

Quality improvement

Perioperative surgical home optimizes patient care, Part 1

The medical home, consisting of a patient-centered team focusing on the coordinated delivery of care, is now embedded in the healthcare lexicon, but the perioperative surgical home (PSH) is a more recent concept that is only starting to spread across the country.

“The number of hospitals in the US with at least one service line running a surgical home is far below 50,” estimates Stan Stead, MD, MBA, vice president for professional affairs at the American Society of Anesthesiologists (ASA), which has taken a leading role in developing the PSH.

Research has shown that PSHs can save money and improve patient outcomes, but implementing the model isn’t easy, and how it’s implemented may vary depending on a hospital’s needs and source of support for the concept.

OR leaders are key participants in building and sustaining PSHs, so they need to understand the model, its benefits, and its challenges.

This article focuses on the concept of the surgical home, payment considerations, general structure, and how to start gearing up to create a PSH. Part 2, which will be published in April OR Manager, delves more deeply into processes.

Driving forces

A PSH provides integrated patient-centered care from the time an individual decides to have surgery through at least 30 days after the procedure (sidebar, p 10).

“The main idea of a perioperative surgical home is care coordination and reduction in variation in practice,” says Arthur Boudreaux, MD, professor and vice chair of the department of anesthesiology at the University of Alabama at Birmingham (UAB) School of Medicine and former chief of staff for UAB Medicine. “If we can coordinate everything effectively, reduce variation where it can be reduced, and minimize unnecessary and wasteful interactions with patients, like wasteful labs, hopefully we will reduce complications, reduce expenses, and better meet patient expectations.”

By improving continuity through better integration of care, the PSH can counteract what Dr Stead calls the “shocking” numbers for readmissions. According to a 2013 report from the Robert Wood Johnson Foundation, one in eight Medicare patients was readmitted to the hospital within 30 days of being released after surgery in 2010.

“It’s clear we need to follow patients not just through the hospital process but through the postop period and beyond,” Dr Stead says. Of course, readmissions also hit the hospital’s bottom line in terms of lack of payment from Medicare and other insurers.

Dr Boudreaux adds that the PSH is well positioned to help hospitals meet the Institute for Healthcare Improvement’s Triple Aim—improving the individual experience of care, improving the health of populations, and reducing per-capita costs of care. (Read more about the Triple Aim Initiative at <http://www.ihl.org/engage/initiatives/TripleAim/Pages/default.aspx>.)

Improving the patient experience is certainly one of the forces driving the PSH. “We’ve developed tremendous technology to take care of patients, but at the same

time we've gone through increasing specialization, so what's lacking with our surgical care is continuity," Dr Stead says. "What we want to see is a great outcome for the patient, and we want to see care delivered at a cost level that is less than is currently happening—principally by making sure patients get the right care the first time."

Benefits of the PSH



*Stan Stead, MD,
MBA*

A 2014 literature review from Texas A&M University, College Station, for the ASA cited several benefits of the PSH model, notably reduced length of stay and readmission rates. Other benefits that contributed to these and other positive outcomes include:

- less unnecessary preoperative testing
 - fewer delays in procedures
 - reduced rate of surgical cancellations
 - early resolution of medical issues
 - greater use of enhanced recovery after surgery initiatives
- reduced postoperative complications.

"The real key here is the benefits for the patient," Dr Stead says. "Patients get a single point of contact for all their questions and their continuum of care; they get coordinated care, which we believe will increase safety; they'll have the shortest necessary stay in the hospital with the least risk of complications; they won't have unnecessary testing; the patient and family will be more engaged because it's much more focused on them; and they'll know what to prepare for and expect."

The PSH has market benefits, too. "Where it [PSH] has been successfully implemented, we are already seeing hospitals, surgeons, and physicians using this as an advertisement for better care and to differentiate their programs from others in the region," Dr Stead says.

Payment challenges

Despite the benefits, hospital leaders need to know that PSHs take a significant time investment to start up. While "proof of concept models" can be done with existing staff, scaling up the PSH throughout the hospital results in the need for further investment, according to Zeev Kain, MD, MBA, professor and chair at the University of California, Irvine (UCI).

It may be necessary to add staff, and some services may not be reimbursed, so the financial impact of the PSH is concerning.

The personnel needed differs based on the stage of implementation of the PSH, with project managers and Lean experts needed during the design and rollout of the PSH and healthcare extenders during the ongoing operations phase.

Dr Kain is in charge of the PSH at UCI, one of the first in the nation to demonstrate the effectiveness of the concept. At UC Irvine Health, the clinical, medical education, and research enterprises of UCI, the PSH was first implemented with patients undergoing joint replacement surgery and later extended to other surgical lines such as spine surgery, cystectomy, and nephrectomy. Initial published results from UCI show significant reduction in length of stay, a very low readmission rate, and a very low complications rate.

Like UC Irvine Health, Advocate Lutheran General Hospital, Park Ridge, Illinois, chose to hire a project manager. "That was the biggest financial investment," says David Young, MD, an anesthesiologist and medical director of presurgical testing at Advocate Lutheran and a partner in Surgical Directions, a consulting firm in Chicago. Dr Young is part of the leadership team for the PSH project cur-

rently in development.

"The surgical home has yet to be monetized," Dr Kain says, "but we have shown significant reduction in length of stay, an increase in patient satisfaction, and fewer costs."

Although some systems such as Kaiser and university-affiliated hospitals have made inroads, reimbursement remains a concern. Dr Stead is optimistic that as payers see the benefits of the PSH, payment will improve, noting that the PSH model is well suited for bundled payment.

"If you look at episode of care payment, this is what a surgical home is," Dr Stead says. "We envision it as a single payment for all the care that's needed by all providers (including the hospital) for the episode, with some warranty for complications."

Currently the Centers for Medicare & Medicaid Services' (CMS) payment is the same for all patients, but the ASA is pushing for payment to be risk adjusted.

"If you're a tertiary care medical center doing high-risk patients with ejection fractions of 15%, then your PSH payment for your cardiac patients is going to have to be different from a community hospital that is doing healthy patients," Dr Stead says. Based on conversations with CMS, he says, "They understand the need for risk adjustment, and I think it's something that we will be seeing coming down the pike."

For example, CMS is currently piloting a program that packages payment around a comprehensive episode of medical care that covers all patient services related to a single illness or condition. The PROMETHEUS™ (Provider Payment Reform for Outcomes, Margins, Evidence, Transparency, Hassle reduction, Excellence, Understandability, and Sustainability) Payment Model generates an evidence-informed case rate that is adjusted for the severity and complexity of each patient's condition. Costs are based on two types of risks—those outside the provider's control and those within the provider's control.

The good news is that hospitals can reap cost-saving benefits. "Hospitals can save money because of shorter lengths of stay, fewer postop complications, and standardization in the OR," Dr Kain says.

Like Dr Stead, he sees the appeal of the PSH to third party payers because about half of the costs following joint replacement surgery are attributable to postdischarge needs. "The cost for the surgical home pays off on the back end," Dr Young says, noting that managing problems such as pain, delirium, and postoperative nausea and vomiting has a high cost for the hospital. "It provides a good return on investment."

Leadership and structure



David Young,
MD

Anesthesiologists head up most PSHs with support from a multidisciplinary team that includes surgeons, nurses, and representatives from a wide range of stakeholders. "Anesthesiologists are exceptionally well positioned to lead surgical homes," Dr Stead says. "We are frequently the physicians who see the patient preoperatively and make the determination if he or she is really prepared for the surgery, we're the physicians present during the case who take care of the patient in the OR, and we're frequently brought in for issues in the hospital postoperatively."

He notes that anesthesiologists are involved in many aspects of patient care that affect outcomes, from the choice of anesthetic to management of pain and glucose levels.

There has been some push back from surgeons on anesthesia-led PSHs. "The

surgeons believe they have a lot of the skills you need for a surgical home,” Dr Stead says. “They want it to be physician run, and we completely agree with that.”

The ASA has established a joint work group on the PSH with the American College of Surgeons and is developing similar relationships with other physician specialties as well as the American Hospital Association.

Hospitals have taken different approaches to building a PSH. Some, like UC Irvine Health, have built the home starting with one service line and expanding to additional ones.

Others, like UAB, take a more broad-based approach or, like Advocate Lutheran, work with individual surgeons who support the concept. A total of 44 hospitals are participating in the ASA’s Learning Collaborative (sidebar, p 11).

“You have to be naïve to think you can take a plan like this and start with an entire hospital,” Dr Kain says. “You have to start with one surgeon so you can see that you are saving money and patients are satisfied, and then you can gain buy-in from services and can expand. We are doing it very carefully, service line by service line.”

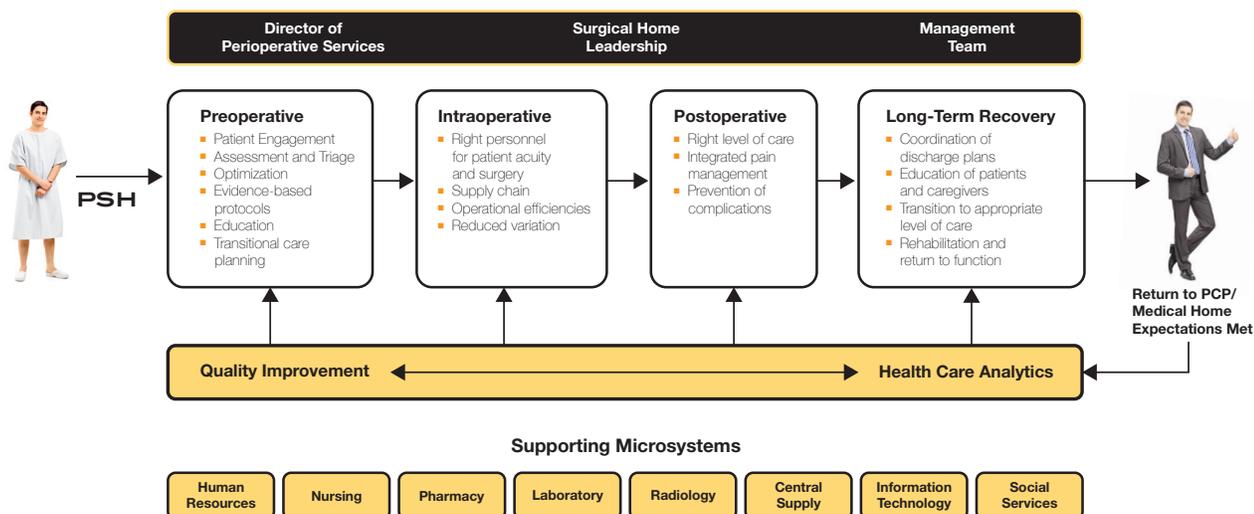
The hospital started with total joint replacement as a proof of concept, and then added cystectomies, nephrectomies, spine, shoulder procedures, and neurosurgery.

“The biggest benefit of this model will be elective procedures that we can plan for and optimize the patient for, and we can reduce variability,” Dr Kain says. He is unsure if the PSH model could be used for urgent procedures or general surgery. “We have to appreciate that some service lines, like orthopedics and urology, are a more natural fit for this approach,” he adds.

The key is for hospitals to structure the PSH so it’s congruent with the concept while still meeting the hospital’s individual needs. Dr Young says the team at Advo-

Perioperative surgical home overview

The figure below illustrates processes and participants in a typical surgical home.



In the PSH model, the patient’s experience of care is coordinated by a director of perioperative services, additional surgical home leadership and supportive personnel, which constitutes an interdisciplinary team. The expected metrics include improved operational efficiencies, decreased resource utilization, a reduction in length of stay and readmission, and a decrease in complications and mortality – resulting in a better patient experience of care.

*Figure developed by Daniel J. Cole, M.D.

cate Lutheran decided to spread out the workload by distributing responsibilities.

"We broke down everything into testing, preoperative, intraoperative, and postoperative phases," he says. "Each element is being managed by a different anesthesiologist."

OR leaders play an important role in building and sustaining the PSH. "They are incredibly important in the process of teamwork and care coordination," Dr Boudreaux says.

Gearing up

Dr Stead and others point to three key elements for implementing a successful PSH:

- buy-in from the C-suite
- buy-in from physicians, especially surgeons
- buy-in from patients.

C-suite buy-in

"You need C-suite support to pay for the surgical home and to motivate the necessary people to come to the table," Dr Young says. To present the program to C-suite staff, he used a template available from the ASA, included basic metrics showing benefit, and provided reading material supporting the concept.

"To have continued support, you have to show effectiveness," he says, citing the standard formula that value equals quality divided by costs. "A surgical home ensures a hospital provides high-value care to patients and payers," he adds.

"Once we showed success in one service line," says Dr Kain, "there was a buy-in from the organization to continue the initiative throughout other surgical services." There are now PSH models in orthopedics, urology, and neurosurgery.

Physician buy-in

To help get surgeons on board, Dr Kain says, "They have to understand there is a need. If you talk about optimizing patients and postop management, surgeons won't argue with you; they always want to do the right thing."

Strategies include gain sharing and explaining how the move to bundled payments makes the PSH in a surgeon's best interest.

Physician buy-in can affect how a hospital launches the PSH. For instance, surgeon support and patient volume led Advocate Lutheran to start with the gastrointestinal service.

Patient buy-in

A PSH thrives by being patient centered. "Patients need to understand that they are getting a point of contact that is going to be consistent throughout their care," Dr Stead says. Dr Boudreaux adds that it's important to set and meet patient expectations. For example, the anesthesiologist lets patients know that the analgesia block they receive after surgery will reduce pain, not eliminate it. "We go to great lengths to set appropriate expectations and meet those expectations."

The bottom line

Although the PSH is now focused on adults having in-hospital surgical procedures, Dr Stead says that some in the ASA Learning Collaborative plan to adopt the model for ambulatory surgery centers. In fact, UC Irvine Health is experimenting with an outpatient orthopedics PSH. There have also been calls to apply the model to the pediatric population. And, Dr Stead adds, there is no "litmus test" as far as the size of facility that can implement a PSH.

ASA Learning Collaborative

The American Society of Anesthesiologists (ASA) launched its Learning Collaborative in spring 2014. Goals include defining the PSH and determining which models work best. Stan Stead, MD, MBA, vice president for professional affairs at the ASA, notes that about 30% of hospitals who say they have a PSH actually have elements of it that aren't yet linked.

The collaborative has developed a readiness tool to help institutions determine their subject matter, organizational, cultural, and programmatic readiness. These tools are part of the development of guidelines and what will become proposed standards for a PSH.

The first cohort of 44 organizations is expected to continue until November 2015. "The goal is to share information [including through publications] and experiences," Dr Stead says.

Future plans include "a longer, more far-reaching collaborative that involves many more centers," Dr. Stead says. The ASA is developing tool kits and other resources to help teams who want to start a PSH in their organization and plans to seek grants from public and private sources to support the work.

Read more about the ASA Learning Collaborative at <https://www.asahq.org/psb>.

“Our goal is to get patients transitioned back to the primary care provider and returned to function,” Dr Stead says. “It’s clear that a successfully done surgical home offers such advantages to the patient in terms of outcome and cost that it is going to be something that everyone will want to participate in.” ❖

Cynthia Saver, MS, RN, is president of CLS Development, Inc., Columbia, Maryland, which provides editorial services to healthcare publications.

References

- Garson L, Schwarzkopf R, Shermeen V, et al. Implementation of a total joint replacement-focused perioperative surgical home: A management case report. *Anesth Analg.* 2014;118(5):1081-1089.
- Gawande A, Kwaan M R, Regenbogen S E, et al. An Apgar score for surgery. *J Am Coll Surg.* 2007;204:201-208.
- Health Care Incentives Improvement Institute. What is PROMETHEUS payment? http://www.hci3.org/what_is_prometheus.
- Kain Z N, Vakharia S, Garson L, et al. The perioperative surgical home as a future perioperative practice model. *Anesth Analg.* 2014;118(5):1126-1130.
- Kash B, Cline K, Menser T, et al. The perioperative surgical home: A comprehensive literature review for the American Society of Anesthesiologists. June 14, 2014.
- Raphael D R, Cannesson M, Schwarzkopf R, et al. Total joint perioperative surgical home: An observational financial review. *Perioperative Medicine.* 2014; 3:6. <http://www.perioperativemedicinejournal.com/content/3/1/6>.
- Robert Wood Johnson Foundation. The revolving door: A report on US hospital readmissions. An analysis of Medicare data by the Dartmouth Atlas Project. 2013. <http://www.rwjf.org/en/research-publications/find-rwjf-research/2013/02/the-revolving-door--a-report-on-u-s--hospital-readmissions.html>.
- Vetter T R, Goeddel L A, Boudreaux A M, et al. The perioperative surgical home: How can it make the case so everyone wins? *BMC Anesthesiology.* 2013;13:6. <http://www.biomedcentral.com/1471-2253/13/6>.
- Vetter T R, Boudreaux A M, Jones K, et al. The perioperative surgical home: How anesthesiology can collaboratively achieve and leverage the triple aim in health care. *Anesthesia & Analgesia.* 2014;118(5):1131-1136.