working toward the development and deployment of a perioperative surgical home. This requires broad and ongoing collaboration among anesthesiologists, clinical care navigators, surgeons, and nursing leaders, with support from the hospital’s corporate suite. We are using the ZIOZ ICP process improvement as a foundational template for this perioperative orthopaedic surgical home.

The ZIOZ ICPs encompass the 120 days before, during, and after THA and TKA surgeries. We believe that this straightforward language is stronger and more easily understood than descriptions such as preoperative, intraoperative (acute stay), and postoperative, which are often used in other surgical home models. For each adverse event, we developed best practice recommendations based on levels of evidence support.

The tables accompanying this article show the best practice recommendations in each phase for transfusion prevention (Table 1), pain management (Table 2), and reducing VTE readmission. Bold text indicates widespread hospital implementation while italic text indicates hospital-specific use. The level of evidence support is shown in parentheses following the recommendation—S for strong, M for moderate, and I for indeterminate.

Resistance by surgeons and health systems to the implementation of ICPs is well understood. But because implementing ICPs does not demean surgeon expertise and licensing, there is little reason for persistent fear, resentment, and disregard to block ICP utilization.

Patient risk identification and risk reduction are best achieved through patient activation, and patient activities were built in as following the recommendation—S for strong, M for moderate, and I for indeterminate.

table: Table 2: Integrated Clinical Pathway Recommendations for Preventing Poor Pain Management

<table>
<thead>
<tr>
<th>Before TKA/THA</th>
<th>During (acute stay) TKA/THA</th>
<th>After TKA/THA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algometer pre-op pain tolerance assess patient for pain tolerance (M)</td>
<td>Regional anesthesia (M)</td>
<td>Avoidance of strong venous thromboembolism chemoprophylaxis in low-risk TKA/THA patients (S)</td>
</tr>
<tr>
<td>Detect catastrophizing (M) and mitigate narcotic use (M)</td>
<td>IV Desmethasone 10 milligram preoperative day of surgery and postoperative day 1 (S)</td>
<td></td>
</tr>
<tr>
<td>Pre-op pain with regional analgesia and multimodal medications NOT narcotics (S)</td>
<td>Wound cocktail deep tissue injection and sensory blocks safer than femoral nerve block (S)</td>
<td>Continue multimodal pain medication (S)</td>
</tr>
<tr>
<td></td>
<td>Bupivacaine DepoFoam suspension percutaneous injection (M)</td>
<td></td>
</tr>
<tr>
<td>Preoperative multimodal medication initiation (S)</td>
<td>Decreased tourniquet time for ischemia minimization and deep venous thrombosis reduction (M)</td>
<td>Reduce or eliminate singular reliance on narcotics to avoid narcotic side effects (M)</td>
</tr>
<tr>
<td>Pharmacogenetic testing for medication optimization (I)</td>
<td>Less-invasive surgical approach (M)</td>
<td>Link patient satisfaction with optimized pain control (M)</td>
</tr>
</tbody>
</table>

Bold text = hospital implementation; Italic text = surgeon preference; S = strong evidence supports; M = moderate evidence supports; I = indeterminate evidence

Source: Mark A. Snyder, MD

 adversity we experienced with ZIOZ ICPs could all benefit.

The tables accompanying this article show the best practice recommendations in each phase for transfusion prevention (Table 1), pain management (Table 2), and reducing VTE readmission. Bold text indicates widespread hospital implementation while italic text indicates hospital-specific use. The level of evidence support is shown in parentheses following the recommendation—S for strong, M for moderate, and I for indeterminate.

Resistance by surgeons and health systems to the implementation of ICPs is well understood. But because implementing ICPs does not demean surgeon expertise and licensing, there is little reason for persistent fear, resentment, and disregard to block ICP utilization.

Patient risk identification and risk reduction are best achieved through patient activation, and patient activities were built in as necessary for each adverse event. Health System LinkNet learning modules were built for continuing education credit. A higher percentage of clinical staff than surgeons accessed these modules.

Both employed and affiliated surgeons and health system hospitals were afforded early and free access to the ZIOZ ICPs. As predicted at the time of program inception, only those surgeons who were fully compliant with ZIOZ had the lowest rates of complications, readmissions, and cost reductions. However, the extensive implementation of ICPs by the hospital meant that all orthopastry surgeons benefited. Resistance by surgeons and health systems to the implementation of ICPs is well understood. But because implementing ICPs does not demean surgeon expertise and licensing, there is little reason for persistent fear, resentment, and disregard to block ICP utilization.

On a hospital level, the simultaneous implementation of ICPs to prevent several adverse events also yields greater synergy benefits. The ICPs are regularly vetted and refined, as evidence-based support becomes available. Large consensus efforts (such as those undertaken for periarticular joint infection), although strong in evidence assessment, are not formatted in a way that can be easily used for ICP efforts.

Turning the curve

ZIOZ is straightforward, data transparent, readily implemented, synergistically beneficial, Level III registry proven, and cost effective in primary THA and TKA surgeries. Our patients and families appreciate knowing about adverse event solutions and outcome-enhancing methods well in advance of arthroplasty surgery.

Second Curve hospitals must perform at supernormal levels to be successful in meeting risk contracts; they must also be clinically integrated to optimize the value in THA and TKA surgeries. Patient-access issues, such as current predictions that demand will exceed provider capacity before 2030, can only be mitigated if total joint surgeons and their respective hospitals maximize safe, high-value performance.

As demand for total joint surgeries increases, general orthopaedists will be required to supplement specialist care. Straightforward, easily understood ICPs for TKA and THA, if completely implemented, could reduce variation in adverse events and care episode costs, while increasing patient satisfaction and surgeon fulfillment. The success we experienced with ZIOZ ICPs in primary THA and TKA could eventually support large risk-sharing strategies like 90-day guarantees. Patients, payers, providers, programs, and places of service could all benefit.

Links to the studies referenced in this article can be found in the online version, available at www.aaos.org/aaosnow/18023.

Mark A. Snyder, MD, FAOA, is medical director of the Good Samaritan Hospital Orthopedic Center of Excellence in Cincinnati.