The Impact of Using Home Health Care After Thoracic Endovascular Aortic Repair

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Background & Aims

- Home health care (HHC) may help
  - ➢Reduce the burden on patients and families after interventions
  - ➢Potentially reduce hospital length of stay (LOS)

- We sought to assess outcomes of patients undergoing Thoracic Endovascular Aortic Repair (TEVAR) who were discharged with or without HHC services.

Methods

- A retrospective analysis of the Nationwide Readmissions Database (NRD)
- TEVAR patients included (2010 to 2018) who were categorized based on disposition at discharge into
  - HHC cohort
  - Routine cohort
- Propensity matching was utilized to compare the cohorts in addition to stepwise-weighted logistic regression

Results

- 9170 TEVAR patients included
  - ➢27.3% (2500/9170) were discharged to HHC
  - ➢Median age was 71 years (62-78)
  - ➢Women comprised 45.9% of the population

Results

- Post-TEVAR increased complications in HHC cohort:
  - Heart failure (4.3% vs. 2.7%, p<0.01)
  - Pneumonia (7.2% vs. 5%, p<0.01)
  - Ileus (4% vs. 2.8%, p=0.02)
  - Sepsis (1.6% vs. 0.9%)
  - Hemorrhage (26.4% vs. 23.7%, p=0.03)

Results

- The LOS for the index admission was comparable (7 days [5-12] vs. 6 days [3-12], p=0.09)
- 30-day readmission was comparable (21.3% vs.19.6%, p=0.07)
- 30-day mortality was also not different between the groups (0.17% vs. 0.25%, p=0.53).

Results

Variable	OR	95% CI		P-value
HHC vs not*	1.21	1.11	1.32	<.0001
Metropolitan teaching hospital	0.91	0.82	1.01	0.08
Female	0.87	0.8	0.94	<.001
Resident status	1.78	1.54	2.04	<.001
Bed size of hospital (small)	1.33	1.1	1.61	<.001
Bed size of hospital (medium)	1.2	1.08	1.33	<.001
Age	0.99	0.99	1	<.001
Length of Stay	0.99	0.98	1	<.001
Non-elective procedure	1.62	1.49	1.77	<.001
Myocardial Infarction	1.31	1.18	1.44	<.001
Arrhythmia	1.13	1.03	1.25	0.01
Pneumonia	1.17	0.99	1.39	0.06
Spinal cord ischemia	1.98	1.26	3.1	<.001
Ileus	1.2	0.97	1.5	0.1
Hemorrhage	1.12	1.02	1.22	0.02

Weighted stepwise logistic regression for 30-day readmission.

*After propensity score matching, stratified by match pairs, HHC vs not: OR=1.4, 0.98-1.31, p=0.07

Discussion

- Post-TEVAR utilization of HHC services was likely due to higher in hospital complications
- HHC utilization trended toward association with increased odds of 30-day readmissions after propensity matching.
- Patient optimization for home discharge should be prioritized

Conclusion

- Priority should be given to reducing TEVAR-related in-hospital complications
- This may reduce need for HHC utilization and improve overall outcomes after TEVAR