



1 new lease on life.
Zero hospital stay.

Total Joint Replacement Surgery in an Ambulatory Surgery Center reduces costs and risk of infection with excellent quality results.

DEVELOPING A SUCCESSFUL TOTAL JOINT REPLACEMENT PROGRAM IN THE AMBULATORY SURGERY CENTER.



THE
SURGERY CENTER
AT LUTHERAN

Background

Advancements in joint replacement surgery have resulted in shorter hospital lengths of stay as well as the migration of these procedures to outpatient surgery centers. As the demand for these procedures grows and pressure builds for cost containment in healthcare, choice of the operative facility based on patient acuity should be considered. In this study, the use of an ambulatory surgery center (ASC) for patients with no significant operative risk factors was evaluated.

Joint Replacement in ASC	Average Length of Stay
Hip & Knee	6-8 hrs.

Expected Length of Stay in ASC	Expected Length of Stay in Hospital
6-8 hrs.	2-3 Days

Methods:

Twenty patients meeting American Society of Anesthesia physical status score of one or two and with no substantial comorbidities placing them at risk for intraoperative or postoperative complications were selected to receive their total joint replacement in the The Surgery Center at Lutheran (TSCAL) in Wheat Ridge, Colorado. These patients were released between eight and twenty-three hours following surgery. Hospital transfers, follow-up emergency room visits, post-op complications, cost and patient satisfaction were tracked following surgery.



Results:

None of the twenty patients in the study were transferred or readmitted to the hospital or emergency room, and no post-op infections or deep vein thrombosis (DVTs) have been reported in the six weeks following surgery. Compared to patients undergoing the same procedure in a hospital, the average savings per procedure is as much as forty-six percent or up to fifteen thousand dollars. Patients reported high satisfaction with the procedure and process.

Results (n=20 patients)	*Six weeks post-op
Hospital Transfers	0
Readmissions to Hospital	0
Emergency Room Visits	0
Post-op infections and or DVTs	0
*Limitations to this study include a small sample size. While predicted to be very low, the expected rate of complications could not be extrapolated due to the small n.	

Conclusion:

For select patients in overall good health, TSCAL has shown to be an appropriate alternative to the hospital for total joint replacement surgery. With a highly trained and dedicated team, our program has been able to achieve high-quality results with significantly lower overall costs. Since the completion of the initial twenty patients that were kept from eight to twenty-three hours, patients can now expect to go home within six to eight hours. This has tremendous positive implications for the future of these procedures from both a cost and quality perspective.

6-8 Hours
Expected length of stay for procedure.



Physician Champion

As orthopedic surgeon Tom Eickmann, MD, observed the hospital stays for his joint replacement patients become shorter and shorter, he saw an opportunity — an opportunity to perform these procedures not only on an outpatient basis, but in an ASC.



"Joint replacement has been done on an outpatient basis for quite some time in select places, but performing these procedures in an ASC is incredibly rare," Dr. Eickmann says. "What I witnessed in the hospital with the shorter stays supported the opportunity to migrate these procedures for select patients to the ASC. I knew that if total knee and hip and partial knee replacements could be performed on an outpatient basis in the hospital, there was no reason why I couldn't perform these procedures in the ASC."

This led to the formation of the total joint replacement program for TSCAL. In February 2012, Dr. Eickmann performed his first joint replacement procedure in the TSCAL. He has since performed dozens of joint replacement procedures, and already has plans to further improve the successful program.

Staff Education

As part of the formation of this program, TSCAL's staff went through comprehensive education and training on total joint procedures, says Diane Lampron, RN, BSN, CASC, director of operations for Pinnacle III and administrator of TSCAL. "For our pre-op and PACU nurses, we provided significant education so they would be prepared prior to us performing our first total joint procedure. Even though we do a lot of orthopedic procedures, we were very specific as to how an actual total joint procedure would look in TSCAL.

"The other key component was the education and training provided to the OR staff, which Dr. Eickmann played a part in," she continues. "We actually went through a mock case to make sure we were really ready to go prior to us doing the first total joint procedure. Any time we add a new procedure, we go through an education process with the staff, but for this we went a little bit above and beyond. Total joint procedures are somewhat unique to an ASC, so we wanted to make sure we were as well prepared as we could possibly be."

Selection Criteria

For patients to be eligible to receive their joint replacement procedure in TSCAL, they must meet a number of requirements.

Patients must undergo the TSCAL's thorough initial assessment to identify any concerns or disease processes, such as obesity, obstructive sleep apnea or cardiovascular disease, which could potentially cause intraoperative or post-op problems. This is a standard assessment for

any patient — not just joint replacement patients — under consideration for a surgery at TSCAL.

TSCAL will typically only admit patients with an American Society of Anesthesiologists (ASA) physical status score of one or two, which indicates they are not high-risk patients. Dr. Eickmann says TSCAL will occasionally admit a patient identified as a "three," but for the joint replacement program they decided to take a more conservative approach and patients are only admitted if they have an ASA score of one or a two.

This conservative approach also involves TSCAL's anesthesia personnel, says Lampron. Anesthesia personnel do not usually review a patient's chart prior to the day of surgery if the patient has an ASA score of one or two; that review is reserved for patients with an ASA score of three. "But for our total joint patients, there's an extra layer of review put in where anesthesia reviews all of the charts for our total joint cases regardless of the patient's ASA score," she says.

Patients are not admitted into the program if they are on a high dose of narcotics, Dr. Eickmann says. "If patients are found to be on what we view as too many narcotics, then we wouldn't perform their procedure in the TSCAL since they may need longer than twenty-three hours to get to the point where oral narcotics are adequate to control their pain."

Finally, the patient must have insurance from a payor contracted with the TSCAL for the joint replacement procedures.

Patient Education

Hospitals typically hold a 'joint class' for patients before they undergo joint replacements. "We have our own version of this joint class," Dr. Eickmann says. "This is where we educate patients about what they need to do to prepare for their procedure; what to expect before, during and after surgery; what measures are taken to manage pain."

Patients also meet with physical therapy to assess their post-op walking aid needs and to practice walking with crutches or a walker. They also meet with the TSCAL pre-admission testing nurse to ensure they understand their pre-op instructions.

Surgical Experience

The patient surgical experience is not significantly different from other orthopedics procedures performed in TSCAL.

On the day of surgery, patients meet with a nurse, anesthesiologist and Dr. Eickmann to go through the pre-op steps associated with procedures in the TSCAL, including reviewing paperwork, marking the site and putting in an IV. Patients also receive their IV antibiotics within an hour of the incision.

"When all of this is completed, the patient is wheeled back into the OR to have their spinal done," says Dr. Eickmann. "The patient always goes under spinal anesthesia; while some people

perform local blocks for these procedures, we prefer not to since it delays motor function and can increase the risk of falls.”

Dr. Eickmann also provides a periarticular joint injection for pain control during the surgery.

“During the first year of our experience, we performed joint replacement procedures with a twenty-three hour stay,” he says. “Joint replacements performed at the center since then have been outpatient, with the surgery done in the morning and therapy and discharge in the afternoon.”

Patients leave the TSCAL and return home with home health services. The physical therapist will go to their home and work out with them. Patients follow up at Dr. Eickmann’s office two weeks and six weeks following surgery.

Outcomes Performance

The first twenty joint replacement procedures in the TSCAL have produced excellent outcomes, Dr. Eickmann says.

“The hospital I work at has been nationally recognized for Outstanding Patient Experience by Healthgrades®,” he says. “TSCAL patient questionnaires indicate their joint replacement patients are even happier than the ones receiving these procedures in that hospital. A number of patients have written down that they had less pain going out of the TSCAL than they did coming in.

“We’ve had no emergency room visits, no infections and no DVTs at six weeks post-op,” Dr. Eickmann continues. “On top of all of this, patients are really excited about undergoing their procedure at the TSCAL because they see that this care has advanced to the point where they don’t even have to be in the hospital for the surgery. Now these procedures aren’t perceived as such a big ordeal to go through.”

Financial Implications

Not only does performing joint replacements in the TSCAL produce excellent outcomes, it’s significantly less expensive than performing the same procedures in a hospital — and payors are taking notice.

“Currently, the private insurance companies we have contracted with for these procedures in the TSCAL are saving an average of forty-six percent or as much as fifteen thousand dollars per case over what they pay to the hospital for the same procedures,” Dr. Eickmann says. “And that’s including the costs of post-op care.

“Slowly but surely I think most payors will see that it’s well worth supporting these procedures in the TSCAL,” he adds. “Once they realize you really can do this safely and deliver high-quality results, I believe they’re going to come on board if they’re not already.”

46% Savings

As much as \$15K Average Savings per procedure

Program Evolution

While the program is evolving, Dr. Eickmann says there will still be some patients who will not be able to receive their joint replacement procedure in the TSCAL.

"If they meet the TSCAL criteria, they'll be able to be done in the TSCAL," Dr. Eickmann says. "But like any other procedure, half of them probably won't meet the criteria. The healthy patients will be operated on in the TSCAL; the others will go to the hospital."

This will still permit a considerable portion of the patient population to undergo joint replacement procedures in TSCAL.

"I think this is the future," Dr. Eickmann says. "I think joint replacement surgery in an ASC is going to be like ACL reconstruction in another ten years. With ACL reconstructions, patients are almost all young, healthy people, and almost all can be done in an ASC. I think it's only a matter of time before joint replacement surgery becomes commonplace in ASCs, and that will be a win-win-win for patients, physicians and insurance companies."

