

Transcatheter Aortic Valve Replacement after Surgical Aortic Valve Replacement: Does Socioeconomic Status Impact Outcomes?

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BACKGROUND

- Transcatheter aortic valve replacement (TAVR) is being increasingly used as a second intervention following failure of surgical AVR (SAVR) necessitating outcome optimization
- Patients' socioeconomic status has been reportedly associated with outcomes after first-time TAVR
- There is paucity of data on how patients' socioeconomic status impacts resource utilization and outcomes after valve-in-valve TAVR

OBJECTIVE

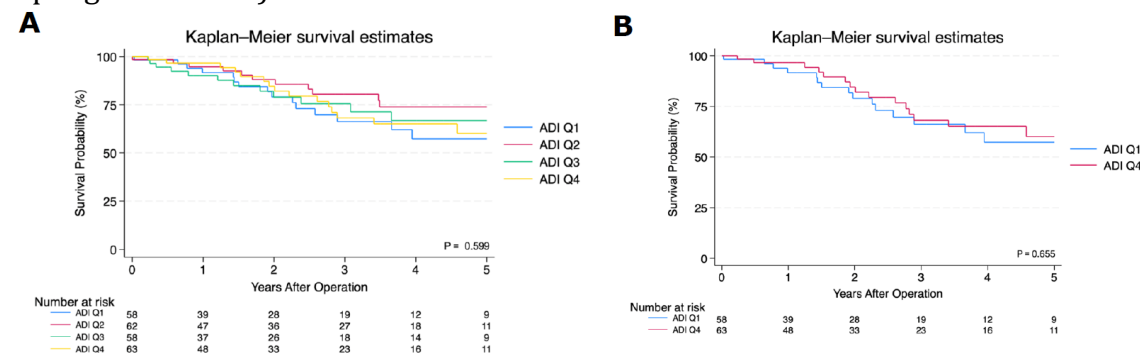
To assess the role of patients' socioeconomic status in outcomes as well as healthcare resource utilization following valve-in-valve TAVR (VIV-TAVR).

METHODOLOGY

- Retrospective analysis of institutional patients (2013-2023) who underwent a VIV-TAVR procedure defined as TAVR after initial SAVR.
- Patients were stratified according to their socioeconomic status based on area deprivation index (ADI) quartiles (Quartile 1 (Q1) to Q4) score on a scale of 1-100 (higher scores = more deprivation).
- A composite outcome of healthcare resource utilization (HRU) comprising readmission within one year or any valvular reintervention was also evaluated.

RESULTS

- Of **5621** TAVR patients, **241** patients were included in this analysis (**Q1**: ADI 0-48, **n=55**; **Q2**: ADI 49-64, **n=62**; **Q3**: ADI 65-80, **n=61**; **Q4**: ADI 81-99, **n=63**).
- Patients in **Q4** were the **youngest** (75 (72-80), $p=0.09$), **mostly women** (59%, $p<0.001$), had the **lowest median household income** (\$41,373 (\$38,665-\$45,670), $p<0.001$), and **highest baseline aortic valve mean gradients** (45mmHg, $p=0.03$).
- In-hospital mortality was highest in Q3 (5%, $p=0.03$).
- The composite **HRU** was **lowest in Q3** (26%) **followed by Q4** (40%) ($p=0.01$).
- Severe prosthesis-patient mismatch (PPM) rates were $<15\%$ and comparable among all groups ($p=0.61$).
- Kaplan-Meier survival analysis showed **no difference in 5-year survival** among all groups (Panel A, $p\text{Logrank}=0.599$) as well as between Q1 and Q4 (Panel B, $p\text{Logrank}=0.655$).



CONCLUSIONS

Socioeconomic deprivation may accelerate disease progression, leading to earlier presentation; however, it did not negatively affect long-term outcomes after VIV TAVR. Despite this, reduced healthcare resource utilization was noted in the most deprived group. In such patients, systematic follow-up may enhance access to care and optimize outcomes after VIV-TAVR