Letter from the Chair

Denis R. Clohisy, MD

Giving each patient the best experience and outcome has been our Department’s long-standing goal. We are now positioned to deliver on this goal across the Twin Cities thanks to our east metro partnership with the combined Health Partners/Park Nicollet Health System at Regions hospital (St Paul, MN), our west metro partnership with the combined Health Partners/Park Nicollet Health System at the TRIA Orthopaedic Center (Bloomington, MN), and our partnership with Fairview Health System (M Health) on campus and in Maple Grove, MN.

When I arrived in the Twin Cities in 1991 as a new faculty member, my clinic was in the basement of the Phillips-Wangensteen Building on campus. We had paper-based patient records, which were either hand written or typed directly into a single copy of the patient’s record. Imaging was provided in very large envelopes with single copy prints. MRI scanning was relatively new but growing in popularity. Patient input about their care experience was sporadic at best.

(continued on page 2)

A life dedicated to understanding and treating the patellofemoral joint

Elizabeth Arendt, MD, loves the kneecap. She has, in fact, devoted her life to it – exploring its anatomy, imaging it, understanding it, and learning how to better treat its injuries and diseases. Her dedication to the joint resulted in her recently winning a Lifetime Achievement Award from the Patellofemoral Foundation, one of only four such awards given since the inception of the foundation in 2003.

Her love affair with the kneecap began early in her career.

“I started working with University of Minnesota intercollegiate women athletes in 1986, shortly after completing my fellowship at the U,” Arendt said, adding that while she was treating all kinds of sports-related problems at the time, she quickly became attracted to the knee and the kneecap joint. “I felt that while there were many kneecap problems, knowledge about those problems was a bit of a black hole. We needed better answers, so I began looking for them.”

Research and a trip to Europe enabled Arendt to expand her understanding of the joint that she thought wasn’t getting the attention it deserved. In the early ’90s, she become a member of the International Patellofemoral Study Group, a new organization dedicated to increasing the education of both physicians and the general public about kneecap issues.

Arendt is now an acknowledged global expert regarding kneecap problems. While she loves treating her patients, an important channel for her expertise is education. She has taught providers and physical therapists (PTs) all over the world about how to better address kneecap issues.

(Arendt, continued on page 4)

Dr. Arendt receiving the 2016 Patellofemoral Foundation’s Lifetime Achievement Award
Going the extra mile to assure good results for complex knee replacement patients

Knee replacement procedures are so common these days that they’re successfully done in all kinds of hospital settings. Sometimes, however, patients have issues that put their knee replacements in the “complex” category.

Issues that complicate a knee replacement could include pre-existing injuries, congenital deformities, or underlying conditions such as severe arthritis, hemophilia, or cancer. Often, the complicating factor is a previous knee replacement that failed, is painful, or got infected and needs to be redone.

When a knee replacement moves into the complex category, it requires the attention of a medical team that understands how to overcome its many challenges. “You want to have people with the most experience in taking care of high-risk patients and the most difficult problems … who are on the cutting edge and rise to the challenge of caring for these patients,” said Edward Cheng, MD.

“We stay abreast of the latest advances, techniques and research. We go the extra mile to make sure our patients have the best possible outcomes.”

It’s important in these cases to communicate well with referring physicians. “It is our goal to understand the complete history so that we will avoid future problems,” said Mark Dahl, MD.

“Referring physicians play a critical role in achieving that goal.”

After all the required information is collected, decisions have to be made about how to approach the surgery. Often, it’s the latest techniques that give these patients the best outcomes, such as using newer types of replacement knee joints or employing innovative multimodal pain management that reduces or eliminates opiate use.

Infection can be a catastrophic complication with any knee replacement. “We do whatever we can to eliminate it,” said Scott Marston, MD. The department has been employing a newer technique in which antibiotic powder is sprinkled on the knee and surrounding skin before closing. “Data that we collected about this technique shows an encouraging downward trend in infection rates,” Marston said. The next phase of the infection reduction study is to look at the effect of soaking the wound with diluted betadine solution.

Advances in imaging have also helped complex knee replacement patients, especially when those images are rendered in three dimensions. “That enables us to look at all sides of the joint before we even do the surgery,” said Dahl. “It helps us prepare for any and all circumstances.” He added that computer simulations of the prosthesis to be used can increase its fit accuracy to within millimeters.

All the work done on behalf of these patients takes time. “We’re willing to invest the time needed to make sure we can address issues as they arise,” said Cheng. “We thrive on the ability to solve our patients’ problems when no one else can.”
Taking a holistic approach to foot and ankle patients

**holis·tic, adjective**
In medicine: characterized by the treatment of the whole person, rather than just the physical symptoms of a disease.

When Fernando Pena, MD, treats a patient’s foot or ankle, he understands that there is a person attached. “To get to the root problem, we must look at the entire person,” he said. “Many factors cause our patients’ pathologies. A fracture may mean poor bone quality. An ulcer may mean poor blood supply.”

As a result, Pena, and his Orthopaedic Department partners, James Mazzuca, DPM; and Joseph Schuster, DPM; take a holistic approach to their work. “Looking at our patients as a whole requires a multi-team approach to make sure they’re optimized for both surgery and long-term success,” Mazzuca said. “The goal is to find the best treatment plan for each individual patient,” noted Schuster. “This often includes collaborating with and referral to colleagues.”

Part of that team approach is the way the three doctors work together. “None of us has much of an ego,” Mazzuca noted. “We seek each other’s advice and do whatever it takes to get things right for our patients.”

Being part of the University of Minnesota expands their team concept even further. “We have other specialties available to us,” Pena said. “That means our ability to solve problems is much higher.” As they get to the heart of a patient’s pathology, they may call in a vascular surgeon or a nutritionist or a rheumatologist.

And they stay connected to their referring physicians. “They won’t lose the continuity of care because they will still be involved,” Mazzuca said. “Looking at their patients as a whole should give them peace of mind,” added Pena. “We’re going to talk about overall health, not just the health of the foot.”

Ironically, doing so sometimes creates one of the biggest challenges of their holistic approach. “When we explain our overall findings to our patients, it can be unexpected,” Pena explained. “They thought we were just focusing on their feet.”

It may also mean that patient care is staged. “If a patient is diabetic, for instance, we need to make sure their neuropathy is taken into account,” Mazzuca pointed out. “That’s where Dr. Schuster comes in.”

This team uses their “whole patient” approach to treat any pathology – from nail care to deformities to joint replacements. “We can address anything our patients need,” Pena said.

Being part of a teaching environment also plays into their holistic approach. “Our students constantly challenge us to stay at the forefront…it requires a certain level of expertise, which is then applied to our patients,” said Mazzuca. “We’re driven to look for better ways to give better care.”
Endowed funds created to help support residents and expand our impact on the world

The U of M Foundation helped us open two endowed funds: Book and Education Endowment and International Education Fellowship. Each fund is designed to better support our orthopaedic education efforts, both locally and internationally.

**Book and Education Endowment Fund**

We offer one of the top orthopaedic surgery education programs in the country and want to attract the best and the brightest. Part of being an attractive program is helping reduce the burden our 40 active residents face each year for things such as books, journal subscriptions, meeting travel, exam and board registration fees – even international travel opportunities.

Our new Book and Education Endowment Fund provides a stable source of ongoing income. Powered by generous giving from alumni, each current resident receives a stipend of $1,000/year for discretionary spending on books and education. The fund also covers the cost of attending a meeting of the American Academy of Orthopaedic Surgeons. We spend an average of $50,000 a year to fund these expenses.

With your generous support, our goal is to raise $1.2 million for this fund. That will allow us to continue giving residents these program-critical resources.

**International Education Fellowship**

This fund helps residents who wish to study or volunteer in underserved areas throughout the world. Previous participants gained invaluable experience and made a profound difference by sharing their much-needed clinical skills in these areas. They tell us that the experience enables them to participate in health care and community building in eye-opening ways in places where the need is enormous.

This fund will also help support international physician partners who wish to pursue an orthopaedic fellowship at the university. By providing the kind of educational experience that enables these practitioners to take new techniques and skills back to their own communities, we expand our impact on the world.

Please join your colleagues in helping us meet our goal of $750,000 to support this fellowship program. You will help ensure that its reach can be extended to all second-year residents and expanded to offer training to our international physician partners.

For more information about either fund, please contact Jean C. Gorell at the U of M Foundation, 612-625-0497, jgorell@umn.edu.

---

*Arendt, continued*

Because her patients come from throughout the country, she felt it was important to strengthen physical therapists’ knowledge about helping these patients, especially those in outstate Minnesota. “As much as I love the physical therapy world, I think we need better programs for teaching them about knee caps,” said Arendt. “The more complicated your knee cap problem is, the more you need to go to a physical therapist who specializes in that area.” To increase the number of such specialists, Arendt orchestrated the creation a group of what she calls “super users” throughout the state. She helped bring in a world-renowned physical therapist from Australia who conducted a workshop for these therapists. “Our goal is to train them to engage their patients in helping them understand the importance of trying to get stronger,” Arendt explained. And because these problems often show up in teenage girls, to make treatment somewhat fun.

To Arendt, treating these patients effectively means giving them back a better quality of life and enabling them to be more active and more productive.