



Hospital of the University of Pennsylvania

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As the Department of Orthopaedic Surgery for the University of Pennsylvania has continued to expand and further sub-specialize, the focus at the Hospital of the University of Pennsylvania has been and continues to be Orthopaedic Trauma and Orthopaedic Fractures.

Over the last decade, Orthopaedic Trauma has “come of age.” At its most basic level, the care of the traumatically injured patient is at the core of being an orthopaedist. The ability to deliver care to this unique and often underserved patient population is truly at the heart of being a physician.



However, being a successful Level I trauma center is centered on the concept of the “team.” At a macroscopic level, the team consists of hospital administrators, physicians, nursing staff, and tangible structures (like ICUs and Resuscitation Bays) coming together to create an environment to care for those that sustain traumatic injuries and put into place mechanisms which will facilitate this process.

Upon this foundation, Level I trauma center triage and care requires intense interaction with more services than most elective practices: emergency medicine; diagnostic and interventional radiology; trauma, vascular and plastic surgery; anesthesia; critical care; nursing; general internal medicine; infectious disease; rehabilitation medicine, physical therapy and occupational therapy; and social work.

It is in our very busy rotating night and weekend call schedule that we best demonstrate our collegiality and depth of caring for one another within our department. The majority of our orthopaedic staff surgeons share call, 24/7/365—at no small personal sacrifice—to meet the burden of emergency orthopaedic care for our region.

In addition to the faculty support, we have Adele Hamilton, CRNP as our inpatient orthopaedic trauma nurse practitioner to improve the comprehensive nature of our inpatient service. Ms. Hamilton’s tireless effort is second-to-none and her acute management of our complex patient population has furthered our ability to provide world-class care. In addition, the Orthopaedic Trauma & Fracture Service has added Kelly McGinnis as the clinical research coordinator for orthopaedic trauma to assist Dr. Horan. She has further elevated the research program by allowing us to maintain eight prospective orthopaedic trauma studies. We are also excited to be bringing on Derek Donegan, MD to the trauma program. Dr. Donegan, former chief resident at the University of Pennsylvania, is

completing his trauma fellowship at UMDNJ-Newark with Drs. Reilly, Sirkin, and Liporace and will be joining the staff in August. However, despite our wonderful new additions, we were sad to see our outpatient nurse practitioner, Karen Garden, leave 2 Silverstein for the R Adams Cowley Shock-Trauma Unit at the University of Maryland. We wish her all the best in her new endeavor.

The research effort from the Orthopaedic Trauma & Fracture Service continues to be a work-in-progress with multiple clinical and basic science projects. Over the past year, the Service has presented multiple podium papers and served as moderators and instructors at the OTA, AAOS, ORS, AOA, FOT and AO meetings. In addition, the faculty members on the service have had several publications in JAAOS, JBJS, JOT, CORR, and PLoS. We continue to have weekly trauma research meetings and are collaborating with Trauma, Neurosurgery, Physical Medicine and Rehabilitation, Anesthesia, and the Pain Service in multi-disciplinary clinical projects. In addition, the division is engaged in multi-center clinical trials and actively executing eight prospective studies. The division is also working with the McKay Orthopaedic Laboratory and the Veterinary School on projects ranging from traumatic articular cartilage injuries to models of bone healing. We have been provided over \$3 million in funding from the DOD, FOT, OTA, AO, McCabe, and PCMD. The academic mission is furthered as the faculty are involved at various levels of leadership including medical school surgical clerkship faculty, orthopaedic clerkship director, medical school admissions committee members, AOA Emerging Leaders, North America Traveling Fellows, AAOS test material writer for trauma and basic science, NOLC participants, NBME test material writer for USMLE II, journal reviewers for JAMA, JBJS, CORR, and JOT, and grant reviewers for OREE, OTA, FOT, and AO.

The Orthopaedic Trauma Service continues to grow at HUP. Patient acuity and volume remains high with a full spectrum of blunt and penetrating trauma. Orthopaedic trauma operative volume has increased over 50% since 2008. Orthopaedic surgical services have expanded to include pelvic and acetabular fractures, increasing non-union and malunion work, and developing the peri-



articular fracture practice. This year, the service re-introduced deformity correction using ring fixators—a technique championed by Dr. Esterhai after his time in Kurgan, Russia. As the presence of the service has grown, so has its local outreach, with transfer volume directly to the Orthopaedic Trauma & Fracture Service up 300% since 2009.

Timeliness of initial surgical intervention and the availability of orthopaedically sophisticated nurses have improved at HUP with the provision of a dedicated operating room five days a week. Thanks to the support of peri-operative services, including our OR nurse manager Lori Fowler-Gagliardi and the tremendous operating room staff with orthopaedic interest, we continue to expand in the operating room as well. We have grown from five rooms/week to over ten orthopaedic trauma rooms / week over the course of the last several years.

After stabilization, and again because of a profound sense of mission on the part of all of the members of the academic department, we are uniquely fortunate to be able to offer unparalleled breadth of world-class subspecialty orthopaedic trauma care to patients with the most difficult injuries requiring additional surgery for soft-tissue coverage, spine, shoulder, elbow, wrist and hand, major lower extremity joint replacement, soft tissue knee reconstruction, ankle and foot, and neuromuscular orthopaedics.



This would be impossible without the best and the brightest residents and students, who deliver personal, tender, hands-on attention through the full spectrum of care from the trauma bay

to pre-op, intra-op, and post-op floor care and follow-up office visits. In many ways it is the quality of our residents—mentally, technically, and humanistically—that determines the quality of each patient's experience. The level of individual responsibility transcends that available on many other services in the health system with full utilization of the skill sets available at all PGY levels.

The didactic portion of the Orthopaedic Trauma Service has expanded to include weekly Fracture Conference where a review of all operative cases from the week prior is done in the Socratic Method. In addition, weekly Trauma Conference reviews topics of interest and is a combination of journal clubs, classic literature, resident and faculty presentations, and CEQI. Furthermore, the Orthopaedic Trauma and Fracture Service is working diligently on an international component for the faculty and the residents through support and continued growth of the Enyi Okereke OREF International Fellowship Endowment Fund to support resident travel-education to underserved areas of the world.

Caring for these patients also generates tremendous paperwork. No one plans for "emergency surgery." Not a patient expects to be disabled. Each patient has forms for carriers, visiting nurses, primary care givers, employers, therapists, disability underwriters, medical assistance applications, or utilities. Most have attorneys. Organizing, completing and then following through with that aspect of care would be impossible were it not for the tireless work and meticulous attention to every detail by our administrative staff, Jeff Mack and Kathy Pusicz.

Each of us who works with patients who have these difficult injuries realizes that it is not our personal skill that cures. Year after year, participating in the care and watching the healing is a humbling experience. We are reminded of how truly lucky we are and how important "the team" is in making this a reality.

