



Trauma

Faculty



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Trauma Division Update

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The Division of Orthopaedic Trauma & Fracture Surgery continues to be an exceptionally busy and dynamic subset of Penn Orthopaedics. The orthopaedic traumatologists practice at the highest volume Level 1 trauma center in the Delaware Valley. The center is now in its third year at its new home at Penn-Presbyterian Medical Center, with over 1500 cases each year. 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. The chief of the division, Samir Mehta, was recently promoted to Associate Professor and works alongside Jaimo Ahn and Derek Donegan to care for some of the greater Philadelphia's most complex and challenging orthopaedic trauma patients.

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 care, as well as run an outpatient fracture clinic multiple days per week 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. The life-blood of the orthopaedic trauma program is the resident complement, who continues to support the service line through tireless efforts. 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 (Figure 1). 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 facilitates 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 teams 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 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. The implementation and evaluation of Penn's program has largely been spearheaded by one of our rising chief residents, Dr. Keith Connolly, in conjunction with Drs. Ahn, Donegan and Mehta from orthopaedics and Dr. Alyssa Krain, from geriatric medicine. Programs like the geriatric hip fracture pathway cannot be a reality without health system support thanks to Rachel Kleinman and Lori Gustave. Additionally, all three attendings are actively involved in research. Dr. Ahn, the quintessential clinician scientist, was awarded the Career Development Grant from the OREF and continues his basic science and translational research in his laboratory at the McKay Laboratory. Dr. Mehta was recently named the head of the Clinical Research Department, alongside Dr. Annamarie Horan, in addition to being actively involved in prospective studies and translational biomechanics research at the Biedermann Lab. Similarly, Dr. Donegan is engaged in biomechanics research within the Biedermann Lab in addition to clinical research projects, with recent publications in *Injury*, *Journal of Orthopaedic Trauma* and *Clinical Orthopaedics and Related Research*.

The division's presence extends beyond the region and beyond medicine, at large. All three attendings are deeply involved with the AO Foundation, an international foundation geared towards advancements in fracture care. By December 2017, all three Penn traumatologists will have chaired a national AO North America course which attracts hundreds of



Figure 1. A trauma team assembled for traditional end of rotation team photograph (from left to right: Dr. Chia Wu, Dr. Michael Eby, Dr. Jenna Bernstein, Dr. Max Courtney, Dr. Blair Ashley, and Dr. Joshua Gordon.)

residents and faculty to learn and to teach the principles of basic and advanced fracture care. Additionally, Drs. Mehta and Ahn have both been involved in international outreach, with Dr. Ahn actively striving to implement a lasting presence in Botswana. Dr. Donegan is extending his influence into the field of business, as he works towards his MBA in the Executive MBA program at Temple's Fox School of Business. He is scheduled to graduate in May 2018 and will undoubtedly bring a fresh perspective and a unique expertise to the department.

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, infection (osteomyelitis), malunions, and non-unions. 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 performed several cases utilizing 3D printing of implants in an effort to salvage extremities in patients with severe injuries.

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. Ahn, Donegan and Mehta all participate in resident morning lectures, Department Grand Rounds, as well as the General Medical Education Committee (GMEC). Dr. Ahn is also heavily involved in the residency as an Associate Program Director. The department hosts biannual courses provided by the Foundation of Orthopaedic Trauma (FOT), which residents are encouraged to attend. The attendings also lead every trauma team in a trauma cadaver lab prior to their rotation to engender team unity as well as to practice common procedures and exposures.

In conclusion, the expertise and diversity of the Trauma Division continues to grow, and we are looking forward to another momentous year of patient care, innovation, outreach and education.