the HealthONE system, helps better position affiliated hospitals to care for a child who arrives unexpectedly. For example, RMHC offers affiliates a detailed training manual telling them what equipment to keep in stock, where to keep it and how often it needs to be replaced.

Washington notes that his team also checks in with affiliated hospitals every two years to make sure they're still on track. "We want them to always be prepared for child-related emergencies," he explains.

Washington encourages leaders at hospitals not yet affiliated with a children's hospital to seek out such connections. HCA, for example, can connect community hospitals within its system to children's hospitals for help, and hospitals in other networks can contact their corporate leaders for assistance.

"Whatever you do, definitely reach out and benefit from others' expertise," he says.

Doctors and nurses working at hospitals in remote areas can also connect to pediatric specialists at other facilities via telemedicine technology using a live, interactive audiovisual link. Together, they can decide the best way to proceed in caring for a child—including evaluating the necessity of transporting the patient to another facility.

"A benefit of telemedicine is that staff at a non-children's hospital can start treatment while waiting for a transfer team," Washington says.

KNOW YOUR LIMITS

No matter how well prepared community hospitals may be, there will be times when they need to transfer patients to a children's hospital for more specialized treatment.

The Children's Hospital Association reports that 11 percent of inpatient admissions to children's hospitals are patients who are transferred from community hospitals.

Washington suggests a list of possible situations when hospital staff might decide it's better to transfer a young patient: severe infections, unstable heart rate or blood pressure, unconscious without a defined cause, and the need for a subspecialist (such as a pediatric cardiologist or pediatric neurologist) only available at a children's hospital.

> "Plan ahead for the worst that could happen, just like you would with any disaster plan."
>
> **Reggie Washington**, M.D., CMO, Rocky Mountain Hospital for Children

RMHC has developed a set of criteria making it clear when a child requires transfer, Washington says. When it forms new affiliate relationships, it also ensures those hospitals set up patient transfer agreements. That way, when the need to transfer a patient arises, an established protocol is already in place.

"A lot of time and effort is saved when no one has to figure out who to call or what to do on the spot," Washington says. "Those seconds can really count when it comes to a young patient's health." ●

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The Impact of the Baby-Friendly Hospital Initiative

The World Health Organization and the United Nations Children's Fund launched the global Baby-Friendly Hospital Initiative in 1991 "to encourage and recognize hospitals and birthing centers that offer an optimal level of care for infant feeding and mother/baby bonding." According to the Baby-Friendly USA website (www.babyfriendlyusa.org), 393 U.S. hospitals and birthing centers in 49 states and the District of Columbia hold the Baby-Friendly designation, and each year approximately 772,000 births, or about 19 percent, occur at those facilities.

Hospitals that complete a lengthy program and successfully implement the

Ten Steps to Successful Breastfeeding and the International Code of Marketing of Breast-milk Substitutes earn the Baby-Friendly Hospital designation. They set policies and train their staff to help new mothers bond with their infants and take the steps to establish and support the practice of breastfeeding.

There are definite advantages to being a Baby-Friendly hospital, including providing a competitive advantage. The designation can also help provide a consistent message to the community on population health issues, such as the healthy growth and development of infants, protection from infectious diseases and prevention of chronic diseases.

"Being baby-friendly is part of our commitment to the families who choose to deliver at our facility," says **Todd Rumsey**, M.D., chairman of the board of the Dupont Hospital in Indiana and a HealthTrust physician advisor. His hospital is currently working its way through the official Baby-Friendly Hospital designation process.

The health benefits associated with breastfeeding are some of the biggest selling points for many Baby-Friendly hospitals. For example, staff in the four

Baby-Friendly hospitals that are part of Livonia, Michigan-based Trinity Health are pleased to be tasked with helping mothers establish breastfeeding with their infants. "We know that it gives those babies a gift for a lifetime," says **Susan Garpiel**, director of perinatal clinical practice for Trinity Health.

From a supply chain perspective, however, the Baby-Friendly Hospital Initiative can be complicated to execute. According to **Nancy Preston**, interim director of strategic sourcing clinical products and services for Trinity Health, the initiative essentially required that hospitals change their relationships with the suppliers who sell formula.

In the past, representatives of formula companies would offer a lower price on formula in exchange for the opportunity to market their products to new mothers who were still in the hospital with their babies. Representatives would bring in free products for the nursing staff to hand out to the new moms.

> "Being baby-friendly is part of our commitment to the families who choose to deliver at our facility."
>
> **Todd Rumsey**, M.D., chairman of the board of the Dupont Hospital in Indiana

Baby-Friendly hospitals discourage this practice, particularly since it turns nurses into de facto advertisers. So Trinity Health reworked its relationship with the supplier to continue purchasing formula to meet the nutritional needs of infants who are not breastfed for medical or other reasons.

"We are now paying for the formula, and we no longer allow that promotional practice," says Preston, explaining that the Trinity Health system refers to this as "fair market value purchasing."

It's a little tricky, however, because the move to fair market value purchasing challenges hospitals to calculate a fair market price for formula that will meet the requirements of the Baby-Friendly program in balance with the need to contain costs. The program prefers that hospitals determine the fair market price of formula according to their geographic location. But healthcare systems usually purchase discounted products through their group purchasing organization contract in lieu of having their hospitals individually research the cost of formula before making the purchase.

"The initiative is very important, but some of the criteria may need to be reconsidered," Garpiel adds. ●

PHYSICIAN Q&A:
Felix Lee, M.D.

Crucial Component for Change: A Strong Physician Champion

Felix Lee, M.D., discusses the importance of physician engagement in establishing best practices, the role of physician advisors in HealthTrust's clinical contracting strategy, and his goals for educating and enlisting physician champions on a local level.

What are some of the reasons you chose to specialize in interventional cardiology?

I originally majored in the neurosciences during college, but my interests turned to interventional cardiology during medical school after I witnessed the devastating, near-permanent effects of stroke. In contrast, during my cardiology rotation I realized what a profound effect something like timely primary balloon angioplasty and stenting could have in mere minutes, bringing patients suffering a massive heart attack back to full health.

As someone with a penchant to micromanage, I also realized no other specialty gives you the ability to pharmacologically control and manage so many aspects of the circulatory system. And that's even before bringing in our armory of devices such as balloons, stents, pumps, oxygenators, pacemakers and defibrillators into the picture.

What kind of changes have you seen in the field of interventional cardiology since you first started your practice?

For the longest time, interventional cardiology was stuck at a plateau in terms of interventional device technology. We were only making incremental improvements with different stent designs and stent metals. But now, we have restenosis-defying drug-eluting stents, heart-supporting catheter-based left ventricle assist devices and blood-oxygenating ECMO devices. And advanced procedures using these devices are no longer restricted to major tertiary care centers with heart transplant programs; they're also being done at our local community hospitals.

We have also seen many advances in how we treat structural heart disease over the past decade, including the ability to replace heart valves with minimally invasive, catheter-based valves. What used to require median sternotomy and full circulatory arrest can now be done with a catheter-based approach on a moderately sedated patient in a fraction of the time. A procedure that used to take five or six hours can now be performed in less than 90 minutes.

Technology advances have also allowed us to perform many procedures in a timelier fashion. That is the case with many of our STEMI (ST-segment elevation myocardial infarction) programs in which we treat all heart attacks as rapidly as possible. When patients come in with an acutely closed artery, our goal is to get them on a table, access their radial artery, perform coronary angiography, extract intra-arterial clot and deploy a stent—all within 60 minutes, as opposed to the national goal of 90 minutes. Even before the procedure is done, many of our patients feel better immediately. Some even want to hop right off the table, with their wristband in place, and return to work that afternoon.

Miniaturization has also allowed us to develop devices such as cardiac defibrillators that can be implanted underneath the skin to treat patients at high risk for sudden death with either severe heart failure or ventricular arrhythmias. Because defibrillators are recording and monitoring the heart rhythm 24/7, and have the ability to shock people out of a lethal arrhythmia even before they lose consciousness, they're the best possible insurance policy.

As equipment and devices continue to get smaller, they are helping to decrease bleeding complications and mortality. Patients having a sudden cardiac event historically had a mortality rate of 80 to 85 percent, but today survive 50 to 60 percent of the time, getting through their acute illness and on to an improved quality of life.

ISTOCK

Felix Lee, M.D., is a Sutter Health/Palo Alto Medical Foundation interventional cardiologist and serves as medical director of cardiovascular services at HCA's Good Samaritan Hospital in San Jose, California. He also serves as the cardiovascular service line medical director at HealthTrust. He earned his medical degree, with multiple awards and honors, from the University of Pennsylvania School of Medicine in Philadelphia. His interests include cardiac catheterization, coronary angiography, coronary intervention and stenting, and engaging his fellow physicians around quality improvement projects.

What are your responsibilities as Good Samaritan Hospital's medical director of cardiovascular services?

My duties include introducing new programs, ensuring the quality of current programs and improving practice management. Good Samaritan, like many other hospitals, is experiencing the growing pains of integrating electronic medical records (EMRs) with computerized physician order entry. As such, I've been involved in the design and implementation of our EMR order sets to make the physician experience easier and with as few clicks as possible.

One of my biggest responsibilities is in the area of continuing education. I enjoy getting physicians together in a public forum for a healthy debate so everyone can see the level of evidence behind each opinion. We have championed our own unique style of "edu-tainment" where we combine medical evidence-based education in a lively, entertaining debate format. This keeps our audience interested and, ultimately, helps us adopt best practices.

What's an example of how this format has helped you adopt a best practice?

We've been extremely successful at redirecting many of our interventional cardiologists from a transfemoral approach for percutaneous coronary interventional procedures to a transradial one.

The majority of interventional cardiologists at our hospital are 50 years or older. Most of our training and practice have been with the traditional femoral approach, allowing us to take a fairly straightforward direct route to the heart, using large catheters through which wires, balloons and stents can rather easily pass for successful interventions. However, about 20 years ago, a number of pioneering physicians started to champion the radial access approach. Although the radial artery in the wrist is considerably smaller than the femoral artery in the groin, radial access bleeding after an intervention is easier to manage, monitor and control. Multiple large studies have since confirmed that a radial approach is much safer for patients than the femoral approach and better tolerated, which ultimately translates into fewer complications and lower mortality.

It became obvious to a number of us at Good Samaritan Hospital that moving to this approach would ultimately be the best practice. We knew we had the tools and the capabilities; now we just needed physician engagement. The difficulty in moving to the new technique was changing ingrained ways of doing things and the steep learning curve.

Given how busy we all were in our daily practices, we realized we had to make this change slowly and in a physician-friendly manner. Several of us started to adopt the radial approach until we reached 10 percent of our cases. We then held conferences and presented cases to highlight the benefits. We did not dictate anything to anyone, but physicians are competitive by nature and most did not want to be left behind the curve.

The result? In two years, we moved the needle for radial access from 5 to 6 percent to 75 percent adoption (65 percent of our interventions). Not only has it been a best practice for treating patients, it has helped the hospital's bottom line. And that is how we achieved the ultimate value formula: interventional care with better quality and increased cost savings.

What role do physician advisors play in HealthTrust's clinical contracting process?

The Physician Advisors Program was the brainchild of CMO **Michael Schlosser**, M.D., to engage practicing physicians and solicit their input on products' strengths and failings. The idea is to bring professionals from all different kinds of hospital practice settings together to discuss what the clinical evidence has to say. We determine if a new product is better than one already on contract or if it presents an advantage that we could translate into better care and cost savings. A device that's premium-priced without premium data backing it up generally won't fly with our advisors. Is a $3,000 stent really better than a $300 stent? Our decision to recommend the adoption of a new product has everything to do with whether or not it will bring value to patients.

We hold teleconferences and quarterly on-site meetings in Nashville to discuss new devices, clinical trials, product recalls and how physician practices are being affected. The HealthTrust physician services team does a great job of reviewing hundreds of studies and summarizing the information in ways that are meaningful to physicians. HealthTrust ultimately uses our evidence-based findings to make better contracting decisions.

Ten years ago, physicians never participated in these discussions, as our professional fees weren't tied to product costs. Our preference was for whatever was newest regardless of the cost. But with reimbursement amounts decreasing and the advent of episode-based bundled payments, many physicians now realize they have skin in the game and need to be a part of the conversation about product selection and utilization with an eye on costs. If physicians are wasteful, nothing will be left in the bucket for physician payments.

As cardiovascular service line medical director for HealthTrust, what are your goals for educating physicians to be leaders in the clinical contracting process?

My job is to help manage change in a collaborative manner. Disruptive changes bring efficiencies and clinical benefits in the long run, but we're still working to get past the upfront hurdles. I want to help our regional physician advisors learn how to become champions of value-based care in their community.

Physician are more likely to trust and listen to other physicians; we have credibility with one another because we work in the same clinical trenches.

When we find a particular product or approach that is significantly better than what we presently have, we need to evangelize its use. I want physician advisors to be the ones to get the word out. These trusted local relationships are what will drive best practice consensus and accelerate adoption of technology that is truly the best on the market. ●

Dr. Lee will be presenting "A Physician-led Approach to Developing a Clinical Contracting Strategy," at the 2017 HealthTrust University Conference in Las Vegas, Nevada.

Advancing HealthTrust's Clinical Agenda

Continued from page 4

Surgeons, American College of Cardiology and Heart Rhythm Society, to name a few.

Perioperative Pain Management Summit

Dr. Schlosser, along with **David Osborn**, SVP of inSight Advisory Solutions, and an internal planning team, hosted a summit in April for the staff of five health systems interested in developing a strategic and systematic approach to perioperative pain management. Each system had physician, pharmacy, nursing and healthcare executive participation.

The summit served as a forum for participants to review literature and best practices in multimodal pain management, interact with subject matter experts in pain control and related systems, share experiences of successful protocol adoption and implementation, and develop specific action plans and tools to execute a multimodal approach for their health system. (*Check out the Q3 2017 issue for highlights.*) We look forward to checking in with these health systems in the near future to report on their implementation success and potential challenges.

Orthopedic Cadaver Course for Executives

Understanding the importance of orthopedic surgery to a healthcare organization, HealthTrust created an orthopedic education series designed to show key hospital leaders how the most common orthopedic surgeries are performed. Our second event of this kind was held in April and participants learned about the role of technology and implants as well as some of the sources of variation.

Orthopedic surgeons from HealthTrust's Physician Advisors Program guided these members through a hands-on experience in an orthopedic cadaver lab. Learning modules included shoulder (traditional and reverse), total knee arthroplasty and knee arthroscopy, led by HealthTrust physician advisors **Greg Brown**, M.D., **Craig Morrison**, M.D., **Daniel Moynihan**, M.D. and **Matthew Willis**, M.D.

I invite all of you to take advantage of the growing library of resources within the "Physician Services" section of the HealthTrust member portal. There you can view and download documents and resources to assist with physician conversations as well as your facility's contract compliance, standardization and savings initiatives.

Ed Jones
President/CEO, HealthTrust

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HealthTrust Offers New Service Solution for UV Light Disinfection

As a follow-up to *The Source* Q1 story on ultraviolet light disinfection, HealthTrust offers a service solution with Diamond Restoration (**Contract No. 7294**). Diamond Restoration provides general microbial disinfection and control services through the use of mobile UV disinfection equipment by a certified UV technician. With a service contract, there is no need to tie up capital to purchase costly equipment or additional employees to operate and manage it. Diamond Restoration is responsible for all maintenance and repairs, and equipment upgrades as new technology becomes available. With its electronic logging system, Diamond Restoration provides continuous data to identify opportunities to improve existing infection prevention protocols.

HealthTrust Physician Advisors Present at Industry Conferences

HealthTrust's physician advisors regularly present at major industry conferences, including two in March alone. At the 2017 meeting of the American Academy of Orthopaedic Surgeons in San Diego, California, **David Jevsevar**, M.D., vice-chair of the department of orthopaedics at Dartmouth-Hitchcock Medical Center (Lebanon, New Hampshire), made an oral poster presentation about predictors of adverse events during index hospitalization for total hip and knee replacements, and what providers need to know to be successful.

A few days later, **Ari Kugelmass**, M.D., chief of the division of cardiology for Baystate Health (Springfield, Massachusetts), was in Washington, D.C. at the 66th Annual Scientific Sessions and Expo of the American College of Cardiology to make an oral poster presentation on understanding readmissions in the 90 days following treatment for acute myocardial infarction (heart attack). **Phillip Brown**, M.D., past chairman of the department of surgery at HCA's Centennial Medical Center in Nashville, Tennessee, also shared a poster abstract on the impact of complications on resource utilization associated with coronary artery bypass graft surgery.

HEALTHTRUST EDUCATION

Visit **healthtrustpg.com/education** to view webinar details, descriptions and registration information as well as recordings from recent past offerings. Or, contact us at **university@healthtrustpg.com** to be added to our email list.

(Note: Content specific to products/services/contract details is still housed on the secure HealthTrust member portal.)

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The HealthTrust Physician Services team regularly reviews all U.S. Food and Drug Administration (FDA) 510(k) approvals and premarket approvals related to physician preference products and those used in a diagnostic setting.

The FDA Probing Rise in Cardiac Events With Absorbable Stent

THE FDA IS INVESTIGATING an increased rate of major adverse cardiac events in patients receiving Abbott Vascular's Absorb GT1 Bioresorbable Vascular Scaffold (BVS), when compared to patients treated with the approved metallic XIENCE drug-eluting stent. The BVS, implanted during a coronary stenting procedure, gradually dissolves and is fully absorbed by the body in three to four years. The FDA approved the BVS in July 2016.

The FDA's initial review of two-year data from the ABSORB III trial shows an 11 percent rate of major adverse cardiac events in patients treated with the BVS at two years, compared with 7.9 percent in patients treated with the previously approved Abbott Vascular's metallic XIENCE drug-eluting stent ($p = 0.03$). This study also shows a 1.9 percent rate of developing thrombosis within the BVS versus 0.8 percent within the XIENCE stent at two years. These observed higher adverse cardiac event rates in BVS patients were more likely when the device was placed in small heart vessels.

An additional preliminary analysis of ABSORB III data suggests improved clinical performance and a lower rate of complications associated with BVS implantation when healthcare providers follow recommended implantation methods. The FDA recommends selecting appropriately sized heart arteries for BVS implantation (e.g., avoiding BVS use in small heart vessels) and following methods to properly implant the device against the vessel wall.

The FDA is working with Abbott Vascular to better understand the cause of the higher cardiac event and device thrombosis rates in patients treated with BVS compared to the XIENCE stent.

Healthcare professionals are urged to report any problem with the BVS to the FDA MedWatch program.

The FDA Updates Recommendations for Heater-Cooler Device Use

SINCE THE Q3 2016 ISSUE'S discussion of the potential concern with heater-cooler devices (oxygenator heat exchangers, cardioplegia heat exchangers and warming/cooling blankets), the FDA has updated its safety recommendations to provide new information about *Mycobacterium chimaera* (*M. chimaera*) infections associated with the use of the LivaNova PLC Stockert 3T Heater-Cooler System in U.S. patients who have undergone cardiothoracic surgeries.

M. chimaera, a type of nontuberculous mycobacterium (NTM) classified as a slow grower, may cause serious illness or death. The FDA believes *M. chimaera* infections associated with the 3T are rare. However, they are difficult to detect because infected patients may not develop symptoms or signs of infection for months to years after initial exposure. NTM organisms can be found throughout nature, including in tap water. In rare cases, the organisms can cause infection in already-sick patients or those with compromised immune systems.

The FDA is evaluating strategies for mitigating infections associated with heater-cooler devices. The FDA's current analyses have identified potential root causes of contamination, which include NTM transmitted through the air (aerosolization), laminar flow disruption and heater-cooler design.

The FDA issued the following recommendations regarding the use of heater-cooler devices.

- Adhere to the cleaning and disinfection instructions in the device labeling.
- Never use tap water to rinse, fill, refill or top-off water tanks. Use only sterile water or water that has been passed through a filter of less than or equal to 0.22 microns.
- Direct the device's vent exhaust away from the surgical field to mitigate the risk of aerosolizing the water into the sterile field and exposing patients.
- Develop and follow a comprehensive quality control program for regular cleaning, disinfection and maintenance of heater-cooler devices according to manufacturers' instructions.
- Immediately remove from service heater-cooler devices that show discoloration or cloudiness in the fluid lines/circuits, because this can be a sign of bacterial growth. Alert infection control officials to perform follow-up measures.

HealthTrust has posted a Clinical Evidence Executive Summary about the issue on the member portal. HealthTrust will launch a perfusion contracting project this summer, and HealthTrust physician advisors will be involved in the contracting process.

Visit the Physician Services page on the HealthTrust member portal for more FDA approvals and clinical evidence reviews.

In January, the FDA issued a final rule banning powdered surgeon's gloves, powdered patient exam gloves and absorbable powder for lubricating surgeon's gloves, citing evidence that such gloves posed serious risks to patients, including airway and wound inflammation, post-surgical adhesions and allergic reactions.

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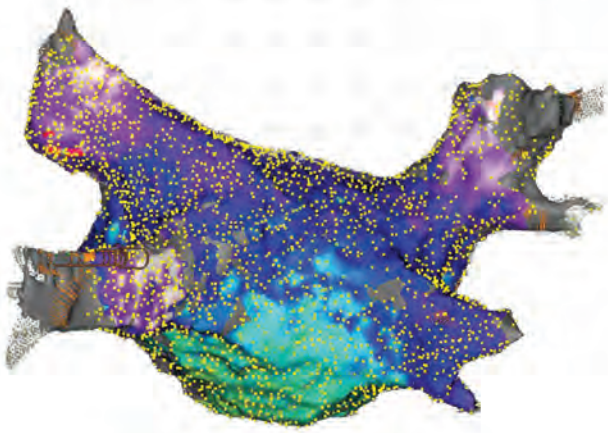

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- Green points are impedance data points.
- Orange points are magnetic data points.

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**For greater precision vs. 1.0-robot testing.

1. Ptaszek, L., Moon, B., Sacher, F., Jais, P., Mahapatra, S., & Mansour, M. (2015). A novel tool for mapping multiple rhythms from a single mapping procedure. Poster abstract P849. *Europace, 17*(Suppl 3), iii115.
2. Ptaszek, L., Moon, B., Mahapatra, S., & Mansour, M. (2015, Nov). *Rapid high density automated electroanatomical mapping using multiple catheter types.* Poster presentation P097. APHRS Scientific Sessions, November 21, 2015, Melbourne.
3. St. Jude Medical. Data on File. Report 90212729.

Rx Only

Brief Summary: Prior to using these devices, please review the Instructions for Use for a complete listing of indications, contraindications, warnings, precautions, potential adverse events and directions for use.

SJM-ENS-0317-0117 I Item approved for global use.