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Micro-costing analysis for the treatment of Atrial fibrillation: an economic evaluation

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BACKGROUND & OBJECTIVES

For the sustainability of the healthcare system, **it is crucial to implement more efficient care models that do not compromise the quality and effectiveness of patient care**. Interventional electrophysiology procedures in an elective setting allow considerations in this context regarding the reduction of hospital stay duration.

Catheter ablation procedures for Atrial Fibrillation (AF) can be evaluated regarding the possibility of reducing the length of hospital stay. Considering the **cryoablation procedures**, the hospitalization setting is still widespread in Italy, despite the **evidence supporting the day hospital management**. This analysis aims to evaluate the variation in resource consumption for the two different hospital pathways.

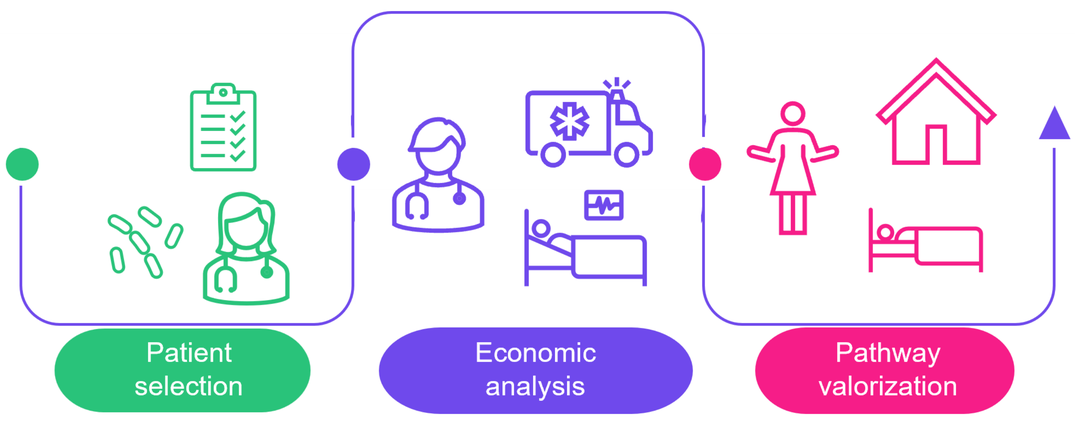

Figure 1.

METHODS

The analysis was conducted in a Southern Italian hospital by using the **Activity-Based Costing method**.

- We examined the different phases of the cryoablation treatment for atrial fibrillation, determining the utilization of resources and the amount of time healthcare staff dedicated to each phase (Figure 1.).
- Interviews were conducted with the medical team and the personnel involved in the procedure.
- Unit cost information was either sourced from the hospital's administration or derived from existing literature
- Personnel costs were computed based on a per-minute basis.

The focus was on patient journey costs and not on devices, drugs, and consumables that were used in equal amounts in both care settings.

RESULTS

The population treated had an age of 56 ± 9 years (25.9% were women); most of the patients (75%) suffered from paroxysmal AF, 25% from persistent AF.

No peri-procedural events were observed in any patient. **The cost difference** between the two hospitalization settings (ordinary with two nights and daytime with one night) **was found to be €493.23 for each patient.**

The main **cost driver** for the path in ordinary hospitalization was **represented by the hospital stay**, which showed to be 36% of the total (Figure 2.).

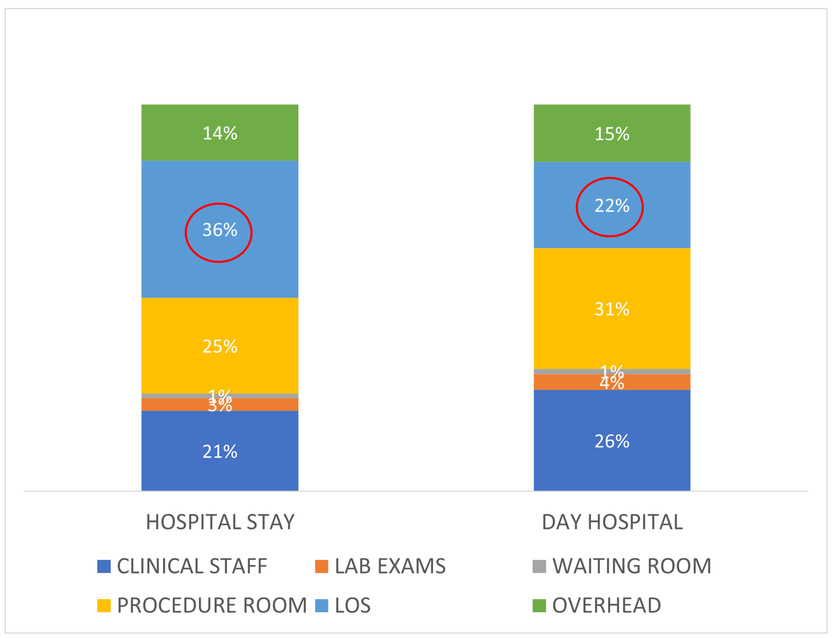

Figure 2.

CONCLUSIONS

Wider adoption of day-hospital cryoablation AF procedures, following careful patient selection, would lead to patient management costs and resource consumption optimization.

It would result in the reduction of the length of stay and freeing up of beds (allowing their reallocation where necessary), reduction of waiting lists, and acceleration of patient access to care.

All of this would greatly enhance the economic sustainability of the Healthcare System.

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