

<div><div>Introduction</div><div>The hospital cost of surgery in patients with adult spinal deformity (ASD) is substantial, putting a significant impact on patient-centered and societal health care resources. Although direct cost of ASD surgery gives a more accurate estimate of the true expense of these interventions, there is limited information on how patient and surgical factors affect the direct cost in the surgical care of patients with ASD.</div><div>Methods</div><div>This is a retrospective analysis of a prospective, multicenter surgical database of ASD patients. Data on direct cost incurred for the index inpatient episode of care, expressed in 2013 dollars, was obtained from administrative data from four of the eleven participating centers. Patient factors considered were demographic characteristics, American Society of Anesthesiologist (ASA) status, SRS-Schwab curve type, and SF-6D. Surgical factors included expected blood loss, length of surgery, operative procedure time, number of levels fused, and bone morphogenic protein (BMP) levels. Multivariable regression analysis was used to predict factors significantly associated with direct costs.</div></div>	<div><div>Conclusions</div><div>In a multicenter hospital-based surgical database of patients with ASD, we found patient age (&gt; 65 years), number of levels fused, amount of BMP/level fused, and length of surgery to be independent predictors of increased direct cost of surgery. Future studies need to confirm and evaluate whether any additional predictors contribute to increased direct cost of index as well as revision surgeries.</div><div>Learning Objectives</div><div>1)Describe the importance of patient and surgical factors on direct cost of surgery in patients with ASD.</div><div>2)Examine how patient and surgical factors interact together in affecting the direct cost of surgery in patients with ASD.</div><div>3)Discuss whether these factors continue to play an important role on direct cost in revision surgeries in patients with ASD.</div></div>	<div><div>Results</div><div>Of the 256 patients in the database, complete data on direct cost was available on 215 (84%). The mean (SD) age was 59 (12.7) years and 82% were female. The mean (SD) direct cost of index surgery was \$70,542(\$24,336). In adjusted analyses age &gt; 65 years, number of levels fused , amount of BMP/level fused, and length of surgery were significantly associated with increased direct cost of surgery (p&lt;0.05).</div></div>
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