

<u>Session/Poster#</u>	<u>Presenter</u>
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### **The Impact of Ventricular Septal Defect on Outcomes and Complications Following Adult Spinal Fusion: A Propensity Scored-Match Analysis**

**Introduction:** A ventricular septal defect (VSD) is a heart defect in which there is an opening in the ventricular septum. Within the literature there are limited findings evaluating the impact of VSD on long-term outcomes after spinal fusion. This study sought to compare outcomes and complication rates between patients with and without VSD undergoing surgery for spinal fusion.

**Methods:** Using the National Inpatient Sample (NIS), patients above the age of 18 admitted from 2005 to 2012 who underwent spinal fusion were retrospectively reviewed. A 1:1 propensity score-match (PSM) by age, gender, and obesity status was performed before analyzing data. Univariate analyses evaluated demographics, complications, and mortality. Multivariate binary logistic regression models were also conducted to identify associations between VSD and postoperative spinal fusion outcomes, controlling for multiple demographic factors.

**Results:** A total of 104 propensity score-matched patients were identified (VSD: n=52; non-VSD: n=52). The VSD cohort, compared to the non-VSD cohort, had comparable length of stay (3.9 - 4.1 days vs. 3.3 - 3.2 days, p=0.426), Deyo score (0.7 - 1.4 vs. 0.4 - 1.2, p=0.323), and total hospital charge (\$86,205 - 82,004 vs. \$74,931 - 47,361, p=0.393). With a 1:1 PSM, patients with VSD, compared to non-VSD patients, had comparable rates for all postoperative complications. VSD was not an independent risk factor for surgical complications (OR: 2.7 [0.9 - 8.7], p=0.089) or medical complications (OR: 2.7 [0.5 - 14.8], p=0.254).

**Conclusion:** As observed in the study, adult patients with Ventricular Septal Defect (VSD) undergoing spinal fusion did not have an increased risk for surgical and medical complications compared to those without a VSD. Further study with a larger sample size should be done to see if a VSD is associated with adverse postoperative outcomes.