



Neuro-Orthopaedic Division Update

Keith Baldwin, MD, MPH, MSPT and David Spiegel, MD



Neuro-Orthopaedic Faculty



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A Holistic Approach to a Challenging Population

The Neuro Orthopedics service at Penn is a dynamic multidisciplinary service that cares for patients with complex orthopedic needs that span multiple traditional disciplines. The service is a “lifespan” service, caring for patients across the lifespan at both the Clinical Practices of the University of Pennsylvania, and the Children’s Hospital of Philadelphia. Keith Baldwin, MD, MPH, MSPT is the chief of Neuro Orthopaedics and is one of a handful of orthopaedic surgeons nationally who cares for the spectrum of neuromuscular disorders in both adults and children. Dr. Baldwin works alongside Katie Walizer, PA and Ross Lenzi PA, to provide timely care to adults who have suffered a traumatic brain injury, spinal cord injury, multiple sclerosis, cerebral palsy and a variety of other conditions. This includes direct work with well-known rehabilitation services both inside and outside the system including Penn Good Shepard partners, Moss Rehabilitation, Magee Rehabilitation, and Bryn Mawr rehabilitation among others. On the Pediatric side, Dr. Baldwin works with David A. Spiegel MD to address the musculoskeletal needs in children with a variety of disorders such as Cerebral Palsy, Spina Bifida, Charcot Marie Tooth, Spinal Muscular atrophy, and others. They are supported by Kathy Abel CRNP, Emily Stegonshek CRNP, Andrea Harmony CRNP, and Jessica Staschak, who play a key role in serving this challenging population.

Treating neuromuscular disorders is a team sport, and the neuro orthopedic team is large. The service partners with many other services within Penn Orthopedics to provide cutting edge and high-level care by partnering in the last year with the Adult Reconstruction service, the Hand and Upper Extremity Service, the Ortho Plastics Service, and the Trauma Service. The adult Neuro Orthopedic Service was also invited to provide clinical training to a psychiatry fellow last year. On

the pediatric side the year was marked by the hiring of a new chief of Physical Medicine and Rehabilitation, Dr. Sally Evans, MD. We look forward to building the service further with Dr. Evans. Additionally, Laura Prosser PhD, PT, has spearheaded a mobile gait lab which provides innovative gait lab services which can be brought “on the go” for clinical evaluations.

Outreach to outlying institutions has been highly successful. Penn has become the “go to” service for neuro orthopedic care for much of the surrounding area with referrals coming from all major rehabilitations in the area. Effort is ongoing to build a more regional and national presence on the adult and pediatric side. With regard to research on the international front, Drs Spiegel and Baldwin worked with colleagues from Nepal to publish a study utilizing a prospective cohort of children with Cerebral Palsy and compared them to a systematic review of patients in developed nations and found that less neurologic impairment resulted in greater functional disability. Additionally, the service identified a beneficial weight gain in patients with cerebral palsy following spinal fusion for neuromuscular scoliosis. This finding was further explored with the HARMS study group last year. Additionally, the service wrote chapters in neuro orthopedics for Orthopedic Basic Science, Chapmans Orthopedics and Physical Medicine Clinics of North America.

David Spiegel received the AAOS prestigious humanitarian award for his multi decade commitment to overseas work, which has allowed him to bring his expertise and clinical knowledge to children in Nepal, Pakistan and Iraq, as well as a knowledge of polio and late presenting cases of a variety of neuromuscular diseases to our residents and fellows here. The neuro orthopedic service at Penn continues to grow and provide one of a kind care that is not matched in the region.