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Improving value in TAVI patients: insights from the Veneto Region experience

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Value-Based Healthcare (VBHC) aims to define, measure and monitor the *value* of the healthcare services, *i.e.* the ratio between the health outcomes and the costs related to the relevant treatment. This approach allows to set new procurement models based on an identified value, for innovative reimbursements of the entire care path.

Objectives

Under this approach, the Veneto Region is conducting a pilot study on data from subjects who underwent a Transcatheter Aortic Valve Implantation (TAVI).

The first goal is the definition of a forecasting model to assess short, medium and long-term outcomes through the analysis of clinical and administrative data from regional sources. Second, we are progressively integrating economic analyses, with the final aims to (1) quantify the costs associated with the cohort of enrolled patients, (2) allow a stratification of the subjects based on their cost profiles, (3) investigate the impact of risk factors and pre-intervention conditions on any detected economic difference and, finally, (4) propose a VBHC-oriented procurement model.

Methods

This retrospective observational study involves the patients who underwent a TAVI between 2010 and 2015 in the Cardiology and Cardiosurgical wards of the region. The clinical data, collected in the regional TAVI Register, were centrally anonymized and linked to the administrative healthcare databases, and a 12-month follow-up was considered from the index hospitalization discharge date. A first descriptive analysis was performed to investigate some of the outcomes of interest.

Results

The linkage between Register and administrative databases was successful for 596 subjects (median age at hospitalization: 82 years for females, 80 males). The median overall stay was 12 days, 2.75 of which in ICU.

As for the preliminary findings on the outcomes, 15 deaths were recorded during the index admission (2.5%), 32 during the follow-up (5.5%). We observed 310 subjects (53.4%) experiencing at least 1 hospitalization during follow-up, for a total of 670 admissions (median number 2, min 1, max 8). We analyzed the costs related to both the index and the rehospitalizations, allowing a first quantification of the overall economic burden (index median cost = 34,179€ [IQR 28,028€-34,179€]; rehospitalizations' median cost = 3,885€ [IQR 2,645€-9,448€]).

Discussion

These preliminary results can offer a first assessment of the *value*. As a next step, we will perform a more refined estimate of the absorption of resources, by considering other related costs collected from the administrative data, such as specialist exams or drugs. Finally, we will test statistical models with increasing complexity, in order to relate risk factors and pre-intervention conditions to the economic differences and the corresponding value.