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REGIONAL VARIATIONS IN IN-HOSPITAL OUTCOMES AND HEALTHCARE RESOURCE UTILIZATION IN PATIENTS UNDERGOING TRANSCATHETER AORTIC VALVE REPLACEMENT IN THE UNITED STATES

Poster Contributions
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Session Title: Interventional Cardiology: TAVR 3
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Background: Whether regional variations exist in in-hospital outcomes and healthcare resource utilization in patients undergoing transcatheter aortic valve replacement (TAVR) in the United States (U.S.) has not been well examined.

Methods: We used data from the 2012-2013 National Inpatient Sample databases to identify all patients who underwent TAVR (ICD-9-CM codes 35.05 and 35.06) in the U.S. Multivariable regression models were constructed to analyze regional differences in in-hospital outcomes after TAVR. Discharge disposition among those surviving to hospital discharge was also studied.

Results: Of 21,185 TAVR procedures during the study period, 5,325 (25.1%) were performed in the Northeast, 4,605 (21.7%) in the Midwest, 7,560 (35.7%) in the South, and 3,695 (17.5%) in the West. Compared with the Northeast, risk-adjusted in-hospital mortality after TAVR was higher in the Midwest and South, and similar in the West. Average length of stay was longest in the Northeast, whereas hospital costs were highest in the West. Among patients surviving to hospital discharge, disposition to a skilled nursing facility or home health care was most common in the Northeast, whereas discharge to home was most common in the West (Table).

Conclusions: We observed significant regional variations in in-hospital outcomes and healthcare resource utilization among patients undergoing TAVR in the U.S.

Table. **Regional Variations in In-Hospital Outcomes and Healthcare Resource Utilization in Patients Undergoing Transcatheter Aortic Valve Replacement.**

	Northeast (n=5,325)	Midwest (n=4,605)	South (n=7,650)	West (n=3,695)
In-hospital mortality	4.1%	5.0%	5.8%	3.9%
Unadjusted OR (95% CI)	Ref.	1.22 (1.01-1.47)	1.42 (1.20-1.67)	0.95 (0.77-1.17)
Adjusted OR* (95% CI)	Ref.	1.58 (1.29-1.95)	1.75 (1.45-2.10)	1.12 (0.89-1.40)
Average Length of Stay[y]	10.0 days	7.7 days	8.8 days	7.4 days
Unadjusted Parameter Estimate (95% CI)	Ref.	0.92 (0.91-0.92)	0.95 (0.94-0.96)	0.89 (0.88-0.90)
Adjusted Parameter Estimate* (95% CI)	Ref.	0.92 (0.91-0.93)	0.95 (0.94-0.96)	0.90 (0.89-0.91)
Average Hospital Cost[y]	$64,458	$57,529	$57,199	$66,158
Unadjusted Parameter Estimate (95% CI)	Ref.	0.92 (0.91-0.94)	0.91 (0.90-0.92)	1.02 (1.00-1.04)
Adjusted Parameter Estimate* (95% CI)	Ref.	0.95 (0.93-0.96)	0.93 (0.91-0.95)	1.04 (1.02-1.06)
Discharge Disposition				
Home	16.5%	29.1%	39.2%	42.0%
Short-term hospital	1.7%	0.7%	0.9%	0.6%
Skilled Nursing Facility	40.7%	35.8%	30.6%	26.9%
Home Health Care	41.1%	34.4%	29.3%	30.5%

*Adjusted for age, sex, hospital characteristics (bed size, teaching status), transapical vs. transfemoral TAVR, and comorbidities.
[y]Unadjusted and adjusted parameter estimates reported for length of stay and hospital cost represent the antilog of the ß coefficients [exp(ß)] obtained from the log-transformed linear regression models.