



Establishing an Acute Pain Medicine Program That Adds Value

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There are numerous clinical and financial benefits to creating an acute pain medicine program with a clinical regional anesthesia practice. Here are some strategies for setting up a successful program.

An acute pain medicine program, including regional anesthesia techniques, can add significant value to a hospital and surgery practice through improved post-operative pain control, faster recovery, decreased anesthetic- and opioid-related side effects, and higher patient satisfaction.¹⁻⁴ Robust evidence from large studies supports the efficacy of ultrasound guidance for improving the safety, speed, and success of common regional anesthesia techniques, such as peripheral nerve block (PNB) and continuous PNB (CPNB), compared with traditional “blind” nerve localization.⁵

An acute pain medicine program that utilizes regional anesthesia also can help a hospital earn financial rewards and avoid penalties under various pay-for-performance (P4P) programs from the Centers for Medicare & Medicaid Services (CMS). These include the Merit-Based Incentive Payment System (MIPS),⁶ which is part of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), the Hospital-Acquired Condition (HAC) Reduction Program,⁷ and the Hospital Readmissions Reduction Program.⁸

A comprehensive, opioid-sparing acute pain management system can shorten hospital length of stay (LOS), reduce readmissions for pain control after surgery, and directly or indirectly help prevent several complications targeted under the CMS HAC Reduction Program, such as urinary and vascular catheter-related infections, surgical site infections, blood clots, pressure ulcers, and inpatient falls leading to injury.

Although these benefits have been well described, ongoing challenges include implementing this change and establishing consistency and reliability in the clinical regional anesthesia practice.

In fiscal year 2016, 758 hospitals incurred an estimated \$364 million in penalties⁹ under the HAC Reduction Program, an average of \$480,211 per sanctioned hospital. This program docks the quartile of hospitals with the worst rates of HACs 1% of their annual payments across diagnosis-related groups (DRGs). Like it or not, the potential for financial penalties does create a powerful new incentive for hospitals, surgical practices, and anesthesiologists to adopt best practices and reduce variability in the quality of care.

New evidence-based guidelines for postoperative pain management from the American Pain Society, American Society of Regional Anesthesia and Pain Medicine (ASRA), and the American Society of Anesthesiologists (ASA), issued in 2016,¹⁰ strongly recommend the use of multimodal analgesia, including regional anesthesia techniques, for a range of surgeries, including those of the extremities, abdomen, and thorax. There is growing evidence to support the use of ultrasound guidance when performing regional anesthesia procedures.

Unfortunately, although there are training guidelines for learning ultrasound-guided regional anesthesia (UGRA),¹¹ there are no readily accessible guidelines for anesthesiologists who are interested in setting up an acute pain medicine program. The strategies suggested in this article are based on the experiences of the author, who started a new regional anesthesiology and acute pain medicine program, including a fellowship, at one university hospital, and more recently led several systemwide changes affecting surgical care at a tertiary care Veterans Affairs (VA) hospital.

At our VA hospital, we have implemented the Perioperative Surgical Home model supported by the ASA, which seeks to optimize outcomes through leveraging the expertise and leadership of physician anesthesiologists. Coordinated care is associated with shorter hospital LOS and lower readmission rates for our orthopedic

surgery patients when compared with the national averages within the VA system as tracked by the VA Surgical Quality Improvement Project.

Success Strategy 1: Identify your customers and how to satisfy their needs.

When considering the “business” of establishing an acute pain medicine program, it is crucial to address the needs of all its prospective customers. Patients are the most important customers, and improving the comfort and quality of their recovery is a clear priority that leads to higher satisfaction. Postoperative nausea, vomiting, and pain rank among the top problems patients want to avoid,¹² and regional anesthesia can minimize or prevent these common side effects associated with general anesthesia, while also shorten patients’ time to meet the hospital discharge criteria.¹³

Our surgical colleagues are also important customers who play an essential role in supporting an acute pain medicine program. During preoperative visits weeks before a procedure, surgeons can recommend nerve blocks to patients, present the clinical pathway, and set patients’ expectations regarding pain and their use of opioid medications. By instituting a multimodal pain management protocol for spine surgery patients at our center, we have decreased use of IV opioid patient-controlled analgesia (PCA) 6-fold while providing highly effective pain relief and rehabilitation. Use of multimodal pain management featuring regional analgesia has essentially eliminated the use of IV PCA opioids for our total joint replacement patient population.

Finally, practice managers and office/hospital administrators are important customers whose support also is crucial for a successful acute pain medicine program. Your administrators may be very interested in improving Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey scores.

The HCAHPS survey, which is administered to a random sample of Medicare beneficiaries who have received inpatient care, is used to assess the “patient experience of care” domain. A hospital’s HCAHPS survey scores are publicly disclosed on CMS’s Hospital Compare website (www.medicare.gov/hospitalcompare), and several questions directly or indirectly relate to in-hospital pain management. New questions are scheduled to be released in 2018.

Success Strategy 2: Review and rate the evidence of regional anesthesia’s clinical and economic benefits.

As prospective customers of an acute pain medicine program, surgeons and administrators may have questions or concerns about its clinical and economic impact. One of the best ways to achieve buy-in from all stakeholders is to analyze the compelling evidence from more than a decade of published data from large

studies that strongly support the safety and efficacy of regional anesthesia techniques.

For example, when our facility recently implemented a change in perioperative anesthetic management for patients undergoing total knee arthroplasty, we presented an article by Memtsoudis and colleagues¹⁴ on the benefits of spinal anesthesia for these patients at our service staff meeting. A committee of anesthesiologists then reviewed and graded the findings of additional similar publications and discussed them with our orthopedic surgery, nursing, and anesthesiology staff, which ultimately led to a new clinical pathway offering spinal anesthesia to patients as our primary anesthetic recommendation for this procedure in appropriate cases.

Our clinical pathways for total joint replacement surgeries—some of the most commonly performed procedures in US hospitals—also include opioid-sparing CPNBs, which are associated with decreased pain scores, improved early rehabilitation, higher patient satisfaction, and shorter time to achieve hospital discharge criteria in patients undergoing total hip, knee, and shoulder arthroplasty.¹⁵⁻¹⁷

Anesthesiologists at Mayo Clinic recently compared outcomes in patients who either underwent total knee arthroplasty under general anesthesia or as part of a new clinical pathway that included regional anesthesia.¹⁸ Patients in the regional anesthesia group had less postoperative pain and confusion, found it easier to participate in postoperative physical therapy sessions, and had a significantly shorter hospital LOS (3.4 vs 4.4 days for those who underwent general anesthesia). Use of regional anesthesia also reduced total hospital costs by \$956 per patient.

CMS has been testing a bundled payment model called Comprehensive Care for Joint Replacement (CJR), which is designed to hold hospitals financially accountable for the quality and cost of care for patients undergoing total hip or knee arthroplasty. These are now the most common inpatient procedures for Medicare beneficiaries, with more than 1 million total hip and knee replacement surgeries performed annually in the United States, according to the CDC.¹⁹

Launched on April 1, 2016, in 67 urban areas across the US, CJR gives hospitals a total target price for an episode of care beginning with admission to a participating hospital and ending 90 days postdischarge. During each model performance year, hospitals are given episode-of-care target prices for hip and knee replacement procedures, and then are paid the usual CMS rates. Depending on the facility's quality and performance, at the end of each model year, it may receive an extra payment or, alternatively, be required to pay CMS for excess costs, providing a powerful incentive for hospitals to rein in costs and improve outcomes with evidence-based care, such as opioid-sparing PNBs, which may contribute to both early rehabilitation and better functional recovery.²⁰ As part of a package of proposals announced in August 2017, however, CMS has proposed

reducing the number of geographic areas required to participate in the CJR program to 34, with participation in the other 33 areas to be voluntary.²¹ In addition, low-volume and rural hospitals in the remaining 34 areas may also voluntarily participate.

Success Strategy 3: Evaluate your resources and develop an efficient system.

There are a variety of ways to incorporate acute pain medicine successfully into an existing anesthesiology practice, but the key goal is to develop a system that is reliably available regardless of anesthesiology clinical assignment, day of the week, or time of day. Key questions to consider and answer include the following:

Who will perform the procedures?

Anesthesiologists who completed their training before the universal incorporation of ultrasound into residency curricula should follow the ASRA practice pathway recommendations.²² Our research has shown that practicing anesthesiologists are more likely to learn the advanced skill of ultrasound-guided CPNB catheter insertion if their training program includes simulation.

What equipment and supplies do you need?

Regional anesthesia requires specialized equipment, such as nerve stimulators, needles, catheter kits, and ultrasound machines.

Where will ultrasound-guided nerve blocks be performed?

UGRA introduces the need for additional equipment. Although UGRA procedures may be performed in the operating room, a more efficient approach for some practices is to perform them in an induction area or preoperative holding room ("block room"). This allows UGRA techniques to be performed while the previous case is still in the operating room and to store ultrasound equipment used for regional anesthesia in one location to improve efficiency.

Success Strategy 4: Establishing a successful acute pain medicine program takes leadership from top to bottom.

In the P4P era, the biggest challenge—and opportunity—we face as anesthesiologists is demonstrating our value. One of the ways we can do this is to take the lead in driving practice changes in perioperative care that can lead to improved outcomes and safety and a better experience for patients, while also helping rein in HACs and readmissions, along with their associated costs.

A key goal in establishing a successful acute pain medicine program is to create a "product" that is consistent and reliable, so every surgical patient gets top-quality pain control, which may include UGRA. Achieving this aim takes leadership throughout the

process of managing change. Physicians on the front lines of patient care need to believe in the new system and have a strong commitment to making it work, while managers and supervisors need to use their influence to negotiate for the resources necessary to initiate and sustain change.

Successful changes in practice require a multidisciplinary team approach, so it is essential for anesthesiologists to be actively involved in their hospital administration and demonstrate their value regularly to help an acute pain medicine program flourish. Going forward in our evolving health care landscape, anesthesiologists need to take a leadership role in coordinating

improved perioperative care with other hospital services, from surgery and nursing to physical therapy, pharmacy, and social work. Ultimately, as anesthesiologists, we demonstrate our value by providing the safest and most effective pain relief to those who need it most: patients suffering from trauma or postoperative pain who need our help to heal.

Dr Mariano served as a Division Chief within the Department of Anesthesiology at the University of California, San Diego, where he founded the Regional Anesthesia and Acute Pain Medicine program and pioneered use of continuous peripheral nerve blocks for patients having same-day surgery.

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