

Beacon Orthopedic Collaborative Care Program

2021-2022 Annual Report



Dear colleagues,

This is our third annual report of the Beacon Orthopedic Collaborative Care Program. This collaboration includes surgeons from Beacon Bone & Joint Specialists and Orthopedic & Sports Medicine Center of Northern Indiana, Inc. We are pleased to share with you a summary of the outstanding developments, programs and highlights of the 2021-2022 performance period.

This program continues to be a high-performing program providing evidence-based orthopedic care related to total joint replacements, hip fractures and orthopedic trauma care across Beacon Health System.

The program has focused on the triple aim of quality, patient experience, while reducing cost of care. Last year, we set and achieved the following goals:

- Reduction in care variation among providers for hip fracture patients; by improving the use of fascia iliac nerve blocks (a local anesthetic) to reduce pain for patients; implementing evidence-based care by using tranexamic acid (TXA) to reduce bleeding complications; and adopting early ambulation protocols for nursing and therapy. We accomplished this by monitoring the use of standardized admission, peri-operative and post-operative hip fracture order sets implemented across the health system in 2022.
- Expansion of robotic surgery with cutting-edge technology (ROSA robotic system) for knee replacement surgery and assuring outcomes were equivalent to or better than nonrobotic knee replacements. Last year, over 200 ROSA knee replacement surgeries were performed.
- Continuing to focus on patient optimization presurgically for elective procedures and using enhanced recovery after surgery (ERAS) protocols for our total hip and knee replacement surgeries.
- Moving to measure patient satisfaction for the hip and knee replacement program by using an interactive digital platform called CareSense, in addition to patient education and patient-reported outcomes data.
- Implementing and adopting a recycle/refurbish program for non-implantable orthopedic surgical supplies to reduce costs.



Joel Post, DO
Medical Director of the Orthopedic
Co-Management Service Line
Beacon Health System



Willis Stevenson, MD
Medical Director of the Orthopedic
Co-Management Service Line
Beacon Health System



Sam El-Dalati, MD, ABTS, MBA
Chief Clinical Officer,
Beacon Health System



I continue to be proud of the work and outcomes that this group of dedicated providers has helped Beacon Health System achieve, related to the orthopedic service line. They have shown remarkable improvement in the triple aim of quality, patient experience and significant savings for the health system related to arthroplasty and hip fracture supply costs. It is a pleasure to work with this highly engaged and collaborative group of surgeons who reflect the highest standards and expertise in orthopedic care delivery.



Beacon Orthopedic Collaborative Care Program members:

Joel Post, DO

Orthopedic Oncology/Orthopedic Surgery,
Beacon Medical Group, Medical Director of the
Beacon Orthopedic Collaborative Care Program

Willis Stevenson, MD

Orthopedic Sports Medicine Surgery, Orthopedic
& Sports Medicine Center, Medical Director of the
Beacon Orthopedic Collaborative Care Program

Joseph Caldwell, MD

Orthopedic Spine Surgery,
Orthopedic & Sports Medicine Center

David Cutcliffe, MD

Orthopedic Hand Surgery,
Orthopedic & Sports Medicine Center

Gregg Ebersole, MD

Orthopedic Surgery, Beacon Medical Group

Craig Erikson, MD

Orthopedic Surgery,
Orthopedic & Sports Medicine Center

Mark Klaassen, MD

Orthopedic Surgery,
Orthopedic & Sports Medicine Center

David Pope, MD

Orthopedic Hand Surgery,
Orthopedic & Sports Medicine Center

J. Mark Schramm, MD

Orthopedic Hand Surgery,
Orthopedic & Sports Medicine Center

J. Benjamin Smucker, MD

Orthopedic Sports Medicine Surgery,
Orthopedic & Sports Medicine Center

Jeffrey Sonntag, DO

Orthopedic Shoulder and Elbow Surgery,
Orthopedic & Sports Medicine Center

Dr. LeeAnne Torres, MD

Orthopedic Surgery, Beacon Medical Group

Scott Trumble, MD

Orthopedic Foot and Ankle Surgery,
Orthopedic & Sports Medicine Center

Jared Vogler, DO

Orthopedic Surgery/Shoulder and Elbow
Orthopedic Surgery, Beacon Medical Group



Paige Albright's reality changed in mere seconds. During a struggle for a basketball during a high school game, her knee was knocked out of place upon impact with another player. Then she hit the floor and it was forced back in place. The result was a dislocation of the right patella, in addition to a tear of the ACL.



My doctors are the best. I know they really care about me and my knee... I'm just so thankful for Beacon.



LeeAnne Torres, MD
Orthopedic Surgery

Her first surgery was about three months after the injury. A surgeon told Paige and her parents, Phil and Reagan, she needed surgery to repair the medial patellofemoral ligament (MPFL), a complex network of soft tissue that stabilizes the knee, and for the cartilage tear, and microfractures to the underside of the patella. The procedure was completed, but even after physical therapy, Paige was in constant pain. In April 2020, she had platelet-rich plasma (PRP) injections in an attempt to regrow the cartilage.

In June 2021, she graduated and headed to Michigan State University. By then, she'd given up sports and had increasing pain. During Christmas break, Paige's high school sports therapist immediately saw something wrong and referred her to sports medicine provider Dr. Michael Messmer. After scans and X-rays showed "not good news," they were told to see a surgeon – again.

Reagan said she thought, "Oh, here we go" and envisioned trips to Mayo Clinic, Chicago or some other large city, and waiting weeks for an appointment. To the family's surprise, two days later they met with Dr. LeeAnne Torres, orthopedic surgeon, in South Bend.

Reagan said Dr. Torres spent over an hour with them, answering questions. In addition to Paige's knee being very unstable, she was anxious after already having endured so much to this point, and Dr. Torres was tuned in to this.

"The level of empathy Dr. Torres and her medical assistant, Kelly Cahall, have shown [our family] is unlike anything we have experienced with other providers," Phil said.

To limit Paige's trauma, Dr. Torres did a scope and cartilage biopsy at the same time, and also performed additional testing on her knee once she was sedated. They then decided on a procedure called Matrix-induced Autologous Chondrocyte Implantation (MACI) – cartilage cells from the knee are harvested then go to a lab where they grow into additional cartilage in six weeks. Since there is a 3-week period of time the new cartilage is viable, Paige and her parents decided she should withdraw from her second semester at MSU.

Dr. Torres recommended a second reconstruction to stabilize Paige's patella as well as an anterior cruciate ligament (ACL) reconstruction given her instability. Paige and her twin brother, Phillip (PJ), have hypermobility syndrome, where a joint can stretch further than average. This was performed in addition to the cartilage restoration procedure.

The combined surgeries lasted over six hours and were a total success. With a year-long recovery period for the ACL and patellofemoral ligament reconstruction as well as the MACI procedure, Paige is on her way to being pain-free. She is still in physical therapy, but was able to return to college and continue her studies toward a business degree. This procedure likely saved Paige from multiple knee replacements throughout life, she has regained confidence in using her knee.

"We feel so incredibly blessed to have this care in our community," Reagan said. "What an asset to have a 'girl boss' take care of our daughter," Reagan said, using the term her daughter Paige uses. "Dr. Torres is an articulate, skilled doctor with a kind and compassionate bedside manner."

Quality metrics 2021-2022

Improving key performance

- Eight quality & operational metrics with 100% improvement over 2020
- Significant dollar savings for the health system related to arthroplasty and hip fracture supply costs

Metric Description	2021-2022 Performance
CareSense patient satisfaction question: "I felt prepared for discharge" (% that agreed or strongly agreed)	92%
CareSense patient satisfaction question: "The quality of joint replacement care I received was exceptional" (% that agreed or strongly agreed)	98%
ROSA (Robotic Knee Replacement) pin complication rate measured at 30 days post-surgery	0.4%
Percent of hip fracture patients that receive a fascia illiac nerve block for pain control	86%
Percent of tranexamic acid (TXA) used for hip fracture patients to reduce bleeding complication	64%
Percent of hip fracture cases using new standardized hip fracture postoperative power plan	82%
Percent of new standardize Hip Fracture Postop Power Plan Utilization	44%
Adopt a recycle/refurbish program for orthopedic supplies in surgery to reduce costs	Yes



Certifications, Centers of Excellence, Accolades

- Both Elkhart General Hospital and Memorial Hospital of South Bend had successful intracycle reviews from The Joint Commission on their Advanced Certification for Total Hip/Knee Replacement programs.
- Reduced surgical cost on hip and knee replacement surgeries.
- Completed more than 200 ROSA surgeries.
- Sg2, a prominent health care system strategy consulting company, has identified important future trends for the orthopedic service line. Sg2 forecast continued growth in Total Hip & Knee Replacement surgeries (estimated at 34%) and Shoulder Replacement surgeries (estimated at 59%) over the next 10 years, as well as continuing shifts from inpatient to outpatient settings.

Getting back to doing the things she loves

After nearly seven years of distress and pain, Diane Krill can play again!

It started when she had to miss a Tim McGraw concert in Indianapolis, with friends. “The pain was so intense, I couldn’t find any comfort except lying flat on my back, on the floor, with my feet resting on a chair,” Diane recalls.

She said, “There really wasn’t any trauma that caused my nerve trouble. It started over six years ago with a pinched nerve, and the pain would come and go. I thought it would heal itself.” Diane later learned that her sciatic nerve was causing the pain.

Diane treated her back with heat packs and over-the-counter pain relievers. “But the pain continued to worsen. It became searing, electric pain from my back, down my leg, all the way to my foot,” she remembers. “I couldn’t play with or pick up my beautiful granddaughters, ages six and two; even cuddles could cause pain if I moved the wrong way.”

She tried seeing a chiropractor, but it was just too painful to get an adjustment. Eventually, Diane arranged to see a pain specialist at OSMC, Gene Grove, MD. Over the years, Dr. Grove treated Diane with injections to reduce inflammation and provide some pain relief. Diane said, “Dr. Grove told me surgery was the next step to get rid of the pain, and to let him know when I was ready.”

“Eventually, I couldn’t find any way of walking, standing, sitting or lying down to get relief,” Diane admits. “The injections weren’t effective any longer. There was just nothing I could do. I was completely miserable.”

Diane visited spine specialist Joseph Caldwell, MD, at OSMC. Dr. Caldwell said, “Diane had developed arthritis in her lumbar spine that was progressively getting worse. This was causing stenosis or pinching of the nerves in her back. Her surgery involved decompressing the nerves and a spinal fusion procedure to address the instability. Her leg symptoms were relieved right after the surgery. And, her low back pain improved as the area healed,” he said.

Diane recalls, “I immediately knew I was better when I woke up from the surgery. And it’s amazing, after just a few weeks, I felt so good!”

“I want to sing Dr. Caldwell’s praises. He took the time to show me my X-rays and MRI. He explained exactly how things would go in surgery. He put my mind at ease. And, I should have done it sooner,” she says.

Diane is thrilled to be shopping, hiking, biking, cuddling, and playing again with her granddaughters.



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Joseph Caldwell, MD
Spine Specialist,
Orthopedic & Sports Medicine



Looking ahead, the program will continue to fine-tune and improve quality initiatives it has worked on in the past while preparing our patients and health system to provide more orthopedic surgeries in the outpatient ambulatory setting. Specifically, the program will:

- Continue to reduce care variation by engaging new partners and other colleagues into the program's quality and cost-saving initiatives.
- Adopt a patient selection tool that will optimize outcomes for our elective hip or knee replacements.
- Improve the return rate for 3-month post-surgical Patient Report Outcome Surveys (PROMS), so we can better monitor our outcomes.
- Adopt and implement a Deep Vein Thrombosis (DVT or blood clot in the leg) prophylaxis protocol for hip fracture patients, so we can avoid the sometimes fatal complication of a pulmonary embolism.
- Prepare for The Joint Commission review of our advanced total joint replacement programs, because both are up for recertification in 2023.
- Understand the landscape of shoulder replacement surgeries related to cost and vendor market shared opportunities.

