From the Front Lines

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Bellin Health Partners standardizes surgical process with perioperative surgical home

Bellin Health Partners is a clinically integrated accountable care system focused on population health to deliver high-quality, affordable care to the people of Northeastern Wisconsin and the Upper Peninsula of Michigan. Our system includes three hospitals, two surgery centers, and approximately 500 employed, independent, primary, and specialty care physicians.

In a system driven by value creation, perioperative medicine at Bellin suffered from poor coordination, high utilization of low-value, protocol-driven, preoperative testing and consultations. There was an over-reliance on "clearance" as opposed to optimization of patients for best surgical outcomes.

Several years ago primary care physicians deployed the concepts of population health at Bellin Health, successfully designing a patient-centered medical home to achieve the quadruple aim of better patient care, lower cost, increased patient satisfaction, and increased provider well-being.

Would the deployment of the patient-centered medical home concepts be equally applicable in perioperative medicine? Would the application of population health strategies, such as exploitation of the relationship between risk and cost, have the potential to create value in perioperative medicine as it did in non-surgical care? These questions challenged us to begin Bellin Health Partners' journey in developing a perioperative surgical home (PSH).

The initial step in our efforts was to standardize the process for preoperative evaluation and optimization of surgical patients. With support from our primary care and surgical colleagues, we agreed that all elective surgical patients would be referred to our preoperative optimization clinic. A universal screening tool, built in the electronic medical record, collects the data needed to achieve risk stratification. Multidisciplinary teams led by subject matter experts developed 20 different optimization pathways to address the most common and impactful conditions. Our universal screening tool categorizes patients in different tiers of risk while identifying the needed optimization pathways for each patient. Using this process allows us to reduce low-value testing and consultations in low-risk patients while focusing our efforts on high-risk patients where optimization could be expected to impact surgical outcomes.

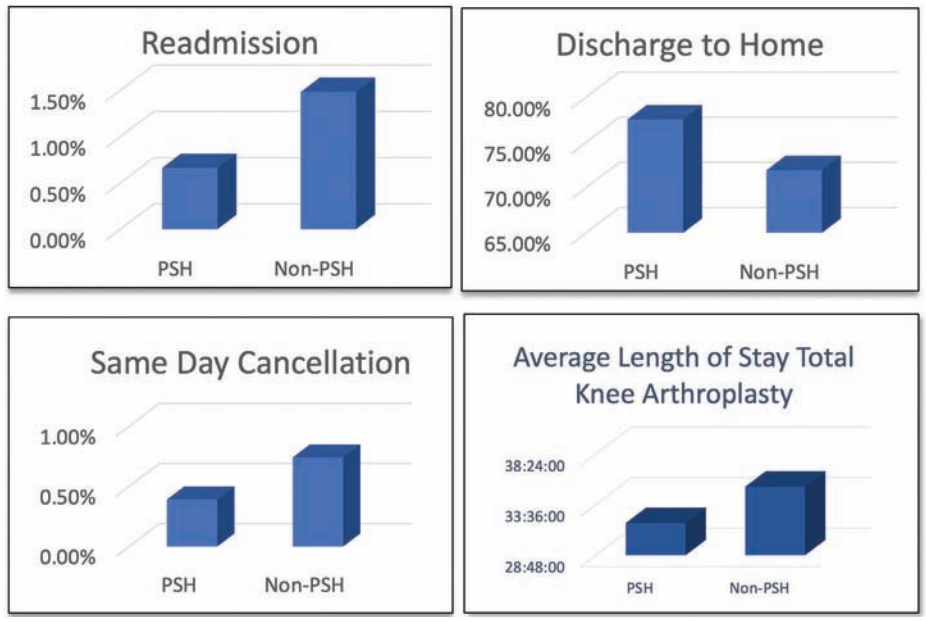

Figure 1: Bellin Health Partners Perioperative Surgical Home Outcomes

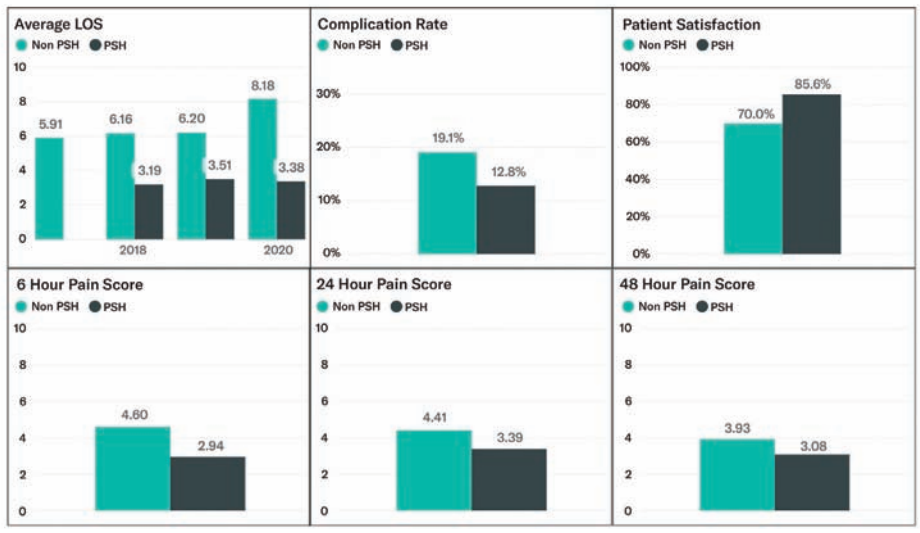

Figure 2: Kettering Health Network Colorectal Service Line

We anticipated that patient satisfaction would decline due to potential delays in elective operations to allow time for optimization. Consistent messaging to patients from all perioperative care providers, along with inclusion of patient representatives in the PSH design, assured patient acceptability, and increased patient satisfaction.

Implementing the optimization process has enabled us to achieve favorable outcomes (Figure 1). We have seen a decrease in length of stay, readmission rates, skilled nursing facility use, and same-day cancellations in our PSH patients compared with our non-PSH patients.

Although the contribution of primary care physicians to the success in accountable care performance has long been recognized, the significant role that specialty physicians can play in improving accountable care outcomes has not been as widely appreciated. We feel that the collective efforts of specialists involved in the implementation of PSH has provided a significant contribution to Bellin Health Partners' success in accountable care, such as the achievement of the highest quality and lowest per capita cost in the pioneer and next-generation accountable care outcomes during three of the six years of participation in these programs.

In conclusion, application of population health strategies to perioperative medicine through PSH holds significant promise in advancing the quadruple aim of improved quality, better patient and provider experience, and reduced cost of care.

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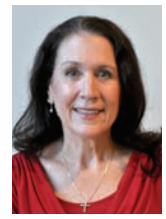

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Kettering Health Network PSH proves resilient through a pandemic

The Kettering Health Network PSH was gaining momentum 20 months after its inception when the March 17, 2020, order came to shut down elective surgery due to the COVID-19 pandemic. Kettering Health, located in Southwest Ohio, includes a total of eight hospitals across a region of over 100 miles. The health network performs over 62,000 annual surgeries. Like most healthcare institutions for which elective OR volumes drive revenue, the uncertainty of a pandemic was daunt-

ing. With the Kettering PSH program, we could have waited out the storm and proceeded with our planned initiatives. However, we felt there would be a greater need for patient-centric, efficient care when the elective surgery order was lifted, so we pulled together and accepted the challenge to forge ahead with PSH expansion during a pandemic.

The Kettering PSH program officially started in July 2018 after six months of multidisciplinary planning with the colorectal service line. The team celebrated with near immediate improvements including a 45% reduction in length of stay, 25% reduction in complication rates, 20% increase in patient satisfaction scores, and improved pain control with less opioid usage (Figure 2). Good news travels fast, and in less than two years, Kettering had added six additional groups to the list of PSH pathways including hernias, gynecology-oncology surgeries, spinal fusions, total joints, and major urology/urology-gynecology surgeries.

At our early 2020 meetings, we had planned to create PSH pathways for cesarean sections and cardiothoracic surgery. As we regrouped during the pandemic surgery shutdown, other initiatives soon became clear. First, our original service line, colorectal, did not experience decreased volumes due to the urgent nature of the procedures. So, we worked to streamline a process for COVID-19 testing preoperatively and developed a committee to review and approve cases. During this time, we identified frustrations in the postoperative and discharge process, and made order set changes to further standardize the PSH experience. We also had time to meet with our primary care colleagues to build a roadmap for both clinicians and patients with attached optimization resources to further population health strategies before a surgical intervention was determined. In addition, our marketing department was able to finalize educational brochures for our outpatient colleagues to increase the PSH referrals. Next, data collected from bariatrics in 2019 identified opportunities surrounding postoperative bleeding and return to OR rates. This led the medical director to reach out to the PSH committee for more information. Ultimately, the PSH collaborative team approach was the right action plan for process improvement in the bariatric patient population. Finally, our Kettering hospitalists discovered our highest-risk vascular patients had variable pre- and postoperative care leading to prolonged length of stay and increased complication rates. Again, the natural solution for vascular surgery standardization and optimization was to develop a PSH pathway with a collaborative team approach.

Although the year 2020 has been riddled with disappointments, cancellations, or setbacks for many aspects of health care and our personal lives, this has not been the case for the PSH program at Kettering. Through resiliency and collaboration, we have been able to add on four service lines, published our Kettering Network primary care and patient facing roadmaps as well as PSH educational office brochures, and put into production our first standardized PSH discharge order set complete with surgery-specific instructions and medication dosages. PSH in 2020 may not have gone as planned, but the growth and ongoing engagement with team collaboration in what has been one of the most trying times of our careers, allows us to move forward with resiliency and hope in 2021. ■

From the Front Lines—Submit a Case Study!

Our new column From the Front Lines features brief case studies written by your physician anesthesiologist peers. We encourage you to share your own case study in a future issue of the *ASA Monitor*. Please contact Haley McKinney at **haley.mckinney@wolterskluwer.com** for issue availability/deadlines and to obtain the three-part case study submission questionnaire. Thank you!