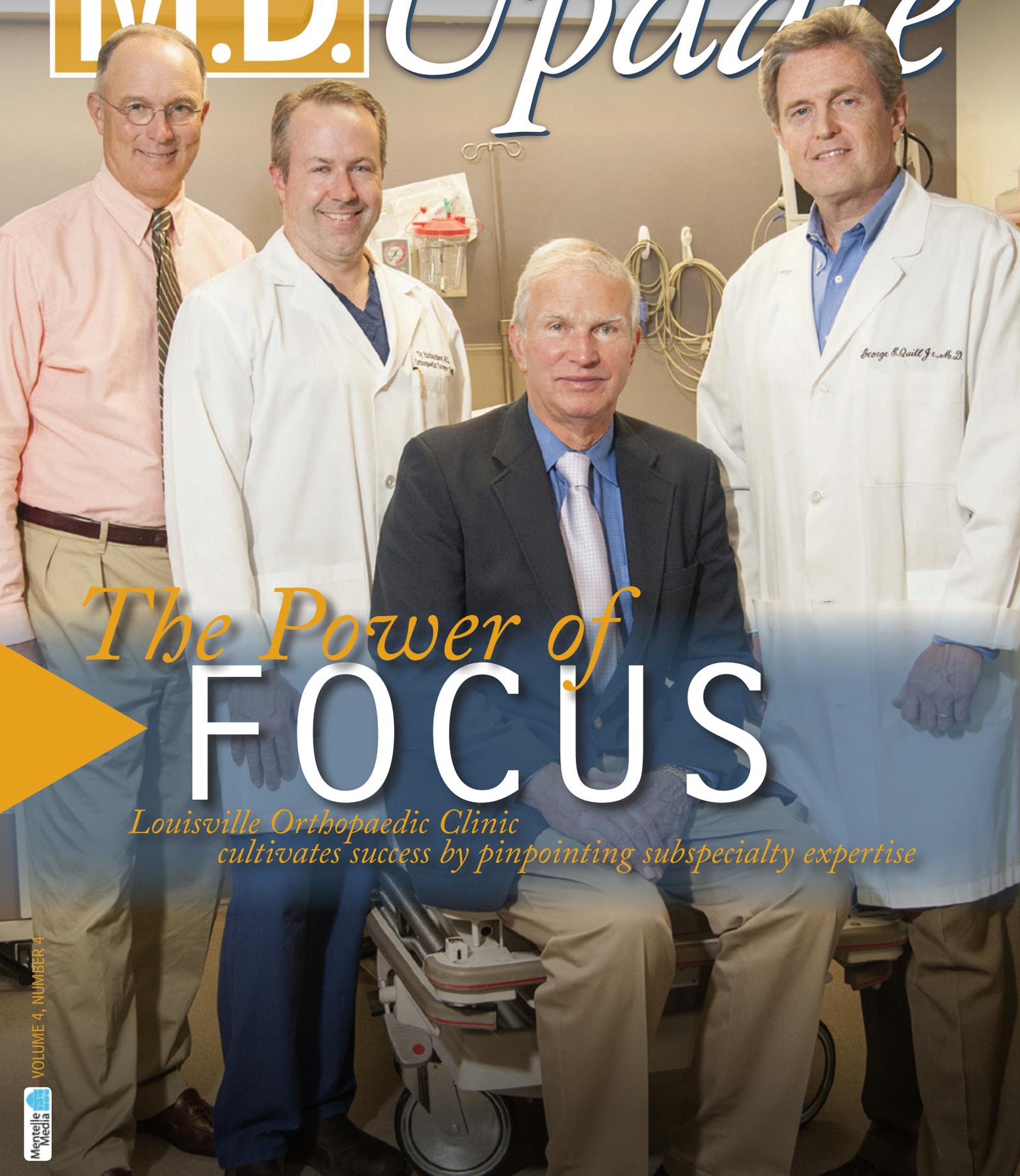


M.D. Update



The Power of FOCUS

*Louisville Orthopaedic Clinic
cultivates success by pinpointing subspecialty expertise*

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BY JENNIFER S. NEWTON

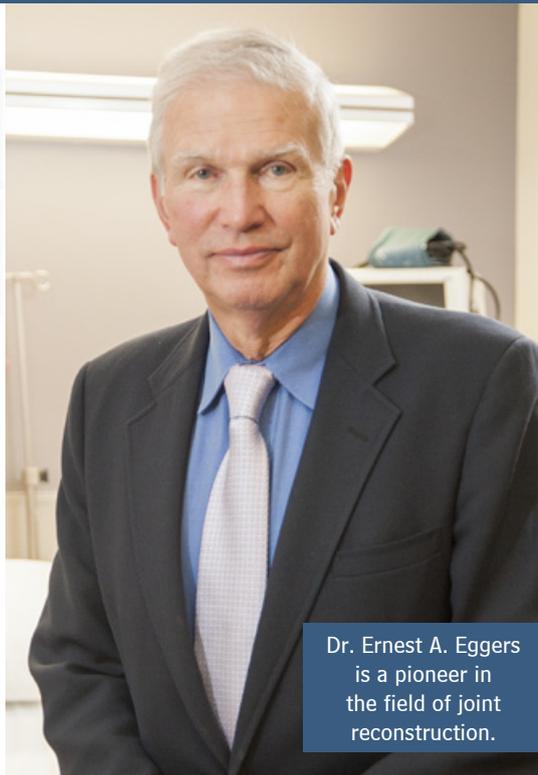
PHOTOGRAPHS BY BRIAN BOHANNON

LOUISVILLE The human musculoskeletal system includes over 200 joints, 206 bones, 640 muscles, 900 ligaments, and approximately 4000 tendons. To any lay person, mastering the entire system seems a daunting task. So, how do physicians achieve an orthopedic practice that encompasses pinpoint expertise in each area of the musculoskeletal system? By selecting providers with an acute focus in a subspecialty area of interest and allow them the freedom to hone their focus to a razor-sharp edge.

For Louisville Orthopaedic Clinic, that is the formula that has allowed them to survive and thrive independently for 40 years.

A fixture in the St. Matthews' area hospital corridor, and in their present location on Dutchmans Lane since 1980, Louisville Orthopaedic Clinic has flourished by being at the forefront not only of medical advancements but of operational ones as well. "We were the first to own our own facility, to start physical therapy within our office, and to have an MRI within our office," says founding partner Ernest A. Eggers, MD.

Ty E. Richardson, MD, agrees that their



Dr. Ernest A. Eggers is a pioneer in the field of joint reconstruction.

business decisions have contributed to their practice's success. "The fact that we own our own real estate gives us an advantage that will allow us to remain independent," says Richardson. Each of the physicians shares a passion for remaining independent and the freedom to control one's own path that provides.

The Clinic's physical assets also include two fully accredited and licensed outpatient operating rooms and their own orthotics lab. Electronic Medical Records, which the Clinic has had since the late 1990s, make digital imaging available wherever the physicians need it.

Having most of the ancillary services they need at their fingertips allows Louisville

Orthopaedic Clinic's physicians to provide more timely and cost-effective care. "If I see someone that needs an MRI, I can get it done in 24 to 48 hours and not wait for the next opening at a hospital, which can take a week," says Richardson.

The Clinic is currently undergoing renovations to realign the intake and checkout flow of the office, which had all been done through the same door, to better accommodate the volume of patients they see. "It's a better freeway system," says Eggers.

Focus on Subspecialties

From his passion for total joints, Eggers made the conscious decision to only recruit partners who had the same level of interest and expertise in a subspecialty of their own. "Each one of us has a subspecialty that we practice in, and every one of us has developed to the razor's edge in their subspecialty and generally is recognized as the best of the best," says Richard A. Sweet, MD, who specializes in total joint replacement. George E. Quill, MD, foot and ankle specialist, agrees, "One of the things that attracted me to this practice is that everybody in the group, even in the late 1980s, had done a post-doctoral fellowship. Beyond four years of medical school and five years of orthopedic training, we all did another year or two in a subspecialty."

The practice has grown to include 10 physicians and five mid-level practitioners. Their subspecialties range from foot and ankle, to joint replacement, to ligament reconstruction, to hip and knee, to spine, to shoulder, to sports medicine and arthroscopic surgery.

Given their business acumen coupled

with their advanced training, it is only natural that they have a penchant to be on the cutting edge of medical advancements. In 1973, Eggers was one of the first orthopedic surgeons to do total hip and knee replacements in the Midwest, outside of the large orthopedic centers. “Since I was on the ground floor, I was in on all the research that went along with hip replacement surgery and all the different products and designs,” says Eggers. The key, he says, was including engineers as well as physicians in the development process.

When Quill completed his orthopedic residency in 1989, he secured one of only eight foot and ankle fellowships in the country at the time. He began practicing in Louisville in 1990 and was the only orthopedic surgeon subspecializing in foot and ankle in Kentucky, southern Indiana, northern Tennessee, or southwest Ohio.

Total Joint Replacements

For Eggers, a hip and knee replacement and custom joint replacement surgeon, the advent of cementless hip replacements in the early 1980s has been one of the most important advancements in hip replacement surgery. He was one of the pioneers in completely un-cemented hip and knee replacements. In 1996 Eggers was involved in an early study of metal-on-metal cementless hips. The titanium stem and chrome cobalt ball and socket may be the most advantageous implant in terms of longevity and durability. Additionally, metal on metal articulations eliminate the concern



Dr. George E. Quill is an expert in foot and ankle disorders.

designs also allow for increased longevity. Cement is still used when bone quality is poor, but in all cases, total hip replacements are lasting decades longer than early models. “Ten years used to be the magic number,” says Eggers. “I have hips now well over 30 years that are still functioning.”

Sweet describes the advancements in knee replacement surgery over the last decade as “evolutionary changes, not revolutionary changes.” These improvements are across the board from pain management, to surgical techniques, to enhanced biomaterials, to instruments, and better understanding of the ligament balance of the knee.

Pain management has evolved to better control pain in the 48 hours following surgery. Sweet uses nerve blocks and intra-

surgery. Eggers concurs, “I think the technical improvement in how you put [knee replacements] in has made a big difference, and we are able to customize the knee to the joint of that individual patient.” New MRI technology allows surgeons to customize a three dimensional surgical strategy based on each patient’s anatomy.

Orthopedic surgeons are also gaining a better understanding of the ligament balance of the knee post-operatively. Contrary to the work done by sports medicine specialists to repair and preserve the anterior cruciate ligament (ACL), knee replacements require surgeons to sacrifice the ACL. “We have learned how to balance these ligaments so that each is tensioned appropriately to provide proper stability and combine that with implant design to make up for the loss of the anterior cruciate ligament,” says Sweet.

Where the goal of knee replacement used to be eliminating the pain of arthritis, often at the expense of mobility, Sweet says, “Our goals are much grander than that now as we try not only to get rid of the pain of arthritis by replacing the surface but also to reestablish the function of the knee by reproducing normal stability.”

Lower Extremity Care

Perhaps, in part, as a result of the limited number of fellowship programs available focusing on foot and ankle treatment, care of the lower extremities was long neglected, laments Quill. Physicians and patients alike often dismiss problems as “just a foot” or “just an ankle sprain.” “The problem is the foot is so integral to everyday activity, if something is neglected, it’s hard to make it better down the line,” says Quill.

Common problems include heel pain, flat feet, tendon strains, ankle sprains, athletic injuries, arthritis, and bunions. A vast majority of patients do not require surgery and undergo nonoperative treatments. Common surgical treatments include bunionectomy, ankle arthroscopy, fracture repair, and ligament reconstruction.

Quill has a particular interest in challenging cases such as late reconstruction after trauma, ankle sprains that do not get better, and tendon transfer after stroke or paraplegia. Treatments for late reconstruction can include making the foot flush to the ground, osteotomy, a fusion of arthritic joints, or ankle replacement, which few surgeons do.

EACH OF OUR PHYSICIANS HAS A SPECIALTY NICHE WITHIN GENERAL ORTHOPEDICS AND THAT SETS US APART FROM OUR NEIGHBORS.

of implant fracture and provide for greater design flexibility, allowing for a larger femoral head, which provides greater stability and less chance of dislocation. Pending more research on metal hips, the gold standard could revert back to ceramic on the new plastic liner in the socket.

There is some concern about the metal ions generated by metal implants, but research has yet to show any adverse health effects. In the event there are contraindications for metal, improved ceramic and polyethylene

articular injections to make the patient more comfortable post-op, which aids in rehabilitation.

While surgery may be heralded as minimally invasive, Sweet asserts, “There is no such thing as minimally invasive when you’re going to replace the whole joint ... A better phrase would be ‘quadriceps sparing surgical approach.’” By avoiding cutting into the quadriceps muscle, the technique allows patients to regain quadriceps muscle function much quicker than traditional

“Even young people who don’t need a fusion or replacement are benefitted by cartilage transplant, which wasn’t available five to 10 years ago on a reliable basis,” says Quill.

Caring for these surgical cases has been an uphill battle. Surgeons used to have to take a device designed for the neck or hand and adapt it to fit the foot. Fortunately, thanks in part to the efforts of physicians like Quill, orthopedic equipment manufacturers are recognizing the unique challenges and needs of the foot and are developing anatomic site specific fixation options for tendon transfers and fracture work.

In some cases, Quill has developed his own solutions to clinical problems. One of those problems was treating patients with a dead ankle bone after trauma or due to uncontrolled diabetes, patients whose only option was often amputation. Looking for a unique fixation device to span the dead bone and fuse the tibia to the calcaneus, “I adapted an intramedullary rod that had been used to fix long bones for use fusing an ankle,” says Quill. He now uses the device 30 to 40 times a year, and it is used all over the world.

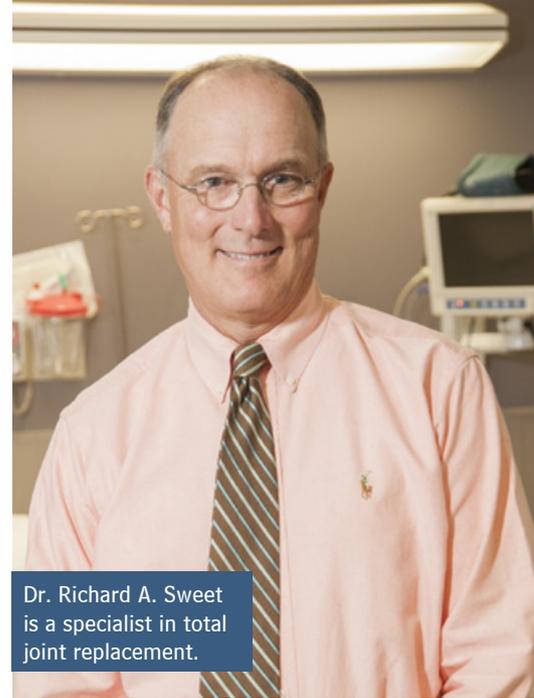
Quill and his colleagues also developed a procedure for patients with painful deformities due to tendon rupture, arthritis, or congenital defects to reorient the bone in the operating room and fix it rigidly, resulting in less pain and swelling.

In fact, Quill is so dedicated to research he formed his own LLC called

Quill Clinical Research Products and does research on cartilage regeneration and orthopedic implants. Additionally, he is currently involved in ortho biologic research, attempting to “harness the power of one’s own healing capacities.”

Sports Medicine

While the thought of sports medicine might conjure images of 20-something collegiate athletes, Richardson says his patient base is an average age of mid-to-late 40s and can often be described as the “weekend warrior.” A shoulder specialist, he actually sees about 50% sports injuries of the shoulder and 50% work-related shoulder injuries. While his treatments are similar, work-related injuries tend to be degenerative in nature after repetitive use whereas sports injuries can be due to a single event. Outcomes can be different too. “The motivation of the patient appears to determine the length of time it takes to



Dr. Richard A. Sweet is a specialist in total joint replacement.

to the details of a physical therapy regimen after surgery ensures that nothing is done to threaten the outcome,” says Richardson. For rotator cuff tears, the physicians have developed protocols in con-

BIOLOGICS WILL BE THE NEXT GAME CHANGERS IN THE FIELDS OF SPORTS MEDICINE AND FOOT AND ANKLE CARE.

recover sometimes,” says Richardson, citing that workers compensation patients may drag out their recovery to get more time off work. Weekend athletes, on the other hand, are often anxious to get back to their normal activities.

Two of the most common sports injuries Richardson sees are a torn meniscus in the knee and rotator cuff in the shoulder. More unusual conditions include Achilles’ tendon rupture and bicep rupture.

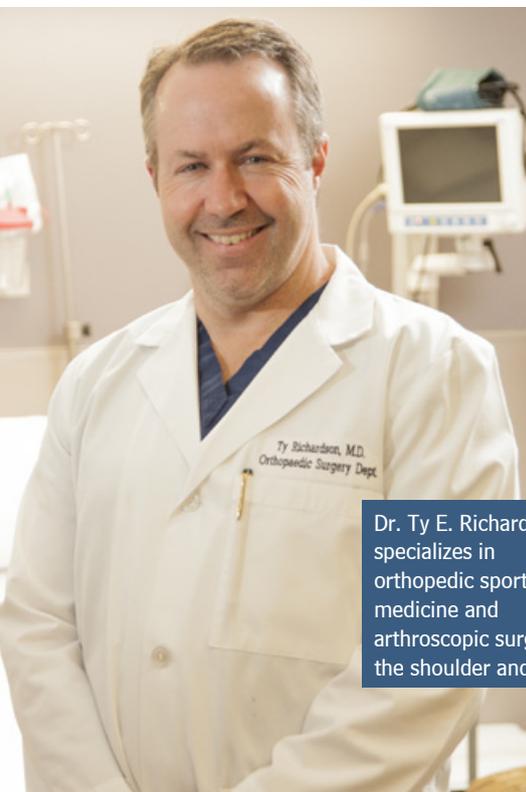
Richardson currently uses a shoulder replacement system by Biomet due to his familiarity with the product and for its flexibility. “Whether I’m going to do a total shoulder, a simple uni-shoulder, or a reverse total shoulder, I use the same surgical approach, the same set of instruments, the same implants. I can make changes at the last second and not have to worry about not having the correct equipment in the room,” he says.

When it comes to post-operative care, Richardson provides extensive physical therapy prescriptions for patients and sets limits on what they should do. “I think that attention

junction with the in-house physical therapy staff to address the different sizes and grades of tears. Any patient who goes to an outside physical therapist gets a hard copy protocol to take with them.

Much like the advancements in joint replacements, changes in arthroscopic shoulder techniques and equipment have been evolutionary modifications of existing technology. “I think the next big steps in sports medicine are going to involve biologic adjuncts to healing ... I think in the future we’re going to see biologic structural grafts we’ll be able to use to replace an ACL or cartilage injuries or large rotator cuff injuries,” says Richardson. Research is currently underway and Richardson predicts effective products will become available for use in the next two to three years.

Louisville Orthopedic Clinic’s care is not just limited to the office or the operating room but extends into the community as well. Richardson has been the team physician for Manual High School for eight years, and the Clinic also provides sideline care for St. Xavier High School, Ballard High School, and Kentucky Country Day. ♦



Dr. Ty E. Richardson specializes in orthopedic sports medicine and arthroscopic surgery of the shoulder and knee.