Annual Direct Medical Costs with Beta-Thalassemia in the Brazilian Public Healthcare System (SUS)

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Background

Beta-thalassemia is a rare genetic disease that affects the beta-globin chains, leading to ineffective erythropoiesis and, therefore, anemia.

In Brazil, a study conducted by the Brazilian Thalassemia Association (ABRASTA) in 2016 indicated that there are 1,662 patients registered with beta thalassemia in the country. The association also reports that 283 adults with thalassemia major and 222 with thalassemia intermedia were identified.

Regarding the Brazilian region most affected by this condition, the Southeast region stands out, especially the state of São Paulo, which leads the number of cases. It is estimated that there are a total of 1,000 people with severe forms of thalassemia in Brazil.

Objective

The aim of this study was to analyze the annual cost of treatment and complications of beta-thalassemia in the perspective of public health system in Brazil.

Methods

We conducted a retrospective cost analysis of ambulatorial and hospital systems (SIA and SIH) available from public data (DATASUS) in Brazil from 2022 to October 2024 with the ICD of D56.1.

The years of 2020/2021 were excluded due to the COVID19 pandemic. The population comprised all beta-thalassemia data available in both systems. The non-probabilistic convenience sample was used to establish the total mean direct cost.

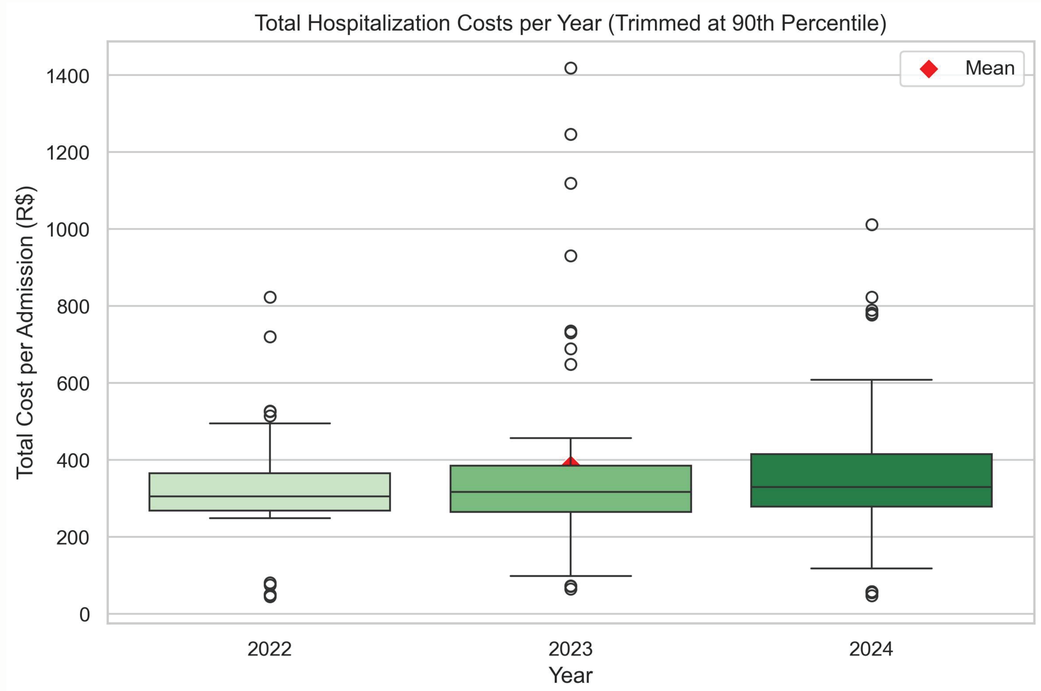
Results

The mean cost among all three years in SIA was R$26.12 and in SIH was R$1,048.47. The cost for SIH was higher than expected in 2023 with the mean cost of R$ 1,878.74. The SIH mean cost for 2022 was R$765.86 and in 2024 was R$500.81.

In 2023, there was a patient logged in the state of São Paulo that required extra care because he had other ICD, including epilepsy and transplant, which might explain the high cost with the patient during this year.

Without this specific patient, the mean cost in 2023 would be R$ 466.68, a similar value found in 2022 and 2024.

Year	Avg cost per hospital admission	Avg cost per admission per patient	Avg cost per patient for hospitalization + ICU
2022	765,86	1136,43	1639,66
2023	1878,74	2708,88	3236,79
2024	514,74	730,94	874,94



Conclusion

The costs with beta-thalassemia in the public health system in Brazil is relatively low, as this is a rare disease with low prevalence in the country. In SIA there is some control and predictability of costs over the three years, making it possible to plan future resource allocations. In the case of the SIH, a patient requiring higher-complexity care highlights the importance of not setting an overly restrictive budget. The cost differences between the systems for treatment patients with this disease suggest there is space for new treatment and management in the country to possibly make costs more efficiently handled.

References

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