

Comparing Relative Value Units for Intramedullary Limb Lengthening Procedures to Common Pediatric Orthopaedic Surgeries to Determine Adequate Compensation

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INTRODUCTION:

Reimbursement for services rendered by physicians is determined by a computation of the relative value unit (RVU) associated with CPT codes. It is based on the amount of work required to provide a service, the resources available, and the level of expertise involved. Because limb reconstruction surgeons often are among the lowest RVU generators in their practice group, we wanted to evaluate whether the RVU values were comparable across different orthopaedic subspecialties. Consequently, this study compares the documented RVU totals of three common pediatric orthopaedic surgeries, arthroscopic anterior cruciate ligament (ACL) reconstruction, spinal fusion for adolescent idiopathic scoliosis, and antegrade femoral intramedullary limb-lengthening (IMLL).

METHODS:

This was an IRB-approved, multicenter, retrospective chart review. Charts of subjects who had ACL reconstructions, including meniscal repairs; spinal fusion surgeries for adolescent idiopathic scoliosis (7-12 levels), including Ponte osteotomies; and femoral antegrade internal limb lengthening procedures, each completed by fellowship-trained pediatric orthopaedic surgeons were reviewed. Comparisons were carried out between several parameters, including the mean duration of each procedure, the number of CPT codes associated with each procedure, the number of postoperative visits in the 90-day global period, and the computed wRVU for each procedure.

RESULTS:

Fifty charts (25 from each center) for each procedure were reviewed. The results are summarized in the table and the attached figure. The RVU per hour was significantly lowest in the antegrade femur lengthening group ($p < 0.0001$). The number of postoperative visits in the 90 day global post-surgery period were significantly higher in the antegrade femur lengthening group ($p < 0.0001$).

	IMLL	ACL	Spine Fusion	p value
Age	15.34 ± 4.614	15.54 ± 2.111	14.68 ± 2.714	0.0540
BMI	21.46 ± 3.790	22.89 ± 4.294	22.68 ± 4.547	0.1606
Anesthesia duration	183.5 ± 50.13	107.9 ± 43.65	334.6 ± 57.99	<0.0001
Surgery duration	120.8 ± 48.16	80.72 ± 46.64	237.1 ± 44.12	<0.0001
Post op visit	7.320 ± 2.272	2.060 ± 0.7398	2.00 ± 0.9897	<0.0001
CPT codes used	1.94 ± 0.68	2.0 ± 0.948	5.42 ± 1.416	<0.0001
wRVU	22.91 ± 5.871	18.81 ± 4.185	130.5 ± 63.22	<0.0001
wRVU/hr	13.06 ± 6.06	19.61 ± 11.88	31.89 ± 11.49	<0.0001

DISCUSSION AND CONCLUSION:

RVUs per time are statistically significantly lowest in the limb lengthening group and highest in the scoliosis group. The limb lengthening patient also requires significantly more visits and time in the postoperative period compared to the other groups. These extra visits during the global period don't add any RVU value to the lengthening surgeon and occupy clinic spots that could be filled with new patients. Based on this data, a review of the RVU values assigned to the limb lengthening codes may be necessary.

