ENHANCE HEALTHCARE'S ANESTHESIA & OPERATING ROOM REVIEW

October to December 2019

Enhance Healthcare Consulting

TABLES OF CONTENTS

October 2019

Women Physicians Leaving the Workforce at an Alarming Rate
Leveraging Internet and Smartphones for Enhanced Recovery
USAP Opens the Kimono On Patient Satisfaction With Anesthesia Providers
Is Propofol for Colonoscopy Sedation Worth the Cost? Insurance Company Says No.
What Does the QZ Modifier Really Mean?
United Health Weaponizes Prior Authorization, Taking Aim at Surgical Care
3-D Modeling System Designed to Support Structural Heart Procedures – Obvious and More Subtle Implications
Health Insurance Costs Far Outpaces Wages/Inflation Over the Past Decade – Approaching a "Fork In The Road?"

December 2019

Doctors at MD Anderson Replace Traditional Anesthesia with Hypnosis
YouTube Video Break – OR Efficiency : The Surgeon Matters
OR Teams Work to Save Patients While Putting Themselves In Danger of Surgical Smoke Inhalation
Ear Tubes in the Office? DFA Approves A New "Breakthrough" System
Follow-Up: Supreme Court Judge Upholds $2M Malpractice Verdict Against Surgeon with Overlapping Surgeries
States Explore Bundling
ICU or No ICU? If that is the Question, We May Soon Ask AI
Top EHC Articles of 2019: Anesthesia Revenue Cycle for Groups and Hospitals
Top Article Review of 2019: What Does the QZ Modifier Really Mean?

Enhance Healthcare Consulting

October

Women Physicians Leaving the Workforce at an Alarming Rate

An increasing number of female physicians are walking away from their full-time jobs after only a few years of practice. According to an *article* written in AAMC, a few years after completing medical school and their residency program, women are more likely to reduce their work hours to manage child rearing and household responsibilities. According to the University of Michigan's Intern Health study, 40% of women physicians reduce or leave medical practice early in their careers due to family obligations and 22.6% of women physicians were not working full-time within six years of practice, compared to 3.6% of men.

The article discusses the need for system-wide reform addressing this glaring issue and to begin implementing solutions to better support women as mothers and physicians. Currently, reentering the workforce after taking an extended leave (24 months or more) is a costly decision that could result in the need to repeat a portion of a residency program or practice under a limited license. Some suggestions for better ways to support women physicians include providing increased leave, paternity leave, on-site childcare and more opportunities for advancement.

Leveraging Internet and Smartphones for Enhanced Recovery

Increased use of the internet and smartphones now makes it possible to capture post-discharge perioperative patient-reported outcomes (PROs) outside of the clinical setting. Two feasibility studies presented at the 2019 annual meeting of the American Society of Enhanced Recovery and reviewed in an *article* in Anesthesiology News, aimed to collect PRO data using a web-based system that tracks the recovery process over a period of time after discharge through PRO surveys. Enhanced Recovery After Surgery (ERAS) aims to reduce the time patients need to spend in the hospital, which increases the recovery time at home.

478 ERAS patients participated in the first study. The PRO surveys were sent out in three waves: Wave 1: web-based surveys sent using email only, Wave 2: surveys sent using text-only, Wave 3: surveys sent using a combination of both email and text. All three waves of surveys were sent at different time intervals pre and post surgery. The study found that the combined text and email approach was the most successful method at all times compared to using text or email alone. The combined approach achieved 65% response at 7 days and 64% at 30 days.

The second study was conducted for new mothers with 718 participants and focused on collecting PROs over the first 30 days postpartum. This study also found that the combined email and text method was most successful – 66% response at 7 days, 48% at 30 days – finding a higher rate of response decline over time.

Dr. Yaakov Beilin, Director of Obstetric Anesthesia at Icahn School of Medicine at Mount Sinai, opined that web-based methods for assessing patients "may be the future for finding out how satisfied our patients are with their care."

USAP Opens the Kimono On Patient Satisfaction With Anesthesia Providers

In our increasingly patient-centric world, opinions and perceptions of patient experience are a major focus of perioperative stakeholders. A meaningful component of this experience is driven by satisfaction with anesthesia providers. An October 2019 *article* in Anesthesia and Analgesia explores factors associated with satisfaction by taking a deep dive into data from US Anesthesia Partners ("USAP"). USAP "opened the Kimono" to the authors (led by U of Chicago) to satisfaction surveys from over 600,000 patients in 2016. Each patient received a 27 point survey inquiring into a variety of satisfaction and outcome questions. The results were married to detailed case data (procedure, time of day, emergency status, anesthesia type etc.) to uncover factors associated with higher or lower anesthesia satisfaction.

Interesting results included that by far the lowest ranked patient opinion of the anesthesia interaction was "were you able to spend time with your anesthesiologist before surgery?" Patients over 55 were less likely to believe that their questions were answered, that all anesthesia options were explained, or that their anesthesiologist eased their anxiety, or respected their privacy. The same over 55 age group was less likely to agree that they were prepared to make informed decisions or spend time with their anesthesiologist before surgery.

Outpatients rated their anesthesia experience more positively than inpatients. They also were more likely to agree that their questions had been answered, options had been explained and that felt they were well prepared to make informed decisions and had been able to spend time with their anesthesiologist before surgery.

Patients who underwent surgery between 6 pm and 6 am were less likely to agree that their anesthesia provider had eased their anxiety or that they had been able to spend enough time with their anesthesiologist preoperatively. Patients receiving regional anesthesia were more likely than those receiving general anesthesia to agree that their options were explained before surgery and that their anesthesiologist respected their privacy. Patients receiving sedation were less likely than those receiving general to agree that they were able to spend time with their anesthesiologist before surgery, but more likely to agree that their anesthesiologist ensured their comfort during surgery.

EHC NOTE: *First of all, the whole peri-op community should send a collective thanks to USAP for agreeing to submit their data for scrutiny, thereby adding to our collective knowledge. Kimono opening is not easy! The article brings up some interesting opportunities for anesthesia providers to focus additional efforts to improve patient satisfaction. Expanded assessment of multifactorial drivers of perioperative satisfaction is likely warranted to identify similar opportunities on a larger scale, encompassing all providers involved in perioperative patient-facing process.*

Is Propofol for Colonoscopy Sedation Worth the Cost? Insurance Company Says No.

Last year, Independent Health, the second-largest insurer in the Buffalo Niagara region discovered that Gastroenterology Associates, a private practice with endoscopy centers in Amherst and Niagara Falls, was using an anesthesia group to administer propofol to their patients instead of using what had been their traditional conscious sedation methods. This discovery resulted in Independent Health ceasing payments for the use of propofol for colonoscopies and endoscopies on August 1. The story is discussed in an *article* in the Buffalo News.

Propofol sedation for colonoscopy continues to increase in popularity across the country with more gastroenterologists preferring this method. Properly administered, propofol sedates and wakes patients faster, reduces complications during and after the procedure and allows for better visibility of precancerous polyps. Although, all these factors seem positive, the anesthesia bill adds $300 to $500 more per patient, adding cost for insurance companies like Independent Health and for their patients. Administering propofol is more complicated than conscious sedation and requires an anesthesiologist or CRNA for administration and ongoing management.

Despite the insurance company refusing to pay the additional costs, Gastroenterology Associates are so supportive of the use of propofol that they are willing to take on the extra cost while they gather more evidence in favor of this method of sedation to share with insurers.

EHC Note: EHC has witnessed the increasing use of propofol for endoscopy across the country where the technique is used in well over half of the cases. More and more hospitals and gastroenterologists are supporting this form of sedation for their patients. A number of insurers have attempted to resist paying for this coverage over the years, but push back from patients and providers have overturned the vast majority of these attempts.

As the article points out, there are some clear clinical and patient comfort advantages to using propofol but it also presents part of an escalating predicament for both hospitals and anesthesia groups. Endoscopy is only one example of the rapidly escalating requests for anesthesia providers to cover a variety of Non-Operating Room Anesthesia (NORA) locations. These locations are often represent an expansion of the original coverage model, are often not on a coordinated schedule with the Main OR and they may be geographically spread about the hospital, making supervision of Anesthetists in a care team model challenging.

Staffing for these unique NORA locations can present significant challenges for both the hospital and anesthesia group, leading to delays in cases due to "sharing" of anesthesia resources and increased anesthesia subsidies if locations are poorly utilized. However, if run efficiently (quick room turnover, adequate utilization of staffed locations and enough available equipment) NORA can present a great revenue opportunity……that is if insurance will cover it.

What Does the QZ Modifier Really Mean?

An article co-authored by EHC principal Howard Greenfield, MD and published in Anesthesia Business Consultants Anesthesia Fall Communique takes a deep dive into the "QZ" anesthesia modifier. Once a simple billing modifier, QZ has taken on an increasingly significant role in the provision of anesthesia and the structure of coverage models The article reviews the history of the modifier and the current impact on hospital administrators, anesthesiologists and CRNAs.

For details, read it *here*.

United Health Weaponizes Prior Authorization, Taking Aim at Surgical Care

In a potentially damaging policy shift for hospitals, United Healthcare (UHC) is ramping up its' prior authorization requirements for some common surgical procedures frequently performed in a hospital outpatient setting. As detailed in a Modern Healthcare *story*, the UHC policy dubbed the "site-of-service medical necessity review" will apply to 1,100 procedure codes for fully insured commercial as well as exchange patients. Procedures which will require medical necessity to be performed in a hospital include colonoscopies, knee replacements, and pacemaker insertions. United CEO Dirk McMahon estimates 2020 savings from this initiative to be $500 million. He is quoted as saying that "in our commercial business alone, we see opportunity to shift well more than 20% of our medical spend to these more effective sites", going on to say that moving joint replacements to ASC's can reduce cost by 50%.

The article presents the potential pitfalls of the proposed policy, citing safety concern when certain types of procedures are moved out of a hospital setting and that site of service decisions should be determined by clinicians in conjunction with their patients.

EHC NOTE: *This expansion of prior authorization by UHC to many common surgical procedures represents a clear danger to US hospitals and hospital-based anesthesia groups. As is well known, most hospitals struggle to break even on patients with government insurance, "making up the difference" with commercial business. Therefore, a major payer weaponizing authorization protocols to drive commercial business from hospitals can squeeze an important contributor to facility profitability – and in some cases viability. The economics of government vs. commercial reimbursement for anesthesia is even more lopsided than it is for hospitals.*

The proposed rules would disproportionately benefit ASC anesthesia groups at the expense of those providing care in hospitals. A likely underappreciated secondary effect of such a shift is that reduced anesthesia collections will often translate into more anesthesia subsidy, thus delivering a "double whammy" to the hospital.

We understand that UHC is attempting to drive down costs, and that makes sense if looked at in isolation. The problem we see is that when a UHC patient has an emergency in the middle of the night, the ASC isn't open. It's the hospital and the anesthesia provider on call who must care for that patient. If the hospital is barely solvent now and is ultimately tipped into insolvency through loss of profitable business, where does that emergency get cared for? Clearly the answer varies from city to city and from urban to more isolated communities. While a major for profit payer such as UHC has an obligation to maximize their profits, they should also recognize that they are an important financial support for the entire spectrum of care and have a role in sustaining the viability of the entirety of care. In the fragmented US healthcare system, there is unfortunately no one entity looking at the big picture. It is not United's (or any other payer's) "job" to drive profitable business to hospitals, but if they and other key payers drive highly profitable surgical cases en-masse to other locations, it may have unintended consequences on their insured patients in communities throughout the country.

3-D Modeling System Designed to Support Structural Heart Procedures – Obvious and More Subtle Implications

Use of complex structural cardiac procedures have significantly increased over recent years, expanding options for sicker patients. Supported by advanced imaging, these procedures by nature are performed without direct cardiac visualization. Now, in yet another application of computer image capture and manipulation, EchoPixel has created a tool designed to create 3D holographic models of the heart to assist in preoperative planning, patent selection and to facilitate more complex structural and congenital heart procedures on adults and pediatric patients. As described in an *article* in Health Data Management, the technology which is awaiting FDA clearance, can process and integrate images from CT, MRI, echocardiography and fluoroscopy to create 3D holographic images. These images, according to Dr. Saurabh Sanon, MD, director of the Structural Heart Transcatheter Therapies program at Palm Beach Gardens Medical Center, as quoted in the article, "lets you effortlessly interact with 3D images to better understand complex cardiac anatomy and the anatomic variability that is commonly seen in structural heart disease patients." Dr. Sanon goes on to opine that early results show promise to improve efficiency and patient access to structural heart procedures.

EHC NOTE: *In yet another example of the inexorable march of technology to support patient care, this article highlights advanced holographic imaging as applied to structural cardiac procedures. While the system is still in the FDA approval process, it is likely that either this or a similar system will eventually be perfected for these procedures.*

In our consulting work, we have seen a dramatic increase in TAVR, Watchman and similar complex procedures. Properly performed in well-trained hands, this expertise opens new solutions for many patients. At the same time, support of these procedures does require additional equipment as well as nursing, anesthesia and support personnel. Frequently requiring an additional covered location or two, these resources must be secured and budgeted for. In addition, specialized cath lab or hybrid rooms occupy precious and often scarce hospital square footage.

As the need for very expensive technology such as 3D holographic systems are perfected and perhaps become the standard of care, the cost to provide these services would be expected to march higher.

As they seek to best support healthy populations in their markets, the challenge for hospitals and OR leadership is to balance costs and returns and to determine where to invest resources. Of course, all facilities cannot be everything to everyone. We advise facilities to build on service line strength to create Centers of Excellence from a clinical, operational and efficiency perspective. It makes little sense to have similar services duplicated or triplicated or quadruplicated in the same narrow geography.

Favorable reimbursement can allow a relatively low volume practice to thrive. However, using structural heart as an example, while reimbursement is currently favorable, there will eventually be downward pressure. If your facility is burdened by expensive equipment, technology, real estate allocation and personnel allocated to this (or any other) specialized service line, the bottom line may eventually come under pressure. In our opinion, business modeling for such service lines should be "stress tested" for reduced reimbursement, competition, out-migration of patients to tertiary centers etc. Sure, you can repurpose these resources to another service line down the line, but that pivot takes time and requires new investment in personnel and equipment.

While the tech described in the article discussed has exciting potential for structural heart patients, it should also lead OR and hospital leaders to consider the future implied cost and challenges of certain service lines. Focus on areas where you have an inherent market advantage or can foresee a long term and sustainable service line which will help improve the health of your population and can withstand "stress test" scenarios.

Health Insurance Costs Far Outpaces Wages/Inflation Over the Past Decade – Approaching a "Fork In The Road?"

An *article* in UPI discusses health insurance cost data based on a survey by the Kaiser Family Foundation. The survey found a 54 percent hike in family premiums (total cost now $20,500) and a 71% increase in employee share (to over $6,000) over the past 10 years. This compares to an increase in wages and inflation of 26 and 20 percent respectively. To make matters worse for employees, the average deductible doubled over that time period, from $800 to $1,600. The percentage of Americans who have deductibles is now 83% as opposed to 63% in 2009. In businesses with under 200 employees, almost half face deductibles over $2,000 representing a 400% increase over a decade.

Kaiser Family Foundation President and CEO, Drew Altman was quoted in the article as saying "The single biggest issue in health care for most Americans is that their health costs are growing much faster than their wages are." Mr. Altman also opined that "Costs are prohibitive when workers making $25,000 a year have to shell out $7,000 a year just for their share of family premiums."

EHC NOTE: We certainly feel the pain of rising health care costs along with everyone else. However, the two most concerning data points in the article are the huge increase in deductibles for small businesses and the example brought up by Mr. Altman of the hypothetical worker earning a low wage potentially being asked to pay over 25% of salary for health insurance.

Ultimately there comes a tipping point when the cost of an item outstrips the ability of the market to pay for it. It seems we are at or certainly near there with health insurance costs. Increases in premiums, employee share and deductibles which far outpace wages and inflation are unsustainable. With surgical care comprising a significant component of health spending, those of us involved in delivering perioperative care should take this opportunity to move the needle in the right direction. As we discussed in the Review in *September*, if the surgical market is to function like a true free market, we must begin with transparency… "As an industry we need to be able to offer an accurate price quote for an easily definable, uncomplicated procedure."

But transparent and high/rising prices won't do the trick alone. All stakeholders in the perioperative environment, including payers must look for opportunities to standardize care, deliver care in the most cost-effective setting and apply analytics to determine the most cost-effective treatment plan for individual patients. Rational resource allocation is also a laudable goal. As we have discussed elsewhere in this *Review*, Multiple hospitals in the same market do not need to provide every complex, resource intensive service line.

At the same time, we should all strive for efficiency. While it is an example from India, we encourage readers to revisit the astounding efficiency we *described* back in April where Narayana Hospital achieves high outcomes at incredibly low prices. How was this achieved? By thinking outside of the box, by rethinking the role each perioperative contributor can fulfill and by relentless improvement. While we don't think a $2,000 CABG will be coming to the US any time soon, downward pressure on prices would be a necessary step in the right direction.

It seems as if we are at a fork in the road. Down what we believe is the lighter, brighter, more promising fork we can attempt to bend the cost curve for consumers and businesses in order to pull back from the approaching tipping point. Down the other fork – which to us is darker and scarier – we can anticipate all the wisdom of dealing with the government – since we enjoy the DMV and IRS so much, let's let CMS run our OR's!

We think most of us would prefer the lighter, brighter, more promising fork. But the dark and scary data on health insurance costs seems to be nudging ever closer to the dark and scary fork. We as perioperative leaders and clinicians should do all we can to nudge back to the fork with the light.

December

Doctors at MD Anderson Replace Traditional Anesthesia with Hypnosis

An *article* written in the Daily Mail reports that doctors at MD Anderson Cancer Center in Texas are replacing traditional anesthesia with hypnosis techniques combined with local anesthesia in order to reduce the need for harmful anesthetics in breast cancer patients undergoing breast lumpectomies. Anesthesia has various side effects including delirium, immune system suppression and addiction, therefore the MD Anderson approach has been to try to avoid the use of anesthetics where practical. The team is finding that the use of hypnosis as an adjunct to local anesthesia improves patient experience, reducing anxiety during the procedure.

In practice, a hypnotherapist helps the patient focus all five senses on a calming scenario while undergoing the procedure. This focus taps into the patients fear and anxiety responses to help them stay calm. Thus far, they have successfully used this technique in over 50 breast surgeries. Dr. Lorenzo Cohen, director of integrative medicine at MD Anderson believes that this method could be used within other specialties as well.

EHC Note: *Today, anesthesia providers often use a cocktail of medications to sedate patients for many procedures. Like most medications, there are side effects to anesthesia administration but oftentimes patients do not have another alternative. Although it is very unlikely that hypnosis therapy will be widely used any time soon (or ever for complex surgeries), the idea of creating an alternative to traditional anesthesia for relatively simple procedures is welcome. This is especially true at a time where the demand for anesthesia continues to increase and expand to new locations, threatening the demand for anesthesia providers to exceed the supply.*

YouTube Video Break – OR Efficiency : The Surgeon Matters

A presentation based on a study from Cleveland Medical Center is posted *here*. The study focused on the impact of in-room to incision time and closure to out-of-room time on OR throughput. The point was made that these two components have a significant impact on overall OR efficiency but are often given less attention than turnover time. Investigators analyzed data from 11,497 cases involving multiple specialties. Significant discussion surrounded in-room to skin incision for General Surgeons, who performed about 40% of the cases at an average for this measure of 38 minutes, close to the 36.6-minute average in-room to incision for the entire surgical volume studied. For General Surgeons this represented 20% of the total OR time, while close to exiting the OR was 14 minutes or only 7% of total OR time. The study found substantial variability between general surgeons for in-room to incision time, ranging from 11 to 51 minutes, and found no statistically significant difference between surgical subspecialties in this metric.

Key team attributes reducing the time to incision included the presence of the surgeon in the OR, checking of equipment prior to room entry, prep/drape on induction and incision on intubation. Similar issues drove high performance for close to out-of-OR. In both, the presence of the surgeon was an important factor.

EHC NOTE: *For us there are several key takeaways from this study: 1) surgeon engagement throughout the OR time period (wheel in to wheels out) helps drive performance, 2) the throughput components in focus in this study (wheels-in to incision and close to wheels-out) receive scant attention in many OR's yet have a significant impact on performance and 3) parallel processing is a way to meaningfully reduce components of OR throughput. Any of the facilities we have worked with on perioperative improvement initiatives have heard us reiterate these points conceptually and have worked with us to measure their absolute and relative performance. We recommend OR leadership teams review the key points from the study referenced and work with surgeons, anesthesia providers and nurses to incorporate these concepts into their facilities.*

OR Teams Work to Save Patients While Putting Themselves in Danger of Surgical Smoke Inhalation

Surgical smoke is an ongoing danger in operating rooms across the country. A long-time orthopedic surgeon in Arizona told AZ family the *story* of how this dangerous smoke nearly cost him his life. Dr. Anthony Hedley had been a practicing orthopedic surgeon for 40 years when he was diagnosed with idiopathic pulmonary fibrosis, an incurable and 100% fatal condition where the tissue in his lungs thickened, making it difficult for him to breathe and circulate oxygen throughout his body. Dr. Hedley was fortunate to receive a life-saving double lung transplant and dedicated his life to researching the cause of his condition.

He discovered that surgical smoke, or bovie smoke, during surgery was the likely cause. According to the Association of Perioperative Registered Nurses, 500,000 healthcare providers are exposed to this smoke annually and the daily impact on an OR team is the equivalent of up to 30 cigarettes per day. Action is being taken to reduce and eliminate the harmful effects surgical smoke has on operating room staff. Some states such as Rhode Island and Colorado have taken action, passing laws requiring hospitals to manage surgical smoke through evacuation systems and there are now many tools equipped to eliminate surgical smoke and protect the OR team.

Ear Tubes in the Office? FDA Approves a new "Breakthrough" System

The US Food and Drug Administration has *approved* a new system for Tympanostomy Tubes in patients 6 months or older. The so called "Tubes Under Local Anesthesia" (TULA) system, which uses a small electrical current to deliver local anesthetic, was tested in 222 pediatric patients. The success rate was reported as 86% and 89% in children younger than 5 years old and from 5-12 years old respectively. These results supported the FDA awarding a "breakthrough device" designation, which requires that the device offers significant advantages and that availability of the device is in the best interest of patients.

EHC NOTE: *The inexorable march of technology may represent a two-edged sword for the businesses of OR's and anesthesia providers. Some breakthroughs drive additional cases, while some technology has the potential to drive traditional business completely out of the OR environment. The TULA system clearly resides in the latter category. While the description holds promise as a positive for patients, if widely adopted it could have a meaningful impact on the caseload at certain hospitals and ASC's.*

Up to this point, in our experience, technology has added to the scope, scale and volume of cases most facilities are able to perform. However, the impact varies dramatically between facilities and markets. As cost pressures and technological innovation continue, many simpler, less invasive procedures may be susceptible to disruption through non-invasive techniques. Each facility (and anesthesia provider group) should assess their potential exposure and if possible, seek to diversify case exposure to include a meaningful percentage of cases which would be less likely to migrate en-masse to the physician office setting.

Follow-Up: Supreme Court Judge Upholds $2M Malpractice Verdict Against Surgeon with Overlapping Surgeries

In our August Anesthesia and OR Review we shared a story "*Overlapping surgery deemed negligent in $2M jury award*" discussing a New York Supreme Court jury's unanimous decision to issue a 2 million dollar malpractice verdict against a surgeon (Dr. Greenky) who routinely staggered joint replacements in two to three OR's.

A *follow-up* to this story explains that Greenky's attorney asked the court to throw out the verdict arguing that the doctor did not get a fair trial because the patient's attorney did not provide evidence that Greenky's use of staggered surgery was inappropriate. He also stated that the opposing counsel falsely implied that Greenky's reason for staggered surgery was money, not patient care.

The New York State Supreme Court Judge upheld the malpractice verdict stating that the staggered surgeries "was merely the ski train on which the negligence of this doctor took place" and the issue was that the patient's thigh was fractured and Greenky failed to repair it.

Greenky's attorney disagrees with the judge's decision and will appeal to the state Supreme Court Appellate Division fourth department.

States Explore Bundling

Bundled payments of surgical services has been slow to take hold with private insurers. However, as detailed in *Modern Healthcare*, bundling platform Carrum Health will offer its' preferred network of providers to State employees in both Maine and Connecticut. The plan in Maine covers 100 procedures and requires no co-pay or deductible within the Carrum network – which includes New England Baptist Hospital in Boston and Connecticut Joint Replacement Institute in Hartford. Carrum (see their press release on the Maine agreement *here*) also offers hospital options around the country.

Carrum CEO Sach Jain is quoted in Modern Healthcare saying that "self-insured employers whose plan enrollees use Carrum's network typically pay 35% less than they would otherwise pay for the service. Eligibility, payment arrangements, and other logistics are streamlined through Carrum's cloud-based platform." The program defines bundles similarly to CMS' Bundled Payment for Care Improvement Advanced program.

EHC NOTE: *While a bit slow to catch hold, bundling or directing patients to centers of excellence seems to be increasing bit by bit among private insurers. We've previously discussed Walmart directing employees requiring total joint replacements to centers of excellence with better outcomes at a lower cost. The rationale for directing patients to high volume centers of excellence at a lower cost seems compelling for any insurer (whether commercial or a self-insured employer). The clear implication of this trend is that if a facility does not qualify as a center of excellence (on both cost and outcomes) for some procedures that they will suffer leakage of surgical volume to facilities that do qualify.*

As we concluded in the Walmart article, the question for facilities competing with such centers of excellence is how do they level the playing field? In our experience, facilities of almost any size can compete in specific specialties in their local markets by focusing efforts on a certain set of procedures and devoting resources to optimize cost, quality and outcomes. All stakeholders involved in the procedures must be integrated, and current protocols must be used – such as the Perioperative Surgical Home, minimally invasive surgical techniques when appropriate, advanced pain control techniques and concepts of ERAS. Our advice: create partnerships with local businesses or payers using your track record as a key differentiator. While you may not be able to partner with the largest employer in the country, smaller, local partnerships can be profitable for facilities and beneficial to your communities.

ICU or No ICU? If that is the Question, We May Soon Ask AI

A pilot *study* of 50 patients conducted at NYU Langone Medical Center and presented at the 2019 American College of Surgeons Clinical Congress tested the appropriateness of ICU triage by an artificial intelligence program compared to that of clinicians. Using input from a number of sources and crunching large amounts of data, the computer created an algorithm with 87 clinical variables and 15 specific criteria related to the appropriateness of admission to the ICU within 48 hours of surgery.

For purposes of the study, criteria for appropriateness of post-operative ICU care were established. If any criterion was met, the ICU care was deemed appropriate, if not met, the admission was deemed an "over triage". Conversely, a patient who was not sent to the ICU but ultimately met a criterion was deemed an "under triage".

The clinicians and the computer algorithm were asked to prospectively assign a patient to receive ICU care or not. Any over or under triage event was classified as failed. Appropriate triage determinations were made in 82% of cases by the AI program, while surgeons accurately assigned patients 70% of the time, followed by intensivists at 64% and anesthesiologists at 58%. While the authors of the study concede that this study only represents a first step, they plan to continue to refine the program and to apply the concept to larger and more diverse patient populations.

EHC NOTE: *While the pilot study discussed was relatively small, the preliminary capability of an AI program to more accurately determine the need for ICU care is persuasive. We assume that such programs can be further refined and improve their accuracy as they continue to crunch data, receive feedback and "learn". Certainly, the ability to engage computer support technology across the perioperative continuum to improve the appropriateness, consistency and speed of decision making offers exciting possibilities to impact patient outcomes and perioperative efficiency.*

Top EHC Article of 2019 : Anesthesia Revenue Cycle for Groups and Hospitals

Whether you are a hospital paying an anesthesia subsidy or a group trying to maximize profitability, it is in your best interest to monitor and optimize anesthesia revenue realized from payers and patients. Read the full article ***here.***

Top Article Review of 2019 : What Does the QZ Modifier Really Mean?

An article co-authored by EHC principal Howard Greenfield, MD and published in Anesthesia Business Consultants Anesthesia Fall Communique takes a deep dive into the "QZ" anesthesia modifier. Once a simple billing modifier, QZ has taken on an increasingly significant role in the provision of anesthesia and the structure of coverage models The article reviews the history of the modifier and the current impact on hospital administrators, anesthesiologists and CRNAs.

For details, read it *here*.

ABOUT THE AUTHORS

Robert Stiefel, MD is a board-certified anesthesiologist and co-founder of Enhance Healthcare Consulting. Dr. Stiefel was a co-founder of a large anesthesia practice management company operating 27 separate facilities, a management service organization, and an internal billing and collections operation. He has over 20 years of experience as a clinical, consultant, and strategist, which allowed him to lead numerous initiatives addressing a wide variety of issues including assisting anesthesia groups re-design of governance, subsidy negotiations, policy/procedures, compensation methodology, and implementation.

Keandra Brown-Davis, MHA is the VP of Operations at Enhance Healthcare Consulting. Keandra graduated from the University of Florida's Master of Health Administration program in 2018. She also graduated from the Florida State University with her Bachelor of Science in Communication Science and Disorders. As an early careerist, she has experiences in various healthcare organizations including not-for-profit and for-profit hospitals, as well as academic medical centers. She previously worked in UF Health's Department of Anesthesiology where she consulted with department leadership on perioperative improvement initiatives, and conducted analyses related to anesthesia utilization, staffing and budgets.