

**Best Trauma Paper of the 2015 POSNA Annual Meeting**  
**Implementation of a Standardized Clinical Assessment and Management Plan (SCAMP) for Pediatric Distal Radius Fractures: Effect on Quality and Care**



*Donald S Bae, MD; Rachel L DiFazio, MS, RN; Marie Harris, MPH; Dionne Graham, PhD; Rose Hamershock, MA; Susan Mahan, MD; Peter M Waters, MD*  
*Children's Hospital Boston, Boston, Massachusetts, USA*

**Background/Purpose:** Standardized Clinical Assessment and Management Plans (SCAMPS) have been proposed as a means of improving quality, safety, and cost-effective care. The purpose of this investigation was to evaluate the effect of a distal radius fracture (DRF) SCAMP on clinical care and resource utilization.

**Methods:** 199 patients treated from October 2010 to March 2012 prior to the initiation of the DRF SCAMP (pre-SCAMP) were compared to 384 patients treated from August 2012 to April 2013 after DRF SCAMP implementation (post-SCAMP). All patients were 4 to 18 years of age with acute DRFs. Exclusion criteria included open fractures, pathologic fractures, refractures, and vascular insufficiency. Mean patient age was 10.5 years. Approximately 45% of patients sustained torus fractures, 40% bicortical metaphyseal fractures, and 15% physeal fractures. There were no significant differences between the pre- and post-SCAMP cohorts with respect to age, gender, or fracture type. Radiographic alignment was assessed at each encounter. Acceptable radiographic alignment was deemed  $<10^\circ$  angulation and 50% translation or  $<20^\circ$  angulation and 50% to 100% translation for older and young patients, respectively. Remanipulation, surgical intervention, and complications were recorded.

**Results:** Torus fractures: All patients with torus fractures achieved satisfactory clinical healing with nonoperative care. However, following SCAMP implementation, there was significant improvements in avoidance of casting (99% pre-SCAMP vs 28% post-SCAMP), appropriate use of splinting (1% pre- to 72% post-SCAMP), and avoidance of unneeded follow-up clinical visits after 3 weeks of immobilization. Bicortical metaphyseal and physeal fractures: While there were no significant changes in remanipulation or surgery rates, there were significant decreases in rate of initial fracture reduction after SCAMP implementation (68% pre- vs 53% post-SCAMP). There were also increased rates of acceptable alignment after the first encounter (86% pre- vs 99% post-SCAMP) and at the 6-week post-injury mark (83% pre- vs 98% post-SCAMP). Overall: Throughout the post-SCAMP period, there was a trend for decreased number clinical visits and radiographs for all patients. Over time, adherence to the SCAMP approached 82% to 100%. No cases of compartment syndrome, malunion, or postsurgical infection were recorded.

**Conclusion:** Implementation of a DRF SCAMP resulted in equivalent clinical outcomes, improved adherence to best practice guidelines, decreased number of clinical visits and radiographs (and thus cost of care), and high provider acceptance. SCAMPs are an effective tool to improve clinical care and resource utilization. Further investigation is underway to characterize accompanying reductions in cost in the DRF model.