



Orthopaedic Trauma and Fracture Service Division “Your Pace or Ours”

Samir Mehta, MD

Orthopaedic Trauma Faculty



Samir Mehta, MD



Derek Donegan, MD, MBA



Susan Harding, MD

The Division of Orthopaedic Trauma & Fracture Surgery continues to be an exceptionally busy and dynamic subset of Penn Orthopaedics. The orthopaedic trauma service, now well settled into its new home at Penn-Presbyterian Medical Center, practice at the highest volume Level 1 trauma center in the Delaware Valley performing nearly 2000 cases annually. The case diversity is expansive, ranging from ankle and distal radius fractures through complex pelvic and acetabular injuries, peri-articular fractures, and managing multiply injured polytrauma patients (Figure 1). The division frequently collaborates with other subspecialties, including plastic surgery for complex revisions and wounds; neurosurgery for spondylopelvic disruptions; and geriatric medicine, for optimal care of our geriatric hip fracture population. In addition to strong surgeon leadership, the division succeeds due to the relentless efforts of dedicated advanced practice providers in both the inpatient and outpatient settings, who facilitate management of acute injuries, as well as run an outpatient fracture clinic daily to ensure that new and follow-up patients are seen in a timely and consistent manner. Additionally, orthopaedic trauma is supported by excellent social workers, case workers, physical therapists and nurses who enable our trauma patients to receive optimal care during what is often one of the most challenging times of their lives. However, the life-blood of the orthopaedic trauma program is the resident complement, who continue to support the service line through tireless effort. The trauma program resident compliment now includes a PGY-1, two PGY-2s, a PGY-3, a PGY-4, and a PGY-5 as chief resident on the service. Clinical roles and responsibilities are divided amongst all the residents on service with a focus on graduated responsibility and autonomy. Lastly, the trauma service is only able to provide 24-7-365 coverage thanks to the non-trauma faculty who sacrifice time from their family

and additional obligations to take call nights and weekends to divide the workload. Because of their sense of responsibility and dedication, our call faculty facilitate the ability of the trauma service to function at a high-level at all times.

Innovation in patient care occurs contemporaneously with upholding longstanding division traditions. For example, the trauma division has worked closely with geriatric and emergency medicine to develop a state of the art geriatric hip fracture program, whereupon relevant members of the care team are immediately notified of a geriatric hip fracture patient



Figure 1.

upon their arrival to the hospital so that the teams can mobilize to provide the patient with streamlined care from ambulance to OR. Geriatric Hip Programs, like that at Penn, have been shown to improve the outcomes of patients suffering from these life-changing injuries. In fact, our geriatric fracture program was recently awarded “Premier Status” by the International Geriatric Fracture Society. Additionally, the orthopaedic trauma service through the support of Dr Levin and the Health System has been diligently working in increase the breadth and depth of the Penn Orthopaedic Limb Salvage Center (POLSC). The orthopaedic trauma service offers several limb salvage and reconstruction opportunities including repair of complex fractures using ring fixation. We have also started the TALLER program - Total Aesthetic Limb Lengthening and Extremity Reconstruction to increase stature. In addition, the division is using 3D printing technology to salvage extremities (Figure 2).

The division’s presence extends beyond the region and beyond medicine, at large. The orthopaedic trauma faculty are involved with the AO Foundation and the Orthopaedic Trauma Association. Both organizations are geared towards advancements in fracture care. The Penn Orthopaedic Trauma faculty have chaired national and international courses which attract hundreds of residents and faculty to learn and to teach the principles of basic and advanced fracture care. The impact of COVID-19 altered the delivery of this academic content, but not the ability to do so. While international outreach came to a halt from 2020 through 2022, there are plans to continue our efforts in the Dominican Republic starting in 2023. Our international experiences can be followed on Instagram at @pennots.

Clinically, the Division continues to extend its areas of expertise focusing on “elective” orthopaedic trauma care. The Division has a distinct interest in peri-prosthetic fractures, complex arthroplasty, robotics and navigation, infection (osteomyelitis), malunions, and non-unions (Figure 3). The division utilizes advanced technology to facilitate

the care of these complex patients including ring fixation and lengthening nails. By collaborating with our colleagues within the department, such as shoulder and elbow, adult reconstruction, foot and ankle surgery, orthoplastics, hand, spine, and oncology, the orthopaedic trauma division can provide the highest level of care. Additionally, the division has done several cases utilizing 3D printing of implants in an effort to salvage extremities in patients with severe injuries.

This year has been one of recovery and enhancement. We have emerged from COVID-19 having continued to provide orthopaedic trauma care throughout the entirety of the pandemic. Dr Susan Harding, who was at Hahnemann University, has transitioned successfully to Penn Orthopaedics without missing a beat. She has built a tremendous orthopaedic trauma presence at Cape Regional Medical Center and also continues to support the trauma service at Penn Presbyterian Medical Center. We are extremely fortunate to have an individual with Dr Harding’s enthusiasm and experience be part of the Penn Orthopaedic Trauma family. The orthopaedic trauma service has continued to our Sunday night weekly fracture conferences that were a direct result of our desire to stay connected with our learners during the pandemic.

The trauma division remains a cornerstone of the residency program’s education. Every resident spends 6 to 12 weeks of their year as a member of the busy trauma service, and the rotation is a favorite amongst most residents, regardless of ultimate career goals, due to the high yield learning environment with faculty who value teaching and education. Drs. Donegan, Harding, and Mehta all participate in resident morning lectures, department grand rounds, as well as the General Medical Education Committee (GMEC).

In conclusion, the expertise and diversity of the Trauma and Fracture Division continues to grow, and, despite the challenges (of COVID) and the changes that lie ahead, we are looking forward to another momentous year of patient care, innovation, research, outreach and education.



Figure 2.



Figure 3.