National Payers Adopt PTPN’s Pay-for Outcomes Program for Physical Therapy and Occupational Therapy Services

A growing number of managed care organizations are replacing “pay for performance” with “pay for outcomes” to ensure that providers are delivering greater value and improved quality of care. In response to this trend, PTPN, a national network of rehabilitation professionals in private practice, is now working with three of its largest contracted health plans to adopt a first-of-its-kind pay for outcomes program for outpatient physical therapists (PTs) and occupational therapists (OTs). In addition, PTPN has developed a comprehensive quality report card for rehab therapists as a tool to identify high-performing providers.

PTPN recently announced the adoption of its pay-for-outcomes program by three of its largest contracted health

(See National Payers Adopt… page 3)

Hospital Acquisition of Physicians and Pricing Power

David Gruber

The ongoing transformation of health care delivery led by hospital systems is based more on the potential for pricing power rather than care delivery innovation. The acquisition of private physician practices, ambulatory surgery centers, and diagnostic imaging centers by hospitals has increased reimbursement payments through Medicare and negotiated insurer rates. Outpatient departments will increasingly subsidize inpatient activities. In addition, hospital consolidation into larger systems has increased their ability to price hyper-competitively with commercial insurers. Employer-sponsored health insurance, currently providing coverage for 166 million

(See Hospital Acquisition… page 5)
National Briefs

New Commission to Focus on Developing State Policies to Contain Costs: A new commission, whose members include a former secretary of Health and Human Services; former governors; health insurance, hospital, and physician group CEOs; and representatives of the major purchasers of health care in the United States, including Medicare, Medicaid, the private sector, and consumers, has begun work to develop practical state policies to contain health care costs. The State Health Care Cost Containment Commission is being organized by the University of Virginia’s Miller Center. For more details, go to millercenter.org/policy/commissions/healthcare.

New Study Shows Ways Quality of Care Measures Can Be Improved for EHRs: Health care providers and hospitals are being offered up to $27 billion in federal financial incentives to use electronic health records (EHRs) in ways that demonstrably improve the quality of care. The incentives are based, in part, on the ability to electronically report clinical quality measures. A new, federally funded study by Weill Cornell Medical College Internal Medicine demonstrates ways in which quality measurement from EHRs can be improved. In a large cross-sectional study in New York state, researchers demonstrated that the accuracy of quality measures can vary widely.

New Certification Program Identifies Medical Home Experts: The National Committee for Quality Assurance (NCQA) has launched a credential program — Patient-Centered Medical Home (PCMH) Content Expert Certification — that gives individuals a way to demonstrate their knowledge of the NCQA PCMH Recognition program. PCMH Content Expert Certification offers PCMH advocates and coaches a way to stand out from their peers by demonstrating their knowledge and understanding of the NCQA PCMH model. The new program gives practices seeking NCQA Recognition as medical homes a way to gauge the qualifications of the growing numbers of consultants and other professionals who often help practices become medical homes.

Commission Offers New Strategy to Slow Spending Growth: A synergistic set of policies that would accelerate health care delivery system innovation could slow health spending growth by $2 trillion from 2014 to 2023, according to an analysis released by the Commonwealth Fund Commission on a High Performance Health System. The report, Confronting Costs: Stabilizing U.S. Health Spending While Moving Toward a High Performance Health Care System, describes a comprehensive set of policies to change the way public and private purchasers pay for care, enhance consumers’ choices of high-value care, and address the market forces driving up costs and estimates their potential to reduce cost growth.
National Payers Adopt...
(from p. 1)

plans in California — Cigna, HealthNet, and Aetna. The pay-for-outcomes program recognizes and rewards providers who meet the highest standards in getting patients better efficiently. The incentive plan is based on the PTPN Rehab Outcomes Index (ROI), a comprehensive quality report card for outpatient PTs and OTs. Providers who earn the incentive are paid on fee schedules ranging from 5 percent to 12.5 percent higher than normal.

The PTPN ROI is a proprietary evaluation system that combines key quality and performance data on PTPN therapists into a provider report card format. The index includes seven quality measures collected through the PTPN Outcomes Program, Quality Assurance Program, and Credentialing Program. To qualify for a bonus from payers, PTPN offices must meet criteria that demonstrate excellent patient outcomes and lower than predicted visits. Rewarding the providers who rank highest in these categories — and therefore are the most efficient providers — saves insurers money on a per patient basis, even if the therapists are paid more per visit.

“The program looks at two key benchmarks: outcomes and efficiency,” explains PTPN Vice President Nancy Rothenberg. “The outcomes benchmark measures the difference between how well the patient got compared to how well other similar patients got nationally — given what he or she came into the clinic with and any related issues; all of the data are risk adjusted. The efficiency benchmark measures how well the patient got per visit — again, compared to how well other similar patients got. The goal is to have the same or better results in terms of both therapy outcomes and visits.”

A convincing piece of data for Cigna, Aetna, and HealthNet is that those offices that scored above the benchmark for both outcomes and efficiency — which means they got the patient better than expected and did it more quickly than expected — had a third fewer visits per case than those who do not meet those benchmarks, says Rothenberg. “We were able to show these payers that, even if you pay the providers more per visit, you are still going to save money if you are saving on the amount of visits per case. That not only rewards good outcomes, but it incentivizes the other offices to have good outcomes and efficient treatment because they see they can get paid more per visit. The eventual goal is to have all the providers meeting benchmarks and being rewarded, which would bring costs down and outcomes up.”

Rothenberg stresses that visits are only part of the equation. “If a therapy office treats patients for many visits, but that is appropriate given the nature of the patients’ cases as compared to similar patients in the database, they can still qualify for the bonus program if they get good outcomes. Conversely, an office that treats patients for only a few visits but does not get good outcomes will not qualify.”

Rothenberg states that PTPN also discusses the impact of good therapy outcomes on downstream costs with payers. “Effective therapy can save the payers money on physician visits, additional surgeries, and pharmacy costs. The costs of higher reimbursement for a therapy visit, or even for longer treatment if needed, is more than offset by the savings on extra health care costs for therapy that does not get the patient back to an acceptable level of function.”

Practices in the ROI are compared to national benchmarks, not to each other, notes Rothenberg. This means they have to achieve actual goals, not just be better than the next guy. “When you only look at an average, there will always be someone below or above that average. When you look at actual benchmarks, however, all of the practices can meet the goals and achieve success, and we feel that is important.”

One highlight of the third-party software engine that drives the PTPN Outcomes Program is its ability to provide risk-adjusted measurements. Benchmark and outcome expectations are based on comparing a patient...
Indigo Insurance Services Expands Stop-Loss Protections for Employers: Indigo Insurance Services, a wholly owned subsidiary of Blue Cross Blue Shield of Massachusetts, has added health care compliance services to its growing suite of Stop-Loss coverage benefits. Through a new partnership with Enquiron, a provider of high-touch consultative solutions for employers nationwide, Indigo will help businesses that self-fund health care for their employees navigate the labyrinth of related laws and regulations. Enquiron’s consultative health care compliance approach combines legal advice with online tools and resources, not only for the employer but for brokers and third-party administrators as well. Compliance attorneys will answer employers’ legal and compliance questions while guiding them through new laws and regulations.

Cigna, Franciscan Alliance Join in Collaborative Accountable Care Initiative in Indianapolis: Franciscan Alliance and Cigna have launched an accountable care initiative aimed at improving the quality of care for Cigna customers in the Indianapolis area. The collaboration will focus on providing coordinated, cost-efficient health care to improve the overall health status of the Cigna population in Central Indiana. To achieve enhanced care coordination, healthier people, and lower overall costs for patients, the collaboration will focus on identifying and implementing long-term strategies aimed at ensuring health care remains accessible and affordable for Cigna customers in Indianapolis. Franciscan Alliance and Cigna will work together, sharing clinical and care management information to provide coordinated, comprehensive health care services. Each organization will have aligned incentives to improve health care quality and patient service while reducing costs.

Aetna, Univita Health Work Together to Help Reduce Hospital Readmissions: Aetna and Univita Health will be offering a transitional care program to Aetna Medicare Advantage members in Texas. The program began in January for Medicare Advantage eligible members who are discharged from selected hospitals in Houston, Dallas, Fort Worth, Austin, and San Antonio. The transitional care program will help Aetna Medicare Advantage members transition smoothly from a hospital or skilled nursing facility to their home and prevent avoidable hospital readmissions. Similar programs administered by Aetna and Univita use evidence-based approaches and have been shown to reduce avoidable hospital readmissions significantly.

Amerigroup to Expand in Florida: Amerigroup, a wholly owned subsidiary of WellPoint, Inc., recently announced that Amerigroup Florida, Inc. has been selected by the Agency for Health Care Administration (AHCA) to provide services for the Long-Term Care Managed Care program in Miami-Dade and Broward counties, two of the largest service areas in Florida. Amerigroup has provided health care coverage in Florida since 2003 and currently serves members in the Medicaid, Children’s Health Insurance Program, Supplemental Security Income/Aged, Blind and Disabled, and Long-Term Care programs in 61 counties. The company also offers Medicare Advantage plans in several counties.

Premera Blue Cross Joins the Benefitfocus Cloud: Premera Blue Cross has selected the Benefitfocus® Platform for integrated decision support and online enrollment for new and existing employer customers. As a leading health plan provider in the Pacific Northwest and independent licensee of the Blue Cross Blue
to the experience of similar patients — similar in gender, age, diagnosis, acuity, other health issues, and many other factors that influence a patient's ability to improve. “You can't just compare a specific patient to the aggregate data of millions of therapy patients. It has to be more focused,” says Rothenberg. “We have actually seen large organizations say things like, ‘The average visit in your area took X length of time, and that is what you should be aiming for.’ But looking at the ‘average visit’ likely isn't going to tell you what you need to know about a specific, individual patient. There are different comorbidities and age factors and a host of other influences that may impact the level of therapy that a patient receives. Risk adjustment allows real comparison and real measurement.”

PTPN’s mandatory outcomes measurement system is powered by Focus on Therapeutic Outcomes (FOTO), a third-party software engine. Patients complete computerized surveys at intake and discharge, which are uploaded to FOTO for comparison to a national database. Both PTPN and its member offices receive reports from FOTO based on these data.

“The use of a third-party system to measure outcomes has two benefits,” notes Rothenberg. “First, we are comparing our providers to a larger universe, not just to ourselves. Second, we cannot game the system. If you have your own data, presumably you could do whatever you want with that data to make it look like you want, but our data goes from the providers to FOTO, and then we receive reports containing the data. We simply take the information we get and go from there.”

For additional information about the program, go to www.ptpn.com.

**Endnote:**
1. For additional information on downstream cost savings, go to www.ncbi.nlm.nih.gov/pubmed/22614792.
importance of outpatient service growth due to cost containment measures being applied to inpatient care, a segment that still accounts for the majority of hospital net revenues. Lower inpatient margins are likely. For example, Brigham and Women’s Hospital in Boston, a Partners Healthcare and Harvard Medical School affiliate, generated $1,506 million in revenues in 2009: $993 million (66 percent) inpatient, and $513 million (34 percent) outpatient. In 2010, revenues reached $1,541 million, up 2.4 percent, though with a different service line mix — $878 million (57 percent) inpatient, $664 million (43 percent) outpatient.  

Physician practice acquisitions are central to increasing outpatient services. According to the Advisory Board, 40 percent of primary care physicians and 25 percent of physicians were employed by hospitals in 2010 as compared with 20 percent and 5 percent just 10 years ago, respectively.  

For most outpatient services, hospitals receive significantly higher reimbursement than office-based in their outpatient facilities than private physicians.  

Fee-for-service (FFS) spending by Medicare for outpatient services across all settings has substantially increased from $27 billion ($811 per beneficiary) in 2005 to $37 billion ($1,181 per beneficiary) in 2010, reflecting a compound annual growth rate (CAGR) of 6.5 percent. Outpatient volume continued to grow, whereas inpatient admissions per FFS beneficiary declined 1 percent per year during the past five years. Outpatient spending growth reflects a combination of continued shift from inpatient to outpatient services and the acquisition of independent physician practices by hospital systems. Hospital outpatient department (OPD) volume increased 6.7 percent from 2009 to 2010, while hospital discharges declined 1.1 percent.  

“Provider-based” or “hospital-based outpatient” payments refer to the billing process for services rendered in a hospital outpatient department, including hospital clinics or non-hospital locations. Upon acquisition, physician practices are considered an outpatient hospital department and, therefore, subject to higher reimbursement.  

According to a Medicare Payment Advisory Commission (MedPAC) report, evaluation and management (E&M) office visits (CPT 99213) are reimbursed 80 percent higher by Medicare if they are performed in a hospital outpatient department, as compared with free-standing physician clinic. Two charges are issued to Medicare patients visiting an outpatient department: a professional (physician) fee and a facility (hospital) charge. The professional fee is $49.27, whereas the facility charge is $75.13 for a total payment of $124.40. The same E&M service from a free-standing, office-based physician results in a payment of $68.97.  

The MedPAC report also claims Medicare payment rates for surgical services are 74 percent higher in hospital outpatient departments (OPDs) than in ambulatory surgery centers (ASCs). Ambulatory surgical centers furnish outpatient surgical services to patients who do not require hospitalization and do not expect an overnight stay after surgery. In 2010, 5,300 Medicare-certified ASCs served 3.3 million fee-for-service beneficiaries at a cost of $2.7 billion or $818 per beneficiary. An OPD premium of 74 percent implies a new cost of $4.7 billion or $1,423 per beneficiary.  

The Medicare fee schedule is also higher for OPD diagnostic imaging studies. A blended technical (facility) fee reimbursement analysis of diagnostic imaging services, irrespective of the type of payer (government, commercial) further highlights the revenue disparity between hospital outpatient department and freestanding outpatient imaging centers, with an average reimbursement disparity of 141 percent.  

In part, Medicare unintentionally provides hospitals an economic incentive to acquire physician practices and joint venture with ambulatory surgery centers and imaging centers, despite its impact on local market competition, pricing, and total health care expenditures.
Large hospital systems also obtain higher reimbursement rates for physician services from commercial insurers.

In a major research brief by the Center for Studying Health System Change, Paul Ginsburg highlighted the pricing power of provider systems within eight health care markets. An analysis of payment rates by Aetna, Anthem BCBS, Cigna, and United Health highlighted a wide variation in reimbursement across markets. The average inpatient reimbursement rate, as a percentage of Medicare, ranged from 147 percent (Miami-South Florida) to 210 percent (San Francisco), whereas the average outpatient reimbursement rate ranged from 234 percent (Cleveland) to 366 percent (San Francisco). Reimbursement by commercial payers, on a relative basis to Medicare, is higher for outpatient visits and procedures than inpatient stays.

Commercial insurance payment variation within a specific market was even greater for inpatient care, with a range of 84 percent for the 25th percentile of inpatient payment (Los Angeles) to 418 percent for the highest reimbursed hospital; comparable outpatient ranges across all markets were 184 percent for the 25th percentile and 312 percent for the hospital with the highest payment rate, respectively. Insurers often cited higher payment rates to large hospital systems as a growth driver of employer insurance premiums. The average private insurer physician payment rates as a percentage of Medicare varied by specialty and ranged from 100 to 250 percent of Medicare in most geographic areas.10

The American Medical Association raises potential for conflict of interest associated with physician practice acquisitions.11

Given the high level of physician acquisition activity by hospitals, the AMA felt compelled to recently issue a policy statement to remind physicians about the paramount importance of patient welfare relative to economic interests. Physicians’ conflict of interest with their employers is nearly inevitable. Hospital employment contracts often discourage referrals to non-affiliated physicians, facilities, or labs (assuming no difference in service, quality, or outcomes).

Physician compensation is often based on a combination of salary and bonus, the latter based on productivity, quality of care, and patient satisfaction. Cost-effectiveness is usually not considered unless the hospital is paid on a capitated basis or is a participant in a payment bundling or ACO pilot.

Other physician-hospital conflicts may result from treatment restrictions based on selective use of evidence-based medicine guidelines or measures of service line profitability. A prominent cardiologist and member of the National Commission on Physician Payment Reform has reported situations where Medicaid patients did not receive implantable defibrillators due to the high cost of the device.12

Accountable care organizations (ACOs) sponsored by hospital systems will be priced by Medicare against a high ceiling of reimbursement, thereby facilitating their profitable transition to capitation; near-term cost savings will be limited.

ACOs represent an extension of the successful Physician Group Practice demonstration, initiated in April 2005, that offered performance bonuses to 10 large group practices if they met quality and cost-efficiency target metrics. An ACO may include primary care physicians, specialists, and care extenders (nurse practitioners, physician assistants) in not only a group practice setting but also networks of practices and partnerships or joint ventures among providers, hospitals, insurers, and others. Requirements include a legal structure for payment distribution, a program commitment of at least three years, and adequate primary care capacity to treat at least 5,000 patients. Waivers from the anti-kickback statute and physician self-referral (Stark) law may be required. Patients in Medicare Advantage plans are excluded from the shared savings program.

According to the Congressional Research Services, “in each year of the three year
While it may not be breaking news that pharmaceutical companies are making headlines for legal and ethical violations, the focus on off-label marketing and other misconduct in the pharmaceutical industry shows no signs of slowing down any time soon, which begs the question: why do these corporate cultures allow it, and why are compliance violations apparently seen as a cost of doing business in these companies? In this article, Mary Bennett, vice
president of the Ethical Leadership Group, part of NAVEX Global, discusses key failures that typically occur within these organizations and what needs to be done to bend the curve at the highest level possible.

Many of the most notable headlines in the pharmaceutical industry recently have involved off-label marketing, acknowledges Bennett. A second key problem area has been poor manufacturing techniques. Both are troubling in this day and age, she adds. “Given the huge settlement dollars and growing focus by the federal government to seek out those who violate the law, why do we still have such a big problem with off-label marketing and poor manufacturing in this industry? There are things that can be done to prevent it.”

In many of the settlements, whistleblowers had come forward within the organization — or tried to come forward — but their concerns were ignored or discounted, notes Bennett. Unfortunately, these organizations typically lack a culture that encourages open communication, which can make it difficult to see results. Not to mention, the financial incentives for maintaining the status quo can “muddy the waters” when it comes to addressing potential issues that have been identified, she adds.

“There is a lot of money getting pumped into [research and development] in these organizations. Making sure they recoup that investment plus make a profit puts a lot of pressure on sales,” says Bennett. “The companies and the sales people have significant incentives to maximize product sales. There is a lot at stake. For many, it becomes an ongoing balancing act — do whatever it takes to sell more drugs, but stay out of the headlines.”

Having a strong, ethical corporate culture is absolutely critical, stresses Bennett. “If the only message employees hear is ‘Make the financial goal. It’s the only thing that matters,’ that will become the highest priority. To really turn the ship will require a shift in culture, and culture is shaped by leadership. When the board and leadership do not clearly communicate and enforce the balanced goals of making the numbers and doing it the right way, lines can get blurry. This is especially true in areas where it is so easy to walk close to the edge or step over the line. In the absence of a culture that embraces doing the right thing, people are going to fill in the ‘how’ themselves, and oftentimes they will think they are doing it for the good of the company. They may have good intentions, but that doesn’t make it right. There must be a culture that very clearly stresses the importance of being above reproach.”

The pharmaceutical industry is not unique in its struggle to create and maintain corporate cultures of integrity, but it seems to be a late addition to the list of federally investigated health care organizations. Physicians, clinical laboratories, hospitals, and other provider organizations have long been targeted because they receive reimbursement from federal health care programs, such as Medicare. Violation of program rules bleeds out the same federal coffers that must pay for appropriate services.

“You can go after hospitals for fraud, waste, and abuse, but what kind of fines and penalties are you going to collect?” asks Bennett. “Most hospitals don’t have a lot of cash. If you think of it simply as a business proposition, from the government’s perspective, going after the ‘deep pockets’ makes the most sense.” Those deep pockets are found in the last health care stronghold — the pharmaceutical industry.

**Board Governance**

Ultimately, the board is responsible (and liable) for compliance program oversight within an organization, notes Bennett. There are several steps organizations can take to increase the likelihood of lawful and ethical behavior. First, boards need to be uniformly equipped and educated to determine what questions to ask and what to expect from their compliance programs to foster a culture that prevents wrongdoing. Second, pharmaceutical boards must set up clear incentives and behavioral expectations — especially in notoriously gray areas, such as off-label marketing. Third, companies must focus on high-risk areas and
take appropriate and consistent corrective action as needed, even when it is difficult. And finally, companies must not allow practices that do not align with internal standards to continue or repeat — a task that may require an overhaul of the company's culture and upgrades to the compliance program.

“The board must set the tone in an organization,” says Bennett. “They need to be very clear about their expectations of leadership; that includes how compensation is set in the organization. What are you paying people to do? Because what you pay for is what gets done. What kind of risk controls are in place? How are these controls being evaluated, and improved? The full board is responsible for this. Often people think compliance oversight is only the responsibility of a board committee, but that’s not true. The committee of the board has the tactical job of hearing the reports and having discussions with the compliance officer, but the full board is responsible — and culpable — for oversight, which can be overlooked.”

The board also needs to be savvy about the questions to ask that will give a clear picture of the compliance program’s effectiveness and whether there is a culture focused on integrity, which is broader than just a culture of complying with the rules, says Bennett. Figure 1 includes a list of tough questions the board needs to be asking.

“‘There must be swift consequences when there are violations,’” continues Bennett. “Sometimes boards, like any other group of managers, are squeamish about disciplinary action when a high-level leader or a great financial performer steps out of line, but they cannot back down, regardless of who is involved. If they do not act decisively, they can open up themselves and the company to a number of negative consequences.”

Some companies have set up funds to pay federal fines when they break the law, as if it is just part of doing business. That is particularly distressing, says Bennett, because it means that these companies are sending a message that wrongdoing is simply a line item on their budget. Misconduct is not just tolerated; it is expected. Few people would want to work for, do business with, or invest in a company like that, she adds.

“There will always be rogue employees and people who are trying to get around the rules, but that doesn’t mean that companies need to go about business as usual,” says Bennett. “They must continue to build and maintain strong, defensible compliance programs and ethical cultures that are supported throughout the organization. It’s a tall order, but it’s the only way to course correct in an industry that continues to make headlines for wayward practices. It’s time to take a tougher stand against these behaviors, and that starts all the way at the top.”

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**Figure 1: Is Your Board Asking Compliance These Tough Questions?**

- What information do you get to give you comfort that compliance risks are covered?
- Do leaders set the right tone? How are they perceived by employees?
- Do we have a “make plan at all costs culture?” Is candor rewarded or punished? What about fear of retaliation?
- How are we at discipline? Are top performers and high-level people held accountable to the code of conduct in the same way as other employees?
- Are there any risks that aren’t being addressed as they should be?
- Do you have visibility to business unit compliance?
- Do you have the resources you need to do your job appropriately?
- Do you feel you have access to the CEO and us whenever you need it?
- What trends in issue types or company locations are you seeing?
- Is there anything we should know? What keeps you up at night?
Express Scripts Infographic Offers a Snapshot of the Growing Epidemic of Prescription Drug Abuse

Each year, an estimated 15,000 people die in the United States as a result of prescription drug overdoses, which also lead to 1.2 million emergency room visits annually. New data show that abuse of these drugs is deadlier than cocaine and heroin combined.

According to statistics just released by Express Scripts, Inc., many of these abused prescription drugs are obtained fraudulently. Unfortunately, the cost for this fraudulent behavior is spread across the board — through premiums, health care costs, benefit costs, and taxes.

Figure 1 provides an overview of the growing challenge of prescription drug fraud and abuse in this country. Express Scripts, which created the infographic, is partnering with government agencies and a national network of health care providers to end this epidemic.

To access a blog with additional information, go to lab.express-scripts.com/pharmacy-waste/prescription-drug-fraud-and-abuse.
Standard Written Checklists Can Improve Patient Safety during Surgical Crises

When doctors, nurses, and other hospital operating room staff follow a written safety checklist to respond when a patient experiences cardiac arrest, severe allergic reaction, bleeding followed by an irregular heart beat, or other crisis during surgery, they are nearly 75 percent less likely to miss a critical clinical step, according to a new study funded by the U.S. Department of Health and Human Services’ Agency for Healthcare Research and Quality (AHRQ).

While the use of checklists is rapidly becoming a standard of surgical care, the impact of using them during a surgical crisis has been largely untested, according to the study. “We know that checklists work to improve safety during routine surgery,” says AHRQ Director Carolyn M. Clancy, MD. “Now, we have compelling evidence that checklists also can help surgical teams perform better during surgical emergencies.”

Surgical crises are high-risk events that can be life threatening if clinical teams do not respond appropriately. Failure to rescue surgical patients who experience life-threatening complications has been recognized as the biggest source of variability in surgical death rates among hospitals, the study authors note.

For this randomized controlled trial, investigators simulated multiple operating room crises and assessed the ability of 17 operating room teams from three Boston area hospitals — one teaching hospital and two community hospitals — to adhere to life-saving steps for each simulated crisis.

In half of the crisis scenarios, operating room teams were provided with evidence-based, written checklists. In the other half of crisis scenarios, the teams worked from memory alone. When a checklist was used during a surgical crisis, teams were able to reduce the chances of missing a life-saving step, such as calling for help within 1 minute of a patient experiencing abnormal heart rhythm, by nearly 75 percent, according to the researchers.

Examples of simulated surgical emergencies used in the study were air embolism (gas bubbles in the bloodstream), severe allergic reaction, irregular heart rhythms associated with bleeding, or an unexplained drop in blood pressure. Each surgical team consisted of anesthesia staff, operating room nurses, surgical technologists, and a mock surgeon or practicing surgeon.

“For decades, we in surgery have believed that surgical crisis situations are too complex for simple checklists to be helpful. This work shows that assumption is wrong,” says Atul Gawande, MD, senior author of the paper, a surgeon at Brigham and Women’s Hospital and professor at the Harvard School of Public Health. “Four years ago, we showed that completing a routine checklist before surgery can substantially reduce the likelihood of a major complication. This new work shows that use of a set of carefully crafted checklists during an operating room crisis also has the potential to markedly improve care and safety.”

Hospital staff who participated in the study said the checklists were easy to use, helped them feel more prepared, and that they would use the checklists during actual surgical emergencies. In addition, 97 percent of participants said they would want checklists to be used for them if a crisis occurred during their own surgery.