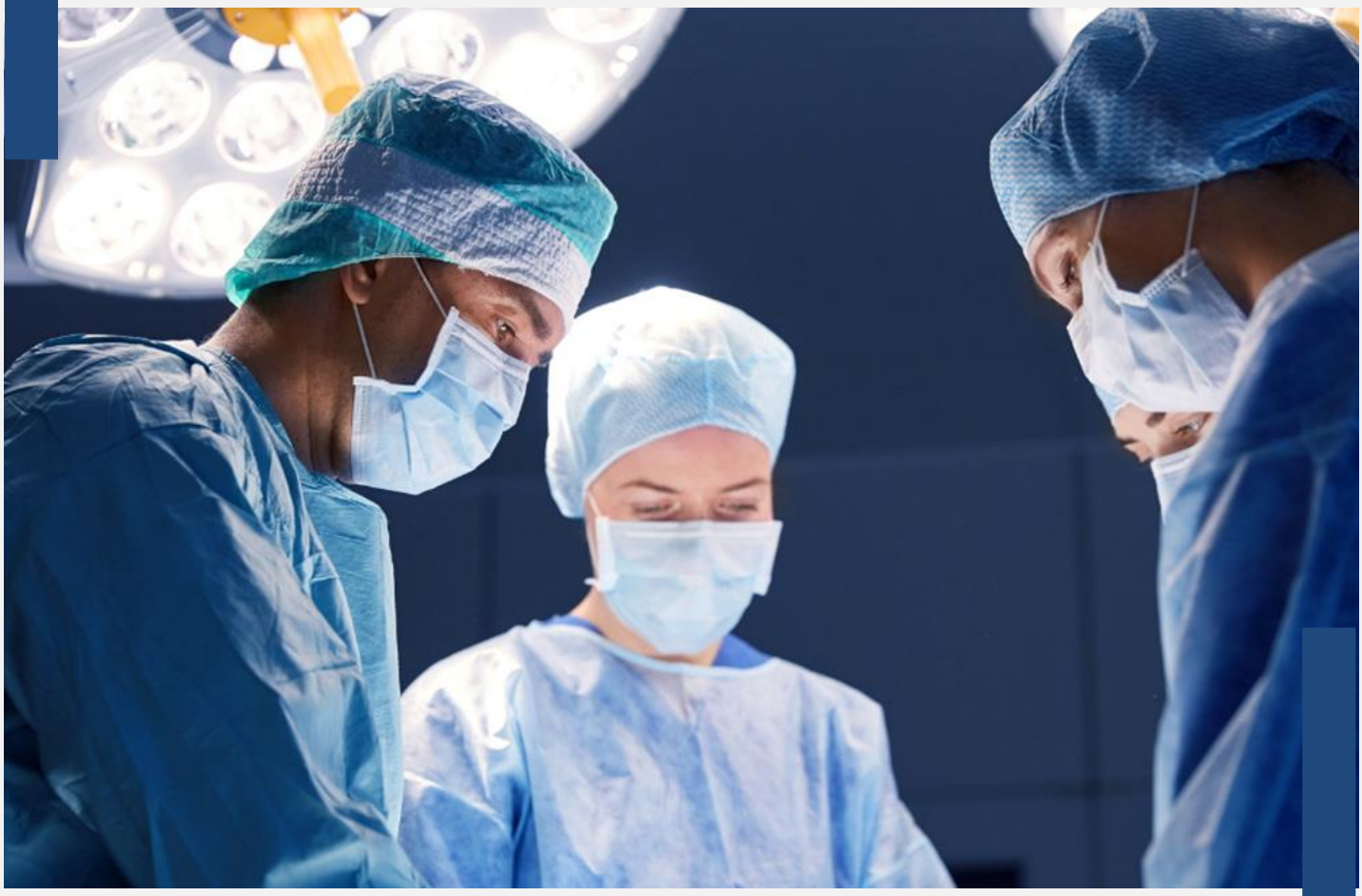
ENHANCE HEALTHCARE'S ANESTHESIA & OPERATING ROOM REVIEW

April to June 2019



Enhance Healthcare Consulting

TABLES OF CONTENTS

April 2019

May 2019

June 2019

Enhance Healthcare Consulting

April

Geisinger Improves Orthopedic Outcomes and Length of Stay Through Telehealth integration

The Department of Orthopedics at Geisinger has expanded integration of the technology Force Therapeutics into perioperative care. For three years, the system has been used to deliver education, communication and monitoring to patients undergoing ***hip*** and ***knee*** surgeries.

Throughout their care, patients are provided with timely exercise and educational videos, prompts and forms to collect information on their progress, and a portal to communicate with their clinical teams. Over 70 percent of eligible Geisinger patients have successfully completed the Force virtual care program, a total of 1,750 patients to date.

In a recent ***update***, the Orthopedic Department has now become the first to integrate the information collected into the patient health record in Epic. This facilitates communication between providers and patients. The results have impacted important metrics including a decrease in hospital length of stay of 30 percent, a 56 percent reduction in skilled nursing facility utilization and an 18 percent reduction in readmissions.

EHC NOTE: *The findings from Geisinger reinforce the beneficial effects we first discussed **here** a few months ago in a study from Rush Medical Center where electronic communication also facilitated pre and postoperative care and improved results. While the reported results from Geisinger are more dramatic both studies reinforce the potential for technology to support perioperative outcomes. Interestingly, the Rush study communicated through automated texting and "video bots" designed by the surgeons, while Geisinger partnered with a commercial entity. Whether a homegrown or an "off-the-shelf" solution is best will likely require evaluation by each individual facility or health system. To get a better understanding of the postoperative components of the Force Therapeutics tool utilized at Geisinger, readers can view a brief video **here**.*

Hospitalist Takes on Medical Director Role at Multi-Facility Pre-Op Center

Hospitalist Holly Ray, MD has taken on the role of Medical Director at the "Surgery Navigation Center" at New Hanover Regional Medical Center ("NHRMC") in Wilmington, NC. According to an ***article*** in the Star Line News, the center opened in October 2018 with the goals of providing a single-entry point and filtering about 40,000 patients undergoing procedures. The Center uses an algorithm based on patients' surgical procedure and medical complexity to provide the appropriate level of preoperative evaluation and preparation. They see preoperative patients for a number of hospitals and ASC's in the Health System. Having a standardized optimization protocol helps NHRMC avoid same-day cancellations for patients, readmissions, and the risk of post-operative complications.

***EHC NOTE*:** *Although the strategy for pre-op preparation utilized in the "Surgery Navigation Center" is in place in many facilities, some health systems struggle to utilize a centralized PAT center. In an environment where margins are constantly under pressure, creating economies of scale where possible should be a goal of every system. A single location can maximize the efficiency of nursing, and physician personnel. Incorporating centralized phone screening mechanism can also minimize the number of patients who need to travel to the testing center.*

Another item to note from the article is that Dr. Ray is a hospitalist. While PAT oversight is often fulfilled by anesthesia personnel, many private groups can't allocate dedicated providers to a PAT clinic. Certainly, hospitalists and other physicians can fulfill this role, but many systems would need a critical mass of patients (perhaps facilitated as in NHRMC by combining patients across the system) to justify the dedicated physician expense.

Let the TAVR Battles Begin

An ***article*** in the Wall Street Journal on March 18, 2019 describes a battle among doctors, hospitals and insurers over federal reimbursement for TAVR. Up until now, due to the reimbursement policies of CMS, the procedure has been limited to about 600 larger centers which are able to perform at least 20 procedures per year. This number of centers represents about half of the facilities with open heart programs. CMS is expected to propose new rules in the near future which may expand the coverage universe. Many smaller facilities and device makers argue for an expansion of the reimbursement to facilitate care for patients closer to home, yet some studies have shown lower readmission rates when TAVR is performed at high volume centers. The American College of Cardiology is of the opinion that there is a correlation between higher volume and quality of TAVR procedures.

EHC Note: *As we often find, a balance must be struck between patient access and safety. In a recurring theme (which has been recently discussed in the* ***Review****), low volumes of any type of complex procedures are often associated with poor outcomes. At the same time, as procedures and techniques are perfected, and clinicians are trained, it is reasonable to gradually expand the universe of centers offering the capability. It makes sense for major organizations including the ASA, ACS, AHA, AORN, etc. to create guidelines delineating a framework establishing educational requirements and proven procedural expertise for perioperative personnel to safely add new techniques and technologies to better care for their communities.*

INTEGRIS "Drives" a Smooth Transition for Pediatric Patients to the OR

Kids are racing through the halls of INTEGRIS Baptist Medical Center in new remote-control cars. It's all part of an ongoing effort to make the hospital less intimidating to children. The Delta Theta Chi sorority donated the cars to INTEGRIS Children's to help transport kids to surgery and other procedures.

https://www.youtube.com/watch?v=P6jk6FlzO60&t=6s

Ashley Ochs, M.A., CCLS, is a child life specialist at INTEGRIS. She says the idea is to make an otherwise scary situation more positive. "Traditionally kids would be wheeled into surgery either in their hospital bed or carried by a staff member, which can be frightening because they don't know what's going on or where they're going. Even though we tell them and show them pictures before taking them, it's still scary to have to leave your parents to go to the operating room. But with the cars, it's fun and exciting. They even get to listen to their favorite song as they go, like they would on a car radio."

Even though the cars were just recently revealed, Paul Digoy, M.D., a pediatric ENT at INTEGRIS, says they are already making a big impact. "These kids are in a new environment. Often they're scared or anxious and they don't know a lot of the people around them. So the cars seem to take their mind off what is happening and gets them to the operating room in a non-stressful way. And we know that how children go to sleep predicts how they wake up. This means a child who goes to sleep scared under anesthesia, will wake up the same way. But if a child goes under happy and comfortable they tend to wake up with less crying and concern." He adds, "I think the cars are making a huge difference. The only hard part now, is getting them out of the car. I think this is going to be a game changer for us." The cars not only make the experience more positive for the children, but for the parents as well. "Sometimes parents are more worried than their children," admits Digoy. "Then to see their child being taken into surgery crying and visibly upset, it can be heart wrenching for them." Ochs agrees, "Parents have been vocal about how much better this experience has been compared to past experiences. They've been relieved to see their child head to surgery with a smile on their face."

While the kids think they're really driving the cars, they're actually being operated remotely by a near-by nurse. Seat-belts are even included for extra safety. The cars are intended for younger children, but older kids can use them as long as they are able to fit inside. There are three cars in total, two in the surgery department and one in the pediatric department to take kids to procedures like blood draws and X-rays.

Perioperative Nutrition Offers Significant Opportunity for Improvement

A wide ranging ***article*** in Anesthesiology News focuses on the state of perioperative nutrition. The article references several studies and features quotes from leading nutrition researchers and clinicians. The consensus is that perioperative nutrition is in dire straits and that changes should be made right away. Lack of nutrition expertise is said to be linked to a lack of education in medical school and residency. Furthermore, nutritional interventions can be time consuming and are not well reimbursed. The experts recommend following recent ERAS nutrition guidelines which include preoperative screening, to focus on preoperative protein, feeding up to two hours pre-op with a carbohydrate drink, and earlier postoperative feeding when practical. Building nutrition optimization protocols into standard preoperative preparation can best prepare patients for positive postoperative results.

Arkansas Pushes to Allow CRNAs to Practice Without Supervision

According to an opinion ***article*** written in the Arkansas Democrat Gazette, SB184/HB1238, a bill in the Arkansas legislature, aims to remove the anesthesia care team model requirement in Arkansas and allow Certified Registered Nurse Anesthetists (CRNAs) to administer anesthesia without any physician supervision. In a medically directed model, a physician anesthesiologist must approve and supervise CRNAs during administration of anesthesiology. The letter, written by an RN who became a Physician Anesthesiologist states that 45 states, the District of Columbia and the Veterans Association currently require physician "involvement" in anesthesia care. The author concludes that Physician supervision of anesthesia ensures patients receive safe, high-quality care and urges Arkansans to contact their Representatives in opposition. She claims the proposed legislation provides no benefit and will not lower health-care costs.

EHC Note: *With many years of experience advising anesthesia groups, hospitals and health systems in states across the nation, EHC has seen and worked with a variety of anesthesia staffing models ranging from All MD to Care Team to models with independent CRNA's. We have seen high quality care provided in all models and we have directly observed that these disparate staffing approaches may be be effective from both an efficiency and cost perspective.*

Attempts at academic study of quality and outcomes between various models have been mixed, with data available to support physician involvement or CRNA-only care. In the midst of legislation proposed in several states that aims to change the scope of supervision (potentially adding to the 17 states which have chosen to opt-out of the CMS physician supervision requirement for anesthesia) there is a great deal of political dialogue and controversy.

In our opinion, hospitals and groups should focus on crafting a delivery model which meets their needs within the parameters of their state regulations. The solution should be carefully designed by taking into account the unique medical culture at the facility, case complexity, local and regional practice patterns, and the cost implications when choosing between various models. As a closing thought, despite the claims of the author of the article reviewed, many commercial payers do reduce payment for unsupervised services by a CRNA, thus reducing cost for insurers and potentially patients in the form of copay and deductibles. Furthermore, in many scenarios, complete or partial use of unsupervised CRNA's would reduce the overall cost of anesthesia staffing for a given set of coverage requirements, thus potentially decreasing subsidy cost to the hospital.

In-Network Hospitals Burden Patients with Surprise Out-Of-Network Bills

An ***article*** written in Modern Healthcare describes the surprising frequency with which in-network hospital admissions result in at least one out-of-network claim. About 1 in 7 patients receive unexpected out-of-network bills when obtaining inpatient care at an in-network hospital. The frequency of this occurrence varies by state, happening 26.3% of the time in Florida and 1.7% in Minnesota. Anesthesiology, a service that oftentimes negotiates contracts with payers separately from the hospital, accounted for the largest amount of out-of-network claims at 16.5%.

Patients are admitted to in-network hospitals with the belief that they will be covered per the terms of their insurance, and they are oftentimes not made aware of out-of-network services or providers until after they've received care. The frequency of surprise medical bills has led legislators to work to find solutions, including placing a cap on out-of-network charges and resolving out-off-network disputes between insurers and providers in arbitration.

EHC Note: *The surprising frequency of out-of-network claims has increasingly become an issue that legislators across the country are taking interest in. They are tackling issues both on a case-by-case basis and a larger scale. This issue can have a negative impact on hospital-based groups' ability to negotiate with their networks and the hospitals they contract with putting the group at continued risk. Difficulty contracting with payers leads to increased difficulty achieving reimbursement and can result in lower overall compensation and/or an increased subsidy ask.*

National Provider Compensation According to Enhance Healthcare's EHCdata

Enhance Healthcare Consulting EHCdata is one of the largest collections of internal facility and provider group data in the country, including specific information on compensation, subsidies and more. According to EHCdata, the national average physician base compensation is $408,000 and the national average CRNA base compensation is shown at $176,000. This data represents EHC's internal information and varies widely by state and region.

American College of Surgeons Assesses Frailty as a Pre-Op Screening Tool

The American College of Surgeons has ***released*** information on a study involving 14,530 surgical patients which was designed to assess frailty as an independent risk factor. Using a common frailty index, researchers deemed 5.3 percent of inpatients and 2.5 percent of outpatients to have "high frailty". Compared with low frailty patients, the presence of high frailty correlated with significantly worse outcomes within 30 days of the operation including:

- Increased risk of experiencing a major complication (a composite of multiple serious complications): 2.9 and 1.8 times greater odds in the outpatient and inpatient groups, respectively
- Longer median hospital stay, by 2.5 days; higher health care costs; and a 5.6 times greater chance of being discharged to a nursing facility for the inpatient group
- Greater chance of being readmitted to the hospital: 4.8 times the odds for outpatients and 2.3 times the odds for inpatients
- More than twice the odds of an emergency room visit after an outpatient procedure

Intermediate, or moderate, frailty significantly increased the risk of all these outcomes as well, the researchers reported. The study authors suggest that a frailty evaluation can be incorporated into the preoperative evaluation process as a risk stratification tool, and that if patients scheduled for a major or complex operation find out they have a high level of frailty, an option might be a "pre-habilitation" program, designed to optimize them prior to the procedure.

You Think You Have Revenue Challenges? This International Hospital Charges $14 for an Endoscopy and $2,000 for a CABG

Bloomberg Business ***reports*** on Narayana Health, a 23-hospital chain in India. Cardiac Surgeon and founder/Chairman of the Health System, Dr. Devi Shetty opened the first Narayana Hospital in 2000. Originally devoted only to Cardiac Surgery the hospitals now have expanded to include most major operations and have set up regional hospitals that could treat patients with complex conditions into its two largest facilities.

Designed for efficiency in a hyper-low cost environment, the system charges $14 for an endoscopy, $2,000 for a CABG, and a Heart Transplant costs $11,000. The low cost apparently doesn't come at the expense of quality as the Narayana Cardiac hub is JCAHO certified and outperforms US counterparts at 30 day mortality for many high end CV procedures.

How can they provide high quality care at a fraction of the US and even other domestic Indian hospitals? The fundamental approach is based upon a business school concept called upskilling. Everyone involved in a complex process works at the top of their qualifications, leaving simpler tasks to lower-paid workers. This allows surgeons to only participate in the most challenging part of the procedure, completing far more procedures in a day. The hospitals also cut costs throughout the supply chain, squeezing turnover time to 15 minutes, sterilizing and reusing surgical tubing, repairing rather than replacing machinery, etc.

Despite their impressive thrift and enviable pricing power, even Narayana is under reimbursement pressure. The new National Health Plan implemented by the Indian government (dubbed "Modicare") has come out with an initial fee schedule which reimburses far below the current pricing of the Narayana hospitals.

EHC NOTE: *Indian hospital operators such as Narayana surely benefit from structural, regulatory and employee compensation tailwinds to help maintain profitability at rock bottom pricing. However, US operating room leaders should look at processes which may be transferable to our own system. Clearly reimbursement in the US is under constant pressure and low cost, high quality providers will be well positioned to thrives… sounds like an opportunity for disruptive innovation to us! With documented good outcomes, and a massive price differential, this article also raises concerns of the loss of high cost procedures to Medical Tourism. The competition for market share may not only be from local hospitals, regional referral centers or tertiary care US facilities, but from locations across the world.*

Atrium Reports Savings After Tumultuous Anesthesia Group Change

In a follow up to a contentious and public anesthesia transition in 2018, the Charlotte Observer **reports** that both Atrium Health System and its patients have realized savings. Atrium CEO Gene Woods is quoted in the article indicating that patients have realized 10% out-of-pocket savings and the Health System has reduced anesthesia spend by $20 Million, across eight hospitals. The transition displaced 90 anesthesiologists who had been employed by a Mednax affiliate. These physicians were replaced by providers brought in by the new vendor, Scope Anesthesia of North Carolina. One of the reasons for the group change was to provide anesthesia services under a more care team based model with expanded use of CRNA's. According to the article, Atrium said last year that it expected anesthesiology costs to be cheaper under Scope because, unlike Mednax, it is not a publicly traded company that faces shareholder pressure to increase profits.

EHC NOTE: *The Anesthesia coverage saga at Atrium Health highlights some interesting dynamics currently shaping the anesthesia service delivery market. In our work with anesthesia groups, hospitals and health systems, we see this playing out in a number of ways in individual markets.*

Many large provider groups with over 1,000 providers have grown rapidly in recent years. They have done so through some organic growth, but more so through acquisitions. Funding for acquisitions often comes from investors – either through private equity or public markets. Many of these firms are then "recapitalized" or resold to other investors often at higher multiples. This creates a need for increased earnings to support the desired return on investment (ROI). The need for a higher ROI and the fact that large entities have higher overhead (support staff, financial staff, sales staff, recruiters etc.) drives the need for more earnings from each contract or book of business. However, the higher expenses are frequently offset by better payer rates for discretionary payers. The result is that the net financial impact is complex.

Smaller groups on average have lower overhead and required net margin requirements but generate less revenue for the same book of business. Each situation must be analyzed (by individuals with extensive anesthesia expertise) based on all expense and revenue drivers to determine whether a large group or a small group will require more financial support. Therefore, while we would not dispute the reported savings realized by Atrium across eight facilities, it would be unwise to extrapolate this to all situations and conclude that moving from a larger group to a smaller group is less expensive. As is often the case, "the devil is in the details", and that is especially true for the complex and multi-factorial issue of anesthesia subsidies.

May

Incisional Hernia Risk- - Now There's an App for That

Researchers at the Perelman School of Medicine at UPenn have developed an *app* designed to assess the risk of incisional hernias in a variety of abdominal procedures. A previous analysis from UPenn shown that care related to incisional hernias cost the US Healthcare system $7.3 Billion per year. Based upon a "big data" analysis of 30,000 patients, the team identified risk factors as well as procedures across multiple specialties likely to lead to an incisional hernia. The app is designed to assign a real-time risk score to every patient scheduled for abdominal surgery at the point of care. This allows surgeons to consider incisional hernia risk as part of their pre-procedural planning and decision making.

Washington State Health System Cites HER and Revenue Cycle as Key Factors Leading to Bankruptcy

Astria Health, based in Washington state has filed for Chapter 11 bankruptcy, laying blame on issues with their EHR and with an outside contracted Revenue Cycle provider. According to the *Yakima Herald-Republic*, in the months leading up to the filing the three-hospital system cut several programs and tightly managed their supply chain in an attempt to stabilize their finances. Nonetheless, their contracted Revenue Cycle vendor allegedly did not process a number of the Accounts Receivables resulting in the cash shortfall that led to the filing.

EHC NOTE: *In another story of financial woe, this small system was apparently hit by a double whammy – EHR problems and poor revenue cycle performance. While the problems cited were hospital-wide, both issues can impact Anesthesia and OR financial performance either individually or together. With the rapid adoption of EHR systems, we have seen many peri-operative challenges with case scheduling, time estimation, and the learning curve with preoperative documentation by both nurses and physicians. These challenges can lead to decreased surgical volume over the course of several months during the transition. Since the OR usually drives hospital financial performance, any disruption in case volume can tip a facility or system over the financial edge. Any reduction in volume will of course directly impact the cash flow of the anesthesia group as well.*

Likewise, Revenue Cycle performance is a major risk factor for both OR and Anesthesia leaders. The inability to convert the services delivered into cash is a major risk factor for any business, and no different in our perioperative world. Revenue cycle performance must be understood and tracked on an ongoing basis whether it is performed internally or outsourced. With hospital and anesthesia group finances under attack on many fronts, vigilance must be maintained to address risk factors such as those discussed in this article. We suggest that OR and Anesthesia leadership teams recognize the pitfalls of an EHR transition and create a plan to identify and mitigate the risks and financial fallout. Separately, revenue cycle performance – for both the OR and Anesthesia – should always be monitored, with Key Process Indicators identified and tracked pro-actively.

United Healthcare Expands Bundling Program for Medicare Advantage Patients

United Healthcare will offer a bundled payments *program* for providers caring for Medicare Advantage patients in over 30 states. The program (which will include certain procedures, including hip and knee replacements, spinal fusions and coronary bypasses) builds upon UnitedHealthcare's existing work with the Centers for Medicare & Medicaid Services' Bundled Payments for Care Improvement Advanced (BPCI Advanced) program for fee-for-service Medicare. Integrated into the program, UnitedHealthcare will provide services and support, including care management solutions to help support care from preoperative education to post-acute care. The program also offers patient engagement tools, performance analytics and consulting, and payment administration services.

Reducing "Low-Value" Preop Care. Good or Bad?

An interesting *study* from JAMA looks at the financial impact of reducing "low-value" preoperative care for cataract patients. Approximately 500 cataract patients from two Los Angeles area academic safety net hospitals were tested. One facility underwent "intervention" whereby a quality improvement and education initiative were undertaken with the goal of reducing overuse of preoperative testing personnel, testing and resources. The second facility had no intervention and served as the control group. Intervention resulted in a dramatic reduction in preoperative visits, chest X-rays and lab tests. Financial impact for the study hospitals (which operate under a capitated budget) showed modest savings over three years of $67,241. However, the same results extrapolated to a fee-for-service hospital calculated a loss of $88,151 over three years.

EHC NOTE: *In this study, the financial impact of what is generally agreed to be evidence-based care (minimizing preoperative testing for cataracts) varies between capitation and fee-for-service facilities. This highlights the confusing and inconsistent financial incentives in the US system. In reality, most hospitals operate with a mix of bundled, DRG and fee-for-service arrangements. To isolate the financial impact of what should be a "no-brainer" intervention, would require a detailed analysis of actual payer mix, reimbursement methodologies and the amount of fee-for-service payments. While we certainly default to providing the most appropriate clinical care – in this case minimizing testing – the payment methodologies should uniformly reward this type of evidence-based care as well.*

Cannabis Use Linked to Need for Higher Doses of Anesthesia

An article written by CNN describes a study conducted by the Journal of the American Osteopathic Association that followed 250 patients receiving minimally invasive surgery in Colorado, where recreational marijuana has been legalized. The study found that patients using marijuana regularly, for recreational or medical purposes, required larger doses of anesthesia for their procedures. Specifically, cannabis users needed 220 percent more propofol, 14 percent more fentanyl and 20 percent more midazolam.

***EHC NOTE:** This study has a relatively low number of study participants, and was retrospective, limitations which may decrease the wide application of the findings. Researchers looked at medical records and compared the amount of sedation for each patient, they did not control other variables. Despite these factors, 13.5% of adults use cannabis in the United States, and use has increased by 43% between 2007 and 2015. With such a significant increase in use, anesthesiologists and other perioperative providers should be aware and plan accordingly for the possible impact on anesthetic agent requirements when caring for patients who regularly use cannabis.*

Improving Quality and Profitability Through OR Efficiency

Take a look at Dr. Randy Fagin's take on improving operating room efficiency! Dr. Randy Fagin IRUS lecture with PowerPoint presentation. Fagin shares good ideas about standardization and creating efficiency for robotic surgical teams.

https://www.youtube.com/watch?v=TCisWVDg22g

All (Non-Robotic) Hands on Deck at Struggling Rural NY Hospital

In a tale which is becoming all too common, a small, rural hospital is considering several concurrent strategies as it struggles for financial survival. Part of the strategy is to shave $460,000 in annual cost by jettisoning lease payments on their surgical robot. As detailed in a *story* by News 7, the facility has lost $2M in the first quarter of 2019. A detailed cost analysis is underway, and the facility is considering being reclassified as a critical access facility, or merging into a local system. The surgical robot lease payments were apparently identified as an immediately identifiable cost reduction opportunity.

EHC NOTE: *Reimbursement pressure, regulatory burdens and challenges in recruitment and retention of providers are causing rural facilities – many of which were on shaky financial ground to start with – to close or teeter perilously on the edge. We understand that a half million-dollar expense savings is compelling to a Board looking at large losses. However, hospitals should carefully evaluate the entirety of a decision to remove a surgical capability and differentiator. While the facility discussed will be able to perform the cases without robotic assistance, it may be that surgeons and patients may decide to go to alternative locations which offer the latest technology. A careful contribution margin analysis should always be performed when making major decisions affecting key surgical differentiators.*

The 5 C's of Physician Leadership

Read our latest article on the keys to successful hospital-based provider leadership!

https://enhancehc.com/wp-content/uploads/2019/05/The-5-Cs-of-Leadership.pdf

White House Joins the Discussion on Surprise Medical Billing

President Trump weighed in on "surprise medical billing" on May 9th. The Washington Post *reported* that the President called for Democrats and Republicans alike to work quickly to stop surprise billing, quoting him as saying that "these practices are bankrupting patients through healthcare costs that are absolutely out-of-control. No family should be blindsided by outrageous medical bills." Administration officials favor requiring hospitals to inform elective surgery patients if any care is to be provided by out-of-network providers and if so, to receive a written price estimate and ability to consent.

EHC NOTE: *While the devil of theoretical national "surprise billing" legislation is in the details, it is difficult to imagine any solution will be favorable to the ability of anesthesia providers to negotiate payer rates. Anesthesia rates from government payers are woefully inadequate at approximately 25 to 33% of commercial rates, compared to most other specialties where government payers reimburse at 75 to 90% of commercial rates. This dubious distinction places anesthesia finances highly leveraged to commercial rates and therefore to the ability to negotiate with discretionary payers.*

In order to negotiate, an entity must have one or more points of leverage. The traditional leverage for anesthesia providers has been to threaten to stop participating in a payers' network. This is a negative for the payer since the patient (payers' customer) will be responsible for an out-of-network bill. If legislation limits or eliminates this option for anesthesiologists, the major point of negotiating leverage is eliminated. Payers would have little incentive to raise rates for any anesthesia group and would have ammunition to help drive down rates of groups currently enjoying above market reimbursement. We have already begun to see this play out in a few states where surprise billing legislation has been passed.

If commercial payments decrease while all other factors remaining equal, reduced professional fee collections will lead either to reduced anesthesia provider compensation or increased hospital subsidy support. Stakeholders on both sides should pay close attention to the political winds swirling around this issue at the state and national levels.

"Lean" Towards Reducing OR Turnover Time

The Annals of Thoracic Surgery reports on a *study* from NYU Langone Medical Center which applied the concepts of Lean process improvement to OR Turnover. A multi-disciplinary team was converted into a turnover time (TOT) "Performance Improvement Team (PIT Crew)". This team created numerous value stream maps for the perioperative period from the preop area to PACU holding. Each process was identified as "valued" or "non-valued" and the non-valued steps were eliminated. The valued steps were further reviewed and streamlined by removing unnecessary or duplicate movements.

In addition, steps were evaluated to determine which could be performed in parallel with other teams. Although there were only 86 procedures in the "control" historical group prior to implementing changes and 42 patients evaluated under the new process, results were significant. Median turnover time was reduced from 37 to 14 minutes. The study goes on to report that the cost of the PIT Crew was $1,298 per day, offset by estimated savings of $19,500 per day.

EHC NOTE: *Although this study was only applied to the cases of two surgeons the results are impressive enough to take note of and investigate further. Certainly, a reduction of 62% in median TOT should be enough to move the needle on surgeon satisfaction and in some cases allow for additional case volume. The article also contains a detailed table which looks at the original process steps and those deemed non-valued for a number of stakeholders – such as anesthesia, nurse circulators, housekeeping, and patient transport. This table is a good resource for OR managers or Operating Room committees interested in identifying opportunities for TOT reductions and implementing parallel processes.*

June

Same Day Discharge for Joint Replacement is Achievable While Minimizing Opioid Use

A study from Northside Hospital in Atlanta and reported on in *Anesthesiology News* showed that a high percentage of Hip and Knee replacement patients can be successfully discharged on the day of surgery using a Multi-Modal Analgesic Protocol (MMAP). Over 2,000 patients were analyzed and 85% were discharged within eight hours of their procedure. Approximately 70% of patients not taking narcotics preoperatively did not require their use in the postoperative period. Success was attributed to the close working relationships between surgeons and anesthesiologists, the use of a strict MMAP with the use of spinal anesthesia, and full institutional support. A Pre, Intra and Post-Operative MMAP protocol summary is provided in the article. The lead author emphasized that a dedicated multidisciplinary team as well as patient education are key components of successful same day discharge for patients undergoing joint replacements.

EHC NOTE: *The approach described, which was able to facilitate same day discharge for joint replacements, is likely to expand to other traditionally inpatient procedures due to cost pressures and advances in surgical technique and pain control. The study discussed is instructive in that a multi-disciplinary team approach in conjunction with a narcotic light multi-modal analgesic protocol facilitated the results. Institutions looking to achieve same day discharge for joint replacements or other procedures are advised to review the approach taken at Northside Hospital and adapt it to their local clinical and operational environment.*

Is Anesthesia Used in Surgery Linked to Breast Cancer Recurrence?

A retrospective study reviewed in *Anesthesiology News* reported no correlation between the type of anesthesia used in breast cancer surgery and the rate of recurrence. The study retrospectively analyzed 5,331 patients who were split into two groups; the IV group was anesthetized with propofol and remifentanil and the volatile group received enflurance, isoflurance, sevoflurance or desflurance. The results showed no significant difference in the five-year survival rates between the two groups. Dr. Jin-Tae Kim, MD, PHD, senior study author, noted the primary cause of death after cancer surgery was the recurrence of cancer and stated that both anesthetic techniques can be used to treat breast cancer, the choice should be dependent on the patients' needs.

Physiologically, anesthesia agents have properties which would appear to either lead to reduced recurrence of the disease (ex. Propofol has antioxidant and anti-inflammatory qualities) or increased risk of recurrence (volatile anesthetics are harmful to the immune system). Several studies have been conducted to determine the link, if any, between anesthesia and cancer recurrence. While the results of these studies have been variable, it is possible that the level of trauma of a major operation might be the significant influencer of cancer recurrence. The study of this relationship is still in the early stages, but any influence anesthesia may have to reduce cancer recurrence is important to analyze and continue to monitor. Dr. Kim noted that additional large, randomized trials comparing cancer recurrence are presently underway.

Changes in Process of First Case on Time Starts Drives Improvement at a SC Hospital

Dramatic improvements in First case On Time Starts were the focus of a *study* published in the Journal of Healthcare Management, by Allen et. al. from Greenville Health System. They describe redesign of first cases which highlighted a change in on-time definition from "wheels in" to "incision time" with no grace period. The changes were driven by a surgeon-chaired, multi-disciplinary OR Operations Committee which solves process related issues in the OR. Their approach included classification of cases as complex (target in OR 45 minutes before scheduled incision) or simple (target in OR 30 minutes before). Process improvement efforts included identification of root causes of delays, transparent sharing of data among all perioperative stakeholders, and a focus on easily correctable issues. The process changes resulted in an improvement of 34.3% in patient in-room on-time performance and a 48.6% increase in incision on-time metrics. The authors calculated a savings in variable personnel costs of $771,000 in their 25-OR facility, generated by saving approximately 80,000 minutes.

EHC NOTE: *The study highlights the power of physician driven process improvement. Surgeons and anesthesiologists led and championed the initiative, with multidisciplinary input from their OR Operations Committee. As described, the initiative included open and transparent sharing of process shortcomings for all stakeholders, surgeons included, to facilitate the impressive results. In the current competitive operating room environment, any operational and/or financial improvements are vital to retain or gain market share and financial viability. Enhance Healthcare embraces many of the approaches described in designing perioperative improvement initiatives for facilities of all sizes.*

Does Quality Pay? The Link Between SCIP Performance and Hospital Profitability

Using nationwide financial data for all US hospitals in the AHA Annual Survey and Surgical Care Improvement Project (SCIP) measure performance from the Hospital Compare site, Beauvais et. al. examined the association between quality metrics performance and hospital financial performance. The *study*, published in the Journal of Healthcare Management found that higher patient safety scores had a direct correlation with increased hospital profitability.

EHC NOTE: *Since this study looked at data from years 2014 and 2015, some of the quality metrics tracked have changed in the ensuing years. Nonetheless, their conclusion – "that targeted improvement in patient safety performance, as evaluated in the Hospital Compare data, is associated with improved financial performance at the hospital level. Increased attention to safe care delivery may allow hospitals to generate additional patient care earnings, improve margins and create capital to advance the hospital financial position" – certainly remains applicable. As a greater percentage of reimbursement is tied to quality and outcome metrics and as patients have increasing access to comparative data, we expect the correlation between demonstrable quality and financial performance to increase. As the typical engine of profitability in most facilities, these findings reinforce the need for all Operating Room stakeholders to closely monitor quality and seek continuous improvement.*

Big Bucks and Big Backers for Surgical VR Firm Vicarious Surgical

Virtual reality combined with surgical robotics and micro-incisions is proving to be a valuable mix for the startup Vicarious Surgical. According to *Mobihealth News*, the company received a second round of funding from A-list investors including the Gates Foundation, Khsola Ventures and Marc Benioff (Salesforce Founder). The latest funding brings the total to $30M for the Massachusetts based company. The company aims to perfect a micro-incision approach "using miniaturized robotics and immersive [VR] to give surgeons improved capabilities" according to one investor. As technology advances, competitors are eyeing new niches and expanding capabilities in the surgical robot arena – seeking to share the market dominated by industry trailblazer Intuitive Surgical with the Da Vinci Robot.

An Inside Look into Why Hospitals Seek New Anesthesia Providers

Enhance Healthcare Consulting surveyed hospital executives across the country to discover how and why they seek new anesthesia providers. Take a look at the results!

https://enhancehc.com/wp-content/uploads/2018/01/SurveyResults-FINAL-04122016.pdf

Virtual Reality Hypnosis Distraction Used to Reduce the Need for Intravenous Sedation

An *article* written in "HIT Infrastructure" describes the possible positive effects of using Virtual Reality Hypnosis Distraction (VRHD) to minimize the need for sedation during surgery. Dr. Dragos Chirnoaga from CUB Erasmus Hospital, Brussels, Belgium led the trial which consisted of a randomized selection of 60 patients undergoing orthopedic surgery. 20 of the patients were in the control group and received regional anesthesia along with intravenous sedation without use of any VR technology. The other 40 patients were separated into two groups using the VRHD therapy, 20 received VRHD during regional anesthesia and the remaining 20 patients received VRHD therapy before and during anesthesia. For both of these groups intravenous sedation was administered if the patient reported pain between 3 and 10. The VRHD therapy consisted of video content of a "submarine ride and life under the sea" shown through virtual reality goggles paired with a calming voice through headphones.

The results showed that only 25% of patients receiving the VRHD therapy during anesthesia required intravenous sedation, with the number decreasing to 10% for patients that received the therapy before and during anesthesia.

EHC NOTE: *While it remains unclear exactly how virtual reality reduces the need for intravenous sedation, the purpose of the therapy is to relax the patient and distract their mind from feelings of pain. Could virtual reality facilitate minor procedures and mitigate the need for conscious sedation and/or MAC? While uses for VRHD therapy in anesthesia are still premature there are potentially several existing and rapidly developing uses for VR/AR (Augmented Reality) within healthcare such as education for practitioners, medical students and patients and surgeon assistance with visualizing operating areas.*

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.***

Maximizing Safety of Non-OR Anesthesia

The Anesthesia Patient Safety Foundation brings us a detailed *article* focused on safety considerations for Non-Operating Room Anesthesia (NORA). For most hospitals, NORA represents the most rapidly growing area of need for anesthesia services. Closed claims data show that NORA patients have a higher frequency of severe injury and death than those treated in the main operating room. In 50% of closed claims from a NORA setting, monitored anesthesia care was the chosen technique. NORA-specific challenges are described in the article and include remote locations, sharing the airway, a high incidence of coexisting disease, limited workspace, older equipment, and inadequate support staff. Recommendations to improve safety include adequate preoperative preparation, standard ASA monitoring, assurance of functioning equipment, availability of emergency equipment and medications, and the creation of protocols and checklists. The authors conclude that anesthesia professionals should guide a multi-disciplinary team approach to safe NORA care in order to be at the frontline of this rapidly evolving and expanding service area.

EHC NOTE: *Based on our experience we concur that demand for anesthesia coverage out of the operating room is outpacing all other anesthetizing sites. This rapid increase in demand brings with it the quality challenges described in this article as well as a host of efficiency challenges. Regarding the quality issues, we feel that the recommendations described by APSF should be supported. In addition to ensuring proper medication, equipment and support personnel are available, written protocols and checklists are especially compelling since we see dramatic variability in practice among both anesthesia providers and proceduralists.*

Efficient support of NORA requires integration of scheduling, written guidelines for allocation of anesthesia personnel, potential block allocation of providers and a mechanism to communicate across all anesthetizing sites as add-ons and emergencies change anesthesia availability throughout the day. Efficient allocation of expensive anesthesia resources is challenging in many out of OR locations where anesthesia coverage is requested for only a subset of cases due to patient or case complexity. As NORA grows, perioperative and anesthesia leaders will be increasingly required to balance the desire for expanded anesthesia capacity against the dual constraints of financial support for poorly utilized locations and of limitations in provider availability. In fact, we see the creation of an integrated scheduling mechanism across all anesthetizing locations becoming a more frequent component of our OR efficiency projects.

Medicare for All – Apalooza : Controversial Proposal Stirs Conflict in Chicago and Washington

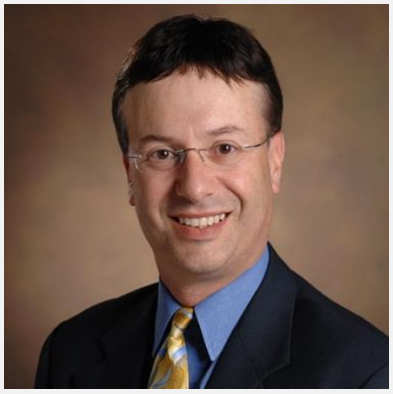
The latest "fix" for all that ails US Healthcare is "Medicare for All" which certainly fuels strong reactions along political and professional lines. Among the latest events are a contentious hearing in Washington summarized in *The Hill* and a protest at the annual AMA meeting detailed in the *Chicago Tribune*.

In Chicago, a group of renegade health care providers called "Physicians for a National Health Program" protested the AMA's opposition to the Medicare for All legislation. Both organizations say they support high quality, affordable health care but the AMA wants to expand private options as opposed to going all in on government-directed care. Meanwhile in Washington, a perhaps more predictable scenario unfolded. In the first hearing on the subject of Medicare for All by a congressional committee with jurisdiction over health care issues, partisan rhetoric flew in both directions, with each party taking turns bashing the other. According to the article, a ranking Republican member of the powerful House Ways and Means Committee painted the proposal as an outrageously expensive Democratic seizure of healthcare akin to the failed universal health care systems in countries like Romania. Not to be outdone, a Democratic co-sponsor of the bill responded to the remarks above that "I have never heard a ranking member's statement that was filled with not a single truth". The atmosphere reportedly was further charged by an audience containing vocal supporters on both sides of the issue.

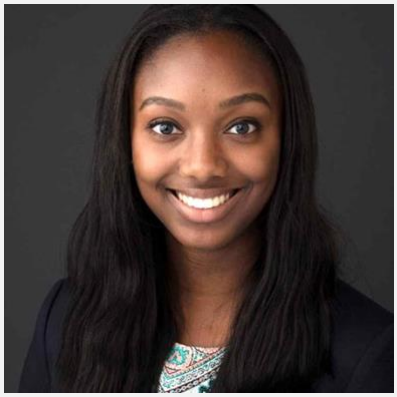
EHC NOTE: We doubt that any of the members of the "Physicians for a National Health Program" were anesthesia providers. In its current form, Medicare reimbursement is abysmal for anesthesia services, reimbursing a far smaller percentage of average commercial charges than other specialties. It is often said in anesthesia circles that if an anesthesia provider is in the OR for an hour with a Medicare patient and they have a plumber at their house for an hour, they end up with less money to show for the hour worked than the plumber. If the current fee schedule were to be maintained implementation of Medicare for All would be a nuclear event for the anesthesia industry. Depending on payer mix and current private rates, reimbursement from the single payer would likely reduce anesthesia collections by 50% to 75%. Not many providers would likely sign up for a corresponding reduction in pay and likewise not many hospitals or surgical centers would be too excited to "make the providers whole" through additional subsidy support.

While the impact would not be quite as dramatic for surgical services, many OR's struggle to break even at Medicare reimbursement rates. If forced to accept these rates for all cases, the key driver of revenue and profits for most hospitals would dry up overnight. We would anticipate pressure to dramatically improve operating room efficiency, reduce supply chain costs and exit surgical service lines with low contribution margins. Compensation for employed surgeons and nursing personnel would likely be reduced. Despite these and other best efforts, some hospitals would likely close their doors in the face of such financial upheaval. Of course, the devil is always in the details, and it is highly likely that even the great minds in Washington would not attempt to implement current Medicare reimbursement policies across the board if they were to move to this version of a single payer system. However, it certainly serves as food for thought. Perioperative directors may want to consider as a thought exercise how they would react in a Medicare for all scenario. What cost cutting options are available? What efficiency options are available? Can the supply chain be tightened? Perhaps consider implementing some of the more palatable options you arrive at now – get lean, mean and profitable ahead of the storm (whatever form that storm takes) as Washington fiddles with the future of healthcare. As for anesthesia providers, if Medicare for all is implemented with the current reimbursement methodology, there's always a career in plumbing to consider.

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.