

SAVR and TAVR in Aortic Stenosis: Reimbursement and Cost Analysis in Chile for providers' reference.



Background:

- Given the recent Diagnosis-Related Groups (DRG) payment reform in Chile in 2020, several challenges have arisen.
- In the local implementation of this payment mechanism, costs data was imported from international sources.
- This, combined with a scarce local capacity building at the hospital level for costing, demands understanding the balance between the current reimbursement rate and actual provider cost.
- **The case of Aortic Stenosis treated with Surgical Aortic Valve Replacement (SAVR) and Transcatheter Aortic Valve Replacement (TARV) has been described as critical.**

Objectives: To estimate the reimbursement rate and current high-complexity provider costs for SAVR and TAVR from the public providers' perspective.

Methods:

The analysis considers the current DRG reimbursement and an accurate cost estimation.

[DRG proceedings:](#)

Reimbursement estimation: Open-access DRG databases from public high-complexity providers were explored. Data on: DRG coding (ICD-9-CM Vol. 3 Procedure codes), DRG weights, basal reimbursement, and add-on payment amounts were gathered.

DRGs are utilized in surgery reimbursement only but exclude pre and postoperative care.

DRG base price was estimated considering 65 hospital rates, their classification according to complexity, the relative weight of each, and distribution, resulting in a mean base price of CLP\$2,184,664.

[Cost proceedings:](#)

Real costs were estimated using an activity-based costing approach and bottom-up strategy for pre-operative, intra-operative, and post-operative periods. When available, for the case of SAVR, the data was combined with GES scheme database parameters.

Among the explored cost drivers, we find lab work, bed days, drugs, and medical devices.

Estimations were made on a per-patient (PP) without complications basis and expressed in 2022 Chilean pesos (CLP).

Results:

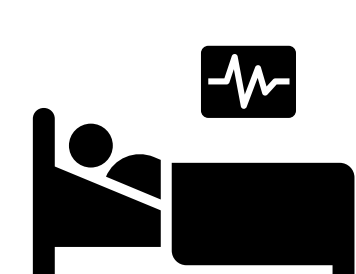
The total comprehensive cost for SAVR was CLP\$13,477,913, and for TAVR, CLP\$ \$21.280.830 (including a 0.25 ratio of aspirin intake), in a two years horizon.

Costs were sorted into three specific periods: Pre-operative, intra-operative, and follow-up care up to two years.



Pre-operative period:

Costs: Were estimated at CLP\$372,714 and CLP\$576,563 for SAVR and TAVR, respectively. No DRG payment applies in pre-operative care.



Intra-operative period:

Reimbursement: SAVR CLP\$11,107,026 and TAVR CLP\$23,138,514 (including add-on payment for TAVR).

Costs: For non-complicated patients: SAVR costs CLP\$12,753,730 and TAVR CLP\$20,353,312.



Post-operative:

Costs: SAVR CLP\$205,240 and CLP\$76,410 for years 1 and 2, respectively. For TAVR are CLP\$235,000 and CLP\$114,170 for years 1 and 2, respectively. For the case of anticoagulants in mechanical valves (0.4 ratio), an annual cost of CLP\$87,274 is summed. No DRG payment applies in postoperative care.

Conclusion:

Significant efforts must be made to estimate local costs for high-cost procedures and adjust their payment according the current DRG reimbursement rate.

