The Perioperative Surgical Home: What Anesthesiologists Need to Do

Jeffrey Huang, MD,* and Mike Schweitzer, MD, MBA†

Healthcare delivery systems will change in dramatic ways in the years ahead. Anesthesiologists have to adapt and support the innovators. The Perioperative Surgical Home (PSH) is a patient-centered and physician-led multidisciplinary and team-based system of coordinated care. The goal of the PSH is to create a better patient experience and make surgical care safe, efficient, and aligned in order to promote a better medical outcome at a lower cost.

KEY WORDS: Patient-Centered Medical Home; Perioperative Surgical Home; quality; outcome; cost.

As we all knew, the failing healthcare system led to a perfect storm. Anesthesiologists think that waiting out the storm could lead to financial losses.¹ The Perioperative Surgical Home (PSH) seems the perfect boat for anesthesiologists to sail into this perfect storm to avoid financial losses. The PSH model is the surgical counterpart to the Patient-Centered Medical Home (PCMH).

PATIENT-CENTERED MEDICAL HOME

The medical home was first introduced to the medical community in 1967. The Agency for Healthcare Research and Quality (AHRQ) defines a medical home not simply as a place but as a model of the organization of primary care that delivers the core functions of primary healthcare. The medical home model has primary care physicians lead a team of professionals including nurse practitioners, physician assistants, pharmacists, health educators, and medical assistants. The medical home includes five core functions: comprehensive care, patient-centered, coordinated care, accessible service, and quality and safety.

Multiple studies have been conducted to prove outcomes of PCMHs. Stewart et al. demonstrated that patients who perceived their visit as having been patient-centered received fewer diagnostic tests and referrals.² Other studies showed that the PCMH improves clinical outcomes, quality of life, and patient satisfaction.³ A series of three-year studies of PCMHs conducted by Independence Blue Cross found significant reductions in medical costs for patients with chronic conditions treated in a PCMH. They showed a 44% reduction in hospital costs and a 21% reduction in overall medical costs.⁴ Bertakis and Azari conducted a randomized study that showed that patient-centered care was associated with a decrease in annual visits for specialty care, less frequent hospitalization, fewer laboratory and diagnostic tests, and decreased total medical charges.⁵ Patient-centered care may result in greater knowledge of the patient, enhanced trust between physician and patient, and diminished need for additional specialty referrals, diagnostic testing, and use of hospital care.⁶

The Perioperative Surgical Home has same care features as the Patient-Centered Medical Home.

Now PCMHs have become the heart of Accountable Care Organizations (ACOs). The National Committee for Quality Assurance PCMH is a recognition program for improving primary care. The program provides practices with information about organizing care around patients, working in teams, and coordinating and tracking care over time. Today, more than 6000 PCMHs have been certified.

PERIOPERATIVE SURGICAL HOME

The PSH model was officially introduced by American Society of Anesthesiologists (ASA) in 2011. The ASA formed the Committee on Future Models of Anesthesia Practice (CFMAP) to develop the PSH, a counterpart of the PCMH.

The PSH model is defined as a patient-centered and physician-led multidisciplinary and team-based system...
Table 1. Features of the PCMH and the PSH

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<thead>
<tr>
<th>Features</th>
<th>PCMH</th>
<th>PSH</th>
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<tbody>
<tr>
<td>Patient centered</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Physician-led practice</td>
<td>Yes</td>
<td>Yes</td>
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<td>Coordinated care</td>
<td>Yes</td>
<td>Yes</td>
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<td>Quality and safety</td>
<td>Yes</td>
<td>Yes</td>
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<td>Comprehensive</td>
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PCMH, Patient-Centered Medical Home; PSH, Perioperative Surgical Home.

of coordinated care that guides the patient throughout the entire surgical experience, from decision for the need for surgery to discharge from a medical facility and beyond. The PSH has same core features as the PCMH (Table 1).

The goal of a PSH is to create a better patient experience and make surgical care safe, efficient, and aligned in order to promote a better medical outcome at a lower cost. The PSH can improve early patient engagement, intraoperative efficiency, clinical outcomes, postprocedural initiatives, and care coordination. The PSH can reduce preoperative testing, postprocedural complications, and cost. Therefore, the PSH can result in savings to the healthcare enterprise, providing care to patients under the newer payment models.

It is a natural for an anesthesiologist, who is a perioperative physician, to lead the development of a PSH. Anesthesiologists are physicians who have extensive training in preoperative evaluation, intraoperative management, postoperative and critical care, and both acute and chronic pain management. Anesthesiologists see all surgical diseases, including those managed by a dozen different surgical specialties. In this role, anesthesiologists must understand the surgical implications of every medical disease and treatment. Anesthesiologists have a history of a leadership role and overall responsibility for managing complex operating room schedules and perioperative administration. A successful PSH will involve a multidisciplinary leadership team working across many other specialties and silos in our current continuum of care.

A Perioperative Surgical Home enhances anesthesiologists’ commitment to patient safety.

The PSH model promotes a more comprehensive and integrated approach to the management of patients undergoing surgery. Therefore, a PSH enhances anesthesiologists’ commitment to patient safety. The PSH model allows for a timelier and more appropriate response to patient physiologic derangement, which reduces surgical morbidity and mortality. The PSH also establishes continuity of perioperative data collection, and provides a new opportunity for perioperative health services and population-level research. Evidence can be generated that compares the benefits and harms of alternative methods to prevent, diagnose, treat, and monitor a clinical condition or to improve the delivery of care.

There have been several reports to support that the PSH model can improve outcomes and reduce costs. Started in 2012 and focused on joint replacements, the joint Surgical Home model at UC Irvine involves protocols designed for preoperative admission, intraoperative care, acute postoperative care, and after discharge. The goals of this model include reducing surgical cancellations, complications, lengths of stay, readmissions, and costs. To date, 155 joint replacements have been completed. Average length of stay is 2.1 days. There has been one readmission, patient and surgeon satisfaction is high, turnover time has decreased to 23 minutes, and cancellations are at 0.4%. The University of Alabama at Birmingham (UAB) implemented the PSH model into its practice. UAB’s preoperative anemia program for patients undergoing total hip replacement identified 128 anemic patients among the 358 studied. Those patients received 352 units of red blood cells during surgery—at a cost of $352,000, or just under $1000 per unit. Had those same patients received anemia therapy, however, the cost would have been $245,000, or a savings of $107,000, the study reported. University of Southern California Keck Medical Center anesthesiologists work with surgeons to develop a care plan that spans from the day before surgery until the patient leaves the intensive care unit. They found that 30-day mortality was 47% lower when patients received care from the perioperative team than before the system existed.

Anesthesiologists have a sense of urgency to implement the Perioperative Surgical Home into their practice.

Our patients must not wait 44 years for the coordinated care improvements to develop and prefet the PSH like the slow evolution of the PCMH. Anesthesiologists have a sense of urgency to implement the PSH into their practice. The CFMAP has made significant strides in the last two years. Implementation tools and research products have been developed by the CFMAP. The ASA will help to accelerate PSH model development and acceptance by patients, members, payers, organizations, and other specialties through education and information.

The CFMAP concludes that Learning Collaboratives (LCs) will help accelerate the implementation of PSHs for academic and community healthcare organizations. An LC
is an instruction method in which people at various performance levels work together in small groups toward a common goal. They are responsible for one another’s learning as well as their own. Thus the success of one person helps others to be successful. Pediatric researchers demonstrated that LCPs are an effective method of improving the quality of care. LCPs have been widely used as a means to develop practical strategies for practice implementation of a medical home.

The PSH model has been strongly supported by the ASA. Immediate past president John M. Zerwas, MD, highlighted the PSH as the number one achievement of the ASA in 2013. New ASA president Jane C.K. Fich, MD, vowed to continue to support the development and implementation of PSHs.

The CFMAP has gained support from many ASA committees. The Surgical Anesthesia Committee will conduct research and catalog the existing literature for evidence-based practices to support implementation of PSHs. The Anesthesia Quality Institute plans to develop a program to produce meaningful and actionable data to enhance patient care. The ASA Quality Management and Departmental Administrative Quality Consultation Program will help to evaluate and assess local-level efforts toward implementing a PSH. The CFMAP will also consider developing processes and guidelines for certification. These could be similar to the certification of ACOs, PCMHs, and Centers of Excellence, each of which have various organizations that provide recognition through certification. The ASA has reached out and asked for support from all levels of government (federal, state, and local), family organizations, and other healthcare organizations. Several conferences have been conducted with payers for reimbursement for care coordination. Many articles have been published to educate the public and ASA members about the advantages of the PSH model. Online PSH resources and research, a library of PSH publications, archived Webinars, and past PSH event materials will be available for all members.

The three major barriers in implementing a medical home are training physicians to understand the medical home concept, communication and care coordination for related health services, and reimbursement for care coordination. The ASA has done enormous work to overcome these barriers to implement the PSH model. However, anesthesiologists have a long journey ahead. Success will require adaptation and change, learning quickly from mistakes, and developing an ability to transfer knowledge among participating entities. The successful PSH model also needs to create strategic added value for a health system and payers.

REFERENCES


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