Report from the 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 manage the burden of emergency orthopaedic care for region.

In addition to the faculty support, we have Adele Hamilton, CRNP, as our in-patient orthopaedic trauma nurse practitioner, to improve the comprehensive nature of our inpatient service. In addition, the Orthopaedic Trauma & Fracture Service has added Karen Garden, CRNP to establish and grow our outpatient program. We have also been granted approval to bring on yet another orthopaedic traumatologist, with an increasing focus on expanding the orthopaedic trauma reach beyond the confines of the University campus.

The research effort from the Orthopaedic Trauma & Fracture Service continues to be a work-in-progress with multiple clinical and basic science projects. 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 actively engaged in multi-center clinical trials. 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 funding from the DOD, FOT, OTA, OREF, AO, McCabe, and PCMD.

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 discharges from HUP have increased over 35% since 2008 and surgical volume has increased nearly 40% over that same time frame. Orthopaedic surgical services have expanded to include pelvic and acetabular fractures, increasing non-union and malunion work, and development of the peri-articular fracture practice. Under Dr. Levin's leadership, Penn Orthopaedics at HUP is on the brink of a colossal event with the building of the Hand Transplant Program, as well. As the presence of the service has grown, so has its local outreach, with direct transfer volume to the Orthopaedic Trauma & Fracture Service up 275% since 2009.

Timeliness of initial surgical intervention and the availability of orthopaedically sophisticated nurses have improved at HUP with the provision of dedicated operating room time. 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 ten orthopaedic trauma rooms/week over the course of the last three years.

After stabilization of the injured patient and extremity, 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 an 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.

Within the health system this would be impossible without the best and the brightest, indefatigable residents and students who delivery personal, tender, hands-on attention through the full spectrum of care from the resuscitation bay to pre-op, peri-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.

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.

PENN Orthopaedic Trauma