FIVE YEAR STRATEGIC PLAN (2022-2026)
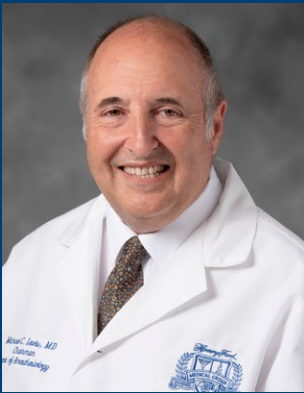
The Department of Anesthesiology, Pain Management and Perioperative Medicine

Henry Ford HEALTH SYSTEM

"Those who build great organizations make sure they have the right people on the bus, the wrong people off the bus, and the right people in the key seats before they figure out where to drive the bus."

- Jim Collins, the business guru, espoused in his 2001 book <u>Good to Great</u>

Message from the Chair

The Department of Anesthesiology, Pain Management & Perioperative Medicine of Henry Ford Health System (HFHS) unveiled its first comprehensive five-year strategic plan in 2016. Today, with the outlined goals largely accomplished, we are ready to plan the next steps to achieve growth, opportunity, and advancement.

The department has made significant investments in personnel development, cultural alignment, and technology. These initiatives have created the infrastructure that drives our clinical and operational quality, along with greater accountability. Moreover, with our strategic partners we have shaped a culture of collaboration, developed operational efficiencies, invigorated academic research output, and significantly improved education programs.

The creation of this new strategic plan would not have been possible without the guidance and assistance of our partners in the HFHS Transformation Team (Theresa Broniak, Kim Pfeiffer, K. R. Prabha, and Emily Sharpe). We are also deeply thankful for the help we received from our human resources team and the Innovation Institute (Lisa Prasad and Scott Dulchavsky). Also, we offer thanks to collaborators from all areas of our professional world (anesthesiologists, CRNAs, surgeons, and administrators), who have partnered and supported us during this journey.

Over the next five years, our transformative work will culminate in a fully developed university department in partnership with Michigan State University (MSU) from the hallmark of a firmly established hospital based academic group. Within this framework, we will contribute significantly to MSU's mission and achieve distinction in clinical care, research, and medical education. This will happen within a cultural and governance framework that is open, honest, and accountable.

I like to think about our destination being akin to what Ronald Reagan described as his vision of America, '"The Shining City Upon a Hill." He defined his idea as: "[I]n my mind it was a tall, proud city built on rocks stronger than oceans, windswept, God-blessed, and teeming with people of all kinds living in harmony and peace; a city with free ports that hummed with commerce and creativity. And if there had to be city walls, the walls had doors and the doors were open to anyone with the will and the heart to get here." We both open and close our document on this theme.

The opportunity is ours to grab!

Deepest appreciation,

Michael C. Lewis, M.D., FASA
Department of Anesthesiology, Pain Management, & Perioperative Medicine
Joseph L. Ponka Chair, Henry Ford Health System
Professor, Michigan State University College of Human Medicine (MSU)
Professor of Anesthesiology, Wayne State University (WSU)

Preamble

We are the Henry Ford Health System Department of Anesthesiology, Pain Management, and Perioperative Medicine. Our team consists of clinical staff, educators, researchers, and administrators.

In a continuously shifting healthcare environment, our clinical obligation is to create effective, safe, and efficient care models. We have the added and welcomed responsibility, as a future academic department of Michigan State University College of Human Medicine, to create new knowledge that will guarantee the continual evolution of the quality of our clinical care, education, and research. If we are going to fulfill this responsibility we must recruit and retain the most talented staff, develop a culture of mentorship, foster a sense of inclusion, and adopt the highest professional standards.

Indeed, this is an enormous charge, and one might be persuaded that the safer tactic would be to select and implement small incremental steps rather than engage in these bold initiatives. We disagree, our approach has been quite the contrary. We must be resolute, bold, sound, cost conscious, and above all, effective. This strategic plan envelops a detailed process of discussion, consultation, expert opinion, and determination to optimally use our valuable resources.

The Process

Six years after arriving here in Detroit the department chair Michael Lewis, MD initiated the creation of this second five-year strategic plan. Michael was recruited to Henry Ford from the University of Florida College of Medicine - Jacksonville (UFCOM-Jax). He built his career at the Miller School of Medicine at the University of Miami where he served as Program Director, Vice Chair, and Senior Associate Dean for Graduate Medical Education.

The planning process spanned several months. We sought input from across the health system through virtual meetings and a during a series of in-person "summits" to formulate a set of mission, vision, and values statements that aligned with those of the organization. Then, five focus areas were developed consensually that represented ideal departmental pillars of success. A preliminary Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis was developed and distributed to all stakeholders for review and refinement. The result of this analysis is depicted on the next page.

Workgroups were formed to evaluate the potential effects of the identified threats and opportunities to each pillar. Their discussion then identified a set of proposed priorities for each pillar designed to capitalize our opportunities and conquer the perceived threats. Recognizing that for our goals to be met, we had to be bold and imaginative. The department was 'all-in" and prepared to invest significant resources and develop a culture of leadership that fosters excellence. This document represents the final work product of this process. It is our roadmap to achieve future departmental growth and stability as we welcome the phenomenal opportunities created by our new partnership with Michigan State University.

Table A: SWOT Analysis

STRENGTHS

- Analytic capability
- Diversity of cases & providers
- Experienced staff
- Positive culture
- Quality improvement focus
- Regional presence
- Robust engaged leadership
- Strong clinical profile
- Strong departmental financial contribution margin
- Supportive system & partners
- Workforce engagement

WEAKNESSES

- Lack of cohesive focus
- Large Geographic footprint
- Limited Fellowship Programs
- Limited opportunities for basic scientific research
- Not yet a University Department

OPPORTUNITIES

- Diversity promotion
- Expansion of clinical service offerings
- Future academic partner
- Increase utilization of telehealth
- Increased and improved training programs
- Increased Scholarly activity
- Medical treatment modality advancement
- Strengthen partnerships with third party payors

THREATS

- Changing reimbursement models
- COVID pandemic inhibits volume and staffing clarity
- Economies of scale offered by large national care delivery models
- Increased technological presence in OR squeezes staff
- Negative image of Detroit
- Very competitive market

Aligning with Organizational Goals

"True North" is a basic notion in the Toyota lean process improvement model. It represents the compass needle for lean transformation, and provides a guide to take an organization from its current condition to where they want to be. Like a mission statement, it is the expression for the purpose of the organization. Our strategic plan aligns with the "True North" of HFHS. It anchors itself in concepts such as high value care, evidence based practice, cost effectiveness, efficiency, high quality, patient safety, superior educational programs, research, and workforce engagement.

TRUE NORTH FRAMEWORK

The trusted partner in health, leading the nation in superior care and value

Safest Care & Best Outcomes

Exceptional Experience

Customers

Compassionate, Committed People

Affordable, Efficient Care

"A Culture of Leadership that Fosters Excellence"

MISSION

We are a premier academic perioperative medicine group providing the safest, most efficient, and highest quality care while promoting innovative research and education.

VISION

Over the next five years, the department will foster new growth and cultivate leadership talent. These changes will be realized through a culture of innovation, mentorship, collaboration, communication, and enhanced professional development.

VALUES

We attach importance to the ensuing values that steer our mission and are reflective of the tenets articulated by our institution:

- *COLLABORATION*
- *COMPASSION*
- *EXCELLENCE*
- *INTEGRITY*

- *COMMUNICATION*
- *DIVERSITY*
- *INNOVATION*

"You don't create values; you uncover them in an organization."

-Alain Gauthier

Environmental Assessment

Anesthesiology in Southcentral and Southeastern Michigan constitutes a unique healthcare environment, and it is extremely clinically competitive. HFHS is at the inception of a new and bright innovative partnership with Michigan State University which is designed to be a catalyst for change and innovation. The goal is to set a new standard for how individuals and communities experience care across Michigan and the nation. We will become the first academic Department of Anesthesiology at Michigan State University. Apart from our partnership with MSU, there are other academic programs in our region (e.g., Detroit Medical Center, St. John Medical Center, Oakland University William Beaumont School of Medicine, and the University of Michigan). Several high-quality private practices are also established within the area.

Henry Ford Hospital in the city of Detroit, has the highest number of per capita Critical Care beds for advanced and specialized care in the region, and receives referrals from within Michigan and internationally due to our proximity to Windsor, Ontario, Canada. Our department geographic footprint is enormous spanning from downtown Detroit to Henry Ford West Bloomfield to the north and approximately 75 miles to the west at Henry Ford Allegiance Health in the city of Jackson. We also staff many freestanding ambulatory surgery centers and pain management clinics within this territory.

PILLAR 1: ORGANIZATIONAL EXCELLENCE

No matter how successful our department may be, opportunities for improvement are ever present. As leaders, we recognize that the pathway to improvement is difficult and requires frequent course adjustments; however, this process should not be daunting if we celebrate the change regularly, no matter the significance or magnitude of the increment.

Therefore, to achieve organizational excellence, we need engaged leadership and focused problem solving to build upon and maintain successful improvements. Hence, we will foster an environment where all are enabled, encouraged, and supported to actualize their unique potentials at every career stage. When we succeed, talented professionals will seek to join and stay with our team because of our strong reputation, high engagement, competitive compensation, and supportive culture. Recruitment will be guided by the principles of Diversity, Equity, Inclusion, and Justice (DEIJ) allowing the department to reflect the community within which we exist, and support efforts coordinated with our partners. This will ensure our communications, processes, and technical expertise will be focused on addressing the distinct needs of each key stakeholder and result in laudable patient and family satisfaction.

A. Building a Strong Cohesive Group

The culture of our department is more than having eminent clinicians who provide superb care. Our philosophy demands all levels of personnel be tightly aligned and contribute to a common departmental vision, while working synergistically. Achieving this paradigm begins with development of a strong sense of identity. We will be purposeful with selective recruitment and rigorous onboarding processes.

To promote success, each new hire will be thoroughly trained in our departmental vision and culture. As part of this process, we will examine the recruits' strengths and engage them in areas where they bring distinct value and wish to grow. Importantly, we must recognize each new team member will have opportunities for growth and development. Regular reviews will be conducted, allowing us to fine tune the recruitment process.

B. Retention and Professional Development

While recruitment is important for long-term success, retention of talented and motivated providers is imperative. High turnover rates increase expense, and negatively affect departmental morale. Our current engagement score, as measured against nationally validated programs, is near the 90th percentile. Our goal will be to identify, manage and mitigate factors that hinder participation and impede staff retention.

Professional development is core to managing engagement and a robust mentoring program is paramount. Effective mentoring enhances faculty productivity, both clinical and scholastic, and is recognized as one of the most important determinants of career success. A faculty task force will be formed to develop and support a comprehensive mentoring curriculum establishing the foundation for skill set development required of an academic anesthesiologist. This group will identify and articulate the

specific goals and metrics of success (e.g., number of extra-mural grants, number of academic promotions, teaching awards, roles in national organizations, etc.). Course completion will be a mandatory part of the regular annual Henry Ford educational curriculum covering a broad array of subjects, including research design, leadership skills, the economics and finances of healthcare, team resource management, and safety/quality.

To alleviate some inherent clinical productivity pressure, focused incentives such as scheduled, project specific protected time will be introduced to promote maximum energy needed for program development. Allocation of academic time allows departmental work that is deemed mission-critical to be completed during normal work hours. This approach will assist with personal development and work-life balance, driving commitment and quality of mentorship. Faculty will be encouraged to become involved in institutional and professional society governance in a fashion that suits their interests and strengthens the department overall.

C. Promote Diversity of Ideas and Not Just People

Diversity and inclusion are more than mere "talking points". They represent our core values. Research clearly shows the benefits of embedded diversity and inclusion not only increase engagement but augment individual performance while symbiotically enhancing team execution. Moreover, it helps to cultivate the skills necessary to provide mentorship, create scholarly opportunities, and prepare providers to address the health needs of our patients.

The department will create opportunities for staff who identify with underrepresented groups. To further incorporate the diversity of ideas, we will develop tools to address the systemic implications of our mono-ideological views of clinical care, education, and research. During this planning period, we will collaborate with MSU academic departments (Philosophy, Sociology, Anthropology, and Psychology) to better understand our departmental culture and barriers to change and growth. A task force will be appointed to design initiatives supporting and promoting DEIJ within the department and our surrounding community (e.g., mentoring in schools). Programs will be developed to engage, inspire, and generate wider interest in the healthcare profession. Implementation of these initiatives will allow us to benefit from the unique contributions of trainees and junior faculty.

Pillar Metrics

1) 100 percent of faculty completion of mentoring curriculum
2) 95 percentile staff engagement scores
3) Department profile mirrors corporate DEIJ metrics

PILLAR 2: EDUCATION

At the outset of planning our first strategic planning process we faced a difficult question: How do we define ourselves as an "academic" department since we did not have any physician scientists or even well-published academicians on our leadership team? We recruited two leaders to help us engineer the transformation of the department into a true academically productive group. An accomplished Vice Chairman for Research, who built an infrastructure for scholarly activity, and a Residency Program Director, who transformed our residency program into one of the most dynamic in the region. These tactical hires have created a culture of inquiry that encourages both resident physicians and faculty to be involved in scholarly activity and has produced tangible results, such as an increase in the number of podium presentations at regional and national meetings, published peer-reviewed papers, faculty in lead positions in academic societies, and fellowship programs. As we move forward in our relationship with MSU, we will continue to build and align our strategy and tactics to create new and innovative initiatives to further our success.

Vision

We will create a cohesive departmental narrative to remain relevant and create connections with prospective trainees. To achieve maximal impact amongst potential recruits, our department must be synonymous with training excellence and we need to develop and nurture that reputation into an educational brand. To this end, we will employ progressive, evidence based, and adaptive learning tools that allow knowledge acquisition for all learners. Faculty, trainees, and technology will work in concert so our graduates will be characterized by an extensive spectrum of knowledge, clinical acumen, and mature interpersonal communication skills. We will recruit trainees who are creative and interdisciplinary thinkers with high potential to be future leaders in the discipline. Through investments in personnel, facilities, and technologies, we will obtain extra mural funding to develop novel programs that will further sustain the growth of our educational mission.

A. Educational Platforms

In the 21st century, virtual education has become the norm. Therefore, we must adjust our educational methodologies to be aligned with our learners. Two tools will be useful in this approach, Learning Management Systems (LMS) and Lecture Capture (LC). LMS is software application that automates administration, tracking, and reporting of training events. Advanced LMS products offer additional features, including test and quiz options, audio or video materials, interactive forums, advanced search capabilities, and grade books. Synergistically, LC is synonymous with a virtual classroom where lectures can be viewed remotely in real-time or recorded and archived for later review through a variety of media players, while still preserving the visual and auditory aspects of the original didactic presentation.

Our goal is for both faculty and trainee learning to be anchored in LMS and LC technologies. Once these platforms have been developed, we will explore other digital methodologies such as Artificial Intelligence (AI) and Machine Learning (ML) for education primarily in the simulation space. Our team will work with our educational partners at MSU to develop educational content, evaluation protocols, and management tools for these platforms.
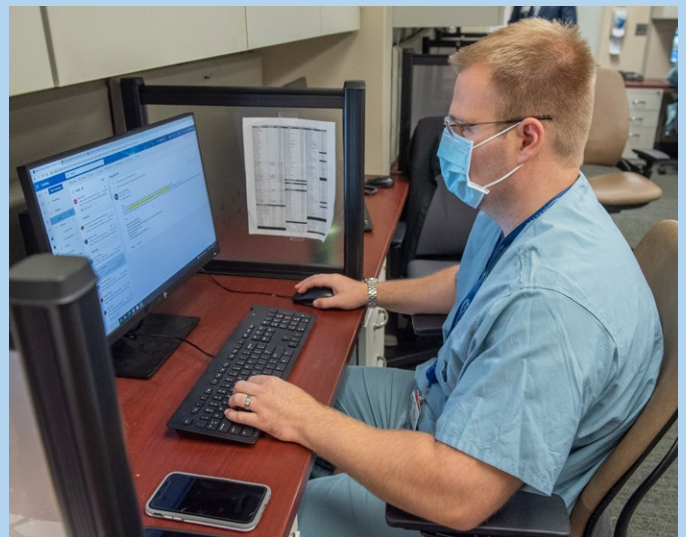
B. New Program Development

To remain relevant and aligned with the changing world of 21st century medicine and to advance our goal of becoming a truly perioperative department, we will establish the following new programs.

Point of Care Ultrasound Training (POCUS)

Recognizing that bedside echocardiography has largely replaced the stethoscope as the primary tool for examining the cardiovascular status of the patient, a group of departmental board-certified echo-cardiographers has been tasked to develop a curriculum to ensure every member of the clinical team receives training in basic utilization of surface ultrasound. We aim to certify every faculty member and resident in POCUS via the American Society of Anesthesiologists (ASA).

Residency and Fellowship Programs

To meet the increasing clinical and educational needs of the department, we will apply to increase the size of our existing residency program and develop new subspecialty fellowships in areas of clinical need.

We will establish a fellowship in Regional Anesthesia and Acute Pain. These fellows will be competent in the art and science of peripheral nerve blockade to help minimize the probability of returning to a health care facility due to post-procedural pain.

A Neuro-Anesthesia Fellowship will also be established, including optional tracts to pursue neuro-critical care certification or neuroscience research, to develop anesthesiologists who are experts in the care of patients with neurologic disease and those requiring neurosurgery. Tapping into the depth and breadth of the neurosurgical procedures performed at Henry Ford Hospital (HFH), we will develop a program that meets the recommendations of the Society for Neurosciences in Anesthesiology and Critical Care (SNACC), and the International Council on Perioperative Neuroscience (ICPN).

Additionally, we will develop and introduce a Clinical Informatics - Perioperative Surgical Home fellowship. This two-year multidisciplinary fellowship (anesthesiology, pathology, radiology, and data analytics) will be the first ACGME accredited fellowship in the Perioperative Surgical Home. Graduates will be board-eligible in clinical informatics and enjoy the option of pursuing a graduate degree in clinical informatics. The clinical informatics portion of the fellowship will focus on data analytics providing population health feedback loops to providers to improve Enhanced Recovery after Surgery (ERAS) and Enhanced Recovery after Procedures (ERAP) the best patient outcomes via the most cost-effective means.

Expansion to Rural and Under Resourced Communities

Finally, we will partner in the creation of novel, multidisciplinary training pathways to address the evolving health care needs of rural and under-resourced communities. To help meet the needs of the rural, underserved, and the military sector, we will partner with our colleagues in Emergency Medicine (EM) to create a joint Anesthesia and Emergency Medicine residency program at Henry Ford Allegiance. Critical Care Medicine (CCM) training will be incorporated into this residency allowing a single physician to support poorly resourced rural hospitals and remote areas (e.g., Indian Health Service) that may not be able to afford multiple specialists.

Pillar Metrics

1) Implementation of both LMS and LC learning platforms.
2) Addition of at least two residents annually to our program.
3) Three new active fellowships.

PILLAR 3: CLINICAL SERVICES BEYOND THE OR

A. Centralizing Optimization

Anesthesia optimization focuses clinical teams on achieving incremental adjustments to baseline physiology to ensure the patient is in the best possible clinical condition prior to their procedure. Improper assessment of a patient's medical needs may result in increased morbidity, a longer length of stay, and increased expense.

We envision one centralized optimization clinic, functioning as a medical air traffic control system, receiving information from partners, integrating it into evidence-based management protocols, and preparing patients for optimal outcomes irrespective of where their procedure or surgical event is performed. This optimization process will increase clinical productivity and provider engagement with the goal of achieving patient satisfaction in the 99th percentile.

B. Advancing Telemedicine Use

Telemedicine will be utilized to promote new methods of healthcare delivery, enhance the scope of the department's reach, and penetrate new markets. It will be evaluated for use in the Intensive Care Unit (ICU) and pain clinics to provide around-the-clock physician presence in isolated rural areas.

We will assume that the use of telemedicine will be subject to continuous change necessitating development of newer and more agile staffing models. We will partner with technology companies to develop a universal virtual platform that is fully integrated with our pre anesthesia testing (PAT) risk stratification protocols. This new universal virtual platform will provide seamless communication between the patient and the primary care physician while promoting the anesthesia care team as a valuable and trusted clinical resource.

C. Social Media Platforms

The ubiquitous use of social media by medical professionals and patients creates an opportunity to improve our department's visibility and connection to our patients, strategic partners, and external stakeholders. We will deploy these technologies to enhance patient communication, develop professional networks, further our educational mission, increase personal awareness of news and discoveries, and provide health information to the community. In line with our DEIJ commitment, the department will increase involvement in community affairs. Community forums, social media, blogs, and printed materials can introduce patients and empower them with useable information about the impact of their general health on the procedural outcome. Specific tools to help patients control their weight, stop smoking, learn about their medications, and exercise tips will be provided.

D. Promoting Patient Safety and Improving Quality

To ensure patient safety and efficient perioperative experiences we have introduced numerous protocols for ERAS and ERAP. These pathways take a holistic approach by utilizing a combination of multimodal evidence-based strategies applied to conventional perioperative techniques to reduce postoperative complications and achieve early recovery and reduced length of stay. These initiatives require a committed and organized team effort involving various sectors of our department (optimization, regional, pain management, and critical care divisions) working in tandem with our surgical and procedural partners to achieve successful execution. Initiatives continue to focus on the opioid epidemic by prioritizing patient centered care and establishing robust non-opioid based protocols with a goal of reducing opioid related deaths by 20 percent.

We will maintain a focus on quality and safety. In this spirit, we will continue our work in the Multicenter Perioperative Outcomes Group (MPOG) initiative. It utilizes the Electronic Medical Record (EMR) and administrative data to analyze the interplay among existing comorbidities, peri-procedural care, interventions, and post-procedural outcomes data to improve quality of care. Over the last decade, the initiative has built and maintained a comprehensive perioperative patient registry based on electronic healthcare data. We will use the findings of this collaborative to conduct research, educate caregivers, and provide local leadership in other clinical services, (e.g., respiratory care, physical therapy, data science and clinical outcomes).

E. New Clinical Opportunities

Over the past decade, the number of procedures completed in office-based settings has increased. We will create a team to examine the impact of offering new clinical and educational opportunities, (e.g., addiction medicine, ketamine infusion clinics, Skilled Nursing Facility [SNF] care, and hospice care).

Pillar Metrics

1) 99th percentile patient satisfaction.
2) Full implementation of a telemedicine platform linking primary care with the anesthesia care team and fully integrated with PAT risk stratification protocols.
3) ERAS/ERAP established for all procedures performed more than 50 times annually.
4) Exceed MPOG thresholds on all measures.

PILLAR 4: RESEARCH AND INNOVATION

A. Achieving World Class Research

Our goal is to be a global leader in basic, translational, and clinical research in anesthesiology and related fields. The scope of this research will transcend a broad continuum, cross between many disciplines, and be applicable to a wide range of perioperative conditions. Our aim is to reach prominence through world class research that finds expression via publication in high impact, peer reviewed journals generating substantial levels of funding. The faculty will be partially evaluated and promoted based on their contribution to innovation and research.

A large portion of this plan will involve a staged creation of research infrastructure (space, equipment, and personnel) and development of training programs and support structures for both faculty and trainees. It is incumbent upon established investigators to facilitate the careers of more junior colleagues through mentorship.

Robust collaboration will be developed with several industry partners anchored in specific projects with the goal of generating financial support for departmental research. To maximize the success of such arrangements, we will create a business development team under the leadership of our departmental administrator. In line with this 'business approach', another fruitful area of collaboration is our partnership with the Henry Ford Innovation Institute (HFII) through which we can establish and promote new anesthesia products, offerings, and ideas. We will increase by fifty percent the extra-mural and industry sponsored funding which will grow staff infrastructure to support accelerated research activity for both publications and intellectual property (IP). The Vice Chair of Research will focus on identifying, reviewing, and sustaining priority targets.

We will work with institutional partners to develop an approach to raising philanthropic monies to support an endowment that would fund such scholarly activities. The idea would be to create small startup funding to allow investigators to develop initial data. An essential component to this approach's success will be our new partnership with MSU. Many of the following initiatives will be created in full collaboration with our academic partner.

B. Identified Research Areas of Interest

Laboratory Neurosciences
- Effects of anesthetics on the function of human neural cells and implication for cognitive deficits.
- Anesthesia and brain cancer.
- Neurosteroids – novel anesthetics and neuroprotection.

Translational & Clinical Neuroscience
- Personalized effects of anesthesia.
- Cardiovascular disease and postoperative cognitive dysfunction.
- Brain Health Initiative (BHI).

Personalized Effects of Anesthesia
- Cardiovascular disease and post-operative cognitive dysfunction.
- BHI.

Acute and Chronic Pain Research
- Efficacy of pelvic nerve blocks for pelvic cancer pain.
- Cooled radiofrequency ablation versus conventional genicular radiofrequency ablation in patients with chronic knee pain.
- Investigation of the effects of intravenous midazolam sedation in diagnostic lumbar medial branch blocks.
- Efficacy of multidisciplinary pain treatment in high impact chronic pain patients.

Labor and Delivery
- Dexamethasone administered via the epidural catheter as an adjunct in patients undergoing cesarean delivery.
- Effects of epidural fentanyl boluses on fetal well-being.

COVID-19
- Conventional protective low tidal volume ventilation vs. airway pressure release ventilation for patients with severe COVID-19 disease.
- Unplanned reintubation incidence in COVID-19 patients.
- A prediction model for invasive mechanical ventilation in patients with COVID-19.

Patient Safety & Quality
- Predicting opioid induced respiratory depression in postoperative arthroplasty patients.
- Pain ease® and ethyl chloride study.
- Sleep and anxiety project.

Pillar Metrics
1) Achieve $3,000,000 in total research funding over five years.
2) Initiate research and publish in at least five of seven identified areas.
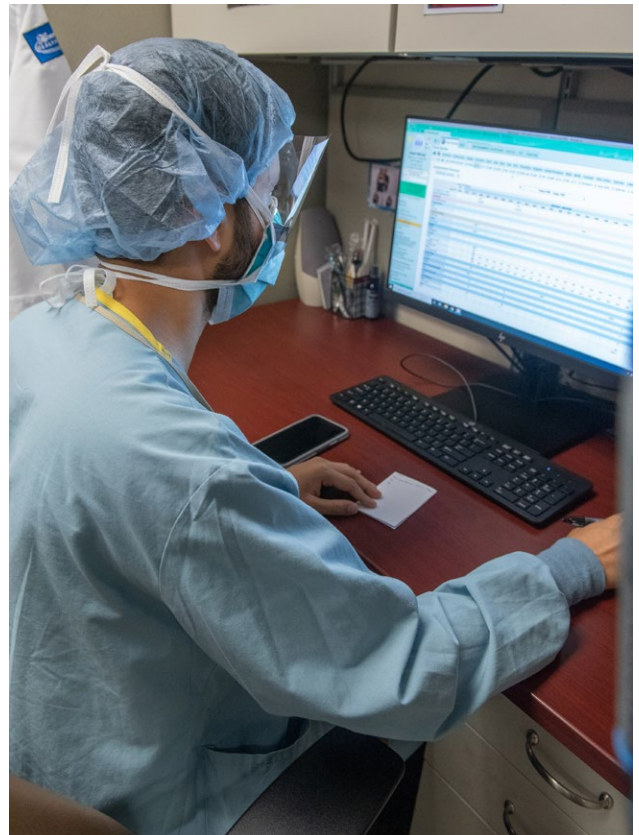
PILLAR 5: FINANCIAL STEWARDSHIP

The department will be acutely aware of the cost, impact, and risk of everything we do. Every new program will be evaluated not only by the added value it brings to patients but also its contribution to the organization's margin. Systems will be created that will allow the group to thrive in the new era of value-based reimbursement.

Our last strategic plan outlined core goals to promote a more transparent financial strategy consisting of cost containment, improved efficiency, additional revenue, and enhanced marketing. These objectives were largely achieved. Billing opportunities to increase revenue were identified and some significant areas of improvement were noted and rectified. Working with the pre-registration office, we have achieved better alignment of activities and learned to better perform tasks in parallel, rather than in sequence, which has resulted in fewer last-minute cancellations of pain management visits. This has improved patient satisfaction and reduced the paperwork for clinical managers. Modifications to our home page on the HFHS website have helped improve our department's marketability. Surgical and procedural case delays and cancelations were evaluated and a plan to minimize anesthesia personnel or processes as a reason for cancelations or delay has been implemented.

Despite these accomplishments, the department continues to face numerous challenges. Reduced reimbursement, increased patient thrift, higher patient copays, a tighter job market, increasing supply costs, and more costly high-tech patient care equipment are some of the headwinds. Our financial pillar for the next five years will require aligning our department with corporate finance. There will be continuous education of staff members, the agility to change course quickly, and staff accountability to fine tune supply and labor utilization in real time. We will develop a reliable, accurate, and actionable method of real time reporting to track financial and productivity metrics important to improve our fiscal standing.

To achieve our aspiration of providing the safest, most efficient, and highest quality care to patients, and do it in the most cost-effective method, the department will implement a three-pronged approach:
– Improve Financial Education (awareness)
– Increase Partnerships (exposure)
– Develop Accountability Mechanisms (reporting)

A. Improve Financial Education
Surgery represents the highest revenue generating department within the health system and has a very large supply expense. We will promote an understanding of the business and finance of anesthesiology within our team by developing a curriculum of finance and cost comprehension. This teaching will include simple cost accounting principles and a tutorial on anesthesia charging methodology. In conjunction with the director of educational programs, we will develop an integrated plan for all incoming residents and staff members to be taught this vital information. Instilling the principles of contribution margin and procedure profitability will be highly beneficial to increasing the department's profit margin. The clinician will better understand how their decisions regarding supply choice, procedure location, and cost containment have contributed to this margin. We will also be in a better position to fully realize the financial impact of our current services within the health system such as optimization clinic, pain management, critical care, other non-operating room services, and we will be able to make better day-to-day supply use decisions.

B. Increase Partnerships
We will strengthen our collaborative partnership with HFHS Chief Financial Officer (CFO), the CFO of the Henry Ford Medical Group (HFMG), and the Medical Director of Health Alliance Plan (HAP) as well as other high-volume payors. It is imperative that the anesthesia services we provide are understood up to the highest level, including the C-Suite to ensure maximum

reimbursement for our services can be negotiated. These partnerships will also allow us to identify new chargeable services or improve charging methodology to services we currently provide. The goal is to increase the department's flow through rate.

C. Develop Accountability Mechanisms

Knowing financial information is not enough. Readily having a means to see improvements and know how changes in practices affect procedure costs is important. Additionally, we need to be good stewards of the health system's resources and the expectation is to make cost conscious and safe choices regarding supply and labor use. We will work with our data science colleagues to develop a real-time reporting mechanism that gathers data from hospital accounting systems, human resource time allocation systems, perioperative operational data from the Electronic Health Record (EHR) and quality data to show profitability on a procedural and physician basis. The dashboard will flag procedure costs or providers whose average cost per case exceed the mean by two standard deviations. These cases will be reviewed quarterly by a committee consisting of anesthesiologists, administrators, and finance staff. Our goal is for providers to be able to easily identify how supply and labor choices have positively contributed to a decrease in anesthesia care costs or an increase in quality of care at the same cost, or both.

Pillar Metrics

1) All clinicians are educated of major revenue and cost drivers.
2) Increase department average flow through rate by 10 percent.

Summary

Where did the concept of the shining city on the hill truly originate? This concept entered the American imagination in Boston harbor as settlers from England came to the area in 1630. Their spiritual leader John Winthrop preached while huddled on the deck of a small wooden boat named the Arbella. It was from this conjectural mental model the great city of Boston arose.

How will our shining city on the hill look? It will be a model clinical department. Our practice will represent an application of the best fiscally responsible, and evidence based medical care created in the context of the highest degree of professional practice guided by excellence in service. The group will be on the cutting edge of innovation. We will have a diverse and inclusive workforce united in an open culture. Each team member will work at top of license and make impactful contributions.

Education will be a core value for this community. We will embrace the newest methodologies of learning promoting cross professional and inter-disciplinary education. As an MSU department, our mandate will also be in the spheres of research and innovation. Our goal is to become a major publishing research group that creates new knowledge and innovation. We will embrace the new payment modalities and practice accountable cost efficient and safe care.

We will maintain the skills and values of a classical anesthesia department while embracing a wider healthcare vision. The department will continue leadership in the operating room, pain clinic, and intensive care units. However, we will be also actively optimizing patient care and expanding our presence outside of the operating room in such venues as the Radiology, GI suites, and the Cardiac Catheterization Unit. Moreover, we will manage patients after their procedure assuring superior outcomes in concert with our partners.

Table B on the next page depicts departmental dashboards pertinent to each Pillar and built by our data scientists. These dashboards, will guide us in real time and allow us to track our progress as we build our programs, develop our pillars, and grow our "Shining City on the Hill".

Table B: Anesthesia Dashboards by Pillar

Pillar 1 Organizational Excellence	Pillar 2 Education	Pillar 3 Clinical Services	Pillar 4 Research & Innovation	Pillar 5 Financial Stewardship
Engagement & Diversity	Grand Round/Conf.	Dept. Metrics	Funding	ASA Units
MPOG/ASPIRE	CME Acquisition	Provider Metrics	Publications	Supply & Equipment
Other Quality Metrics	Academic Performance	Procedure Productivity	Intellectual Property	Billing Compliance
Executive		Pain Productivity	Faculty/Team Development	Staff Productivity
Faculty Achievements		Critical Care Productivity		TDABC Cost Accounting
Faculty Development		Optimization Productivity		
		Technology		
		ERAS/ERAP		
		Complications & Outcomes		
		Predictive Modeling		

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HEALTH SYSTEM   all for you