

# DIRECT COSTS OF EPILEPSY IN TURKEY: A PANEL APPROACH

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## OBJECTIVES

Epilepsy is a chronic health problem with major implications on mortality, morbidity, productivity and economy in general. Although its incidence and prevalence vary among countries, they are estimated to be 20-50/100,000 and 4-10/1000 respectively (1). Besides its epidemiologic burden, the disease also has high cost implications for the Social Security Institution (SSI) of Turkey. This study aimed at estimating the direct cost of epilepsy treatment in Turkey.

## METHODS

A panel approach was adopted for the study in the absence of a database to estimate direct costs from real world data. A form was designed to explore the epidemiology and type, amount and duration of resources used in treatment of epilepsy. The form inquired cost items by partial, generalized and unclassified epilepsy. Five key opinion leaders with wide knowledge of clinical practice answered the form. All direct costs for diagnosis, treatment, monitoring, emergency and hospitalization were included. The costs of resources used in each category and in each treatment modality were calculated by using the SSI's price tariff.

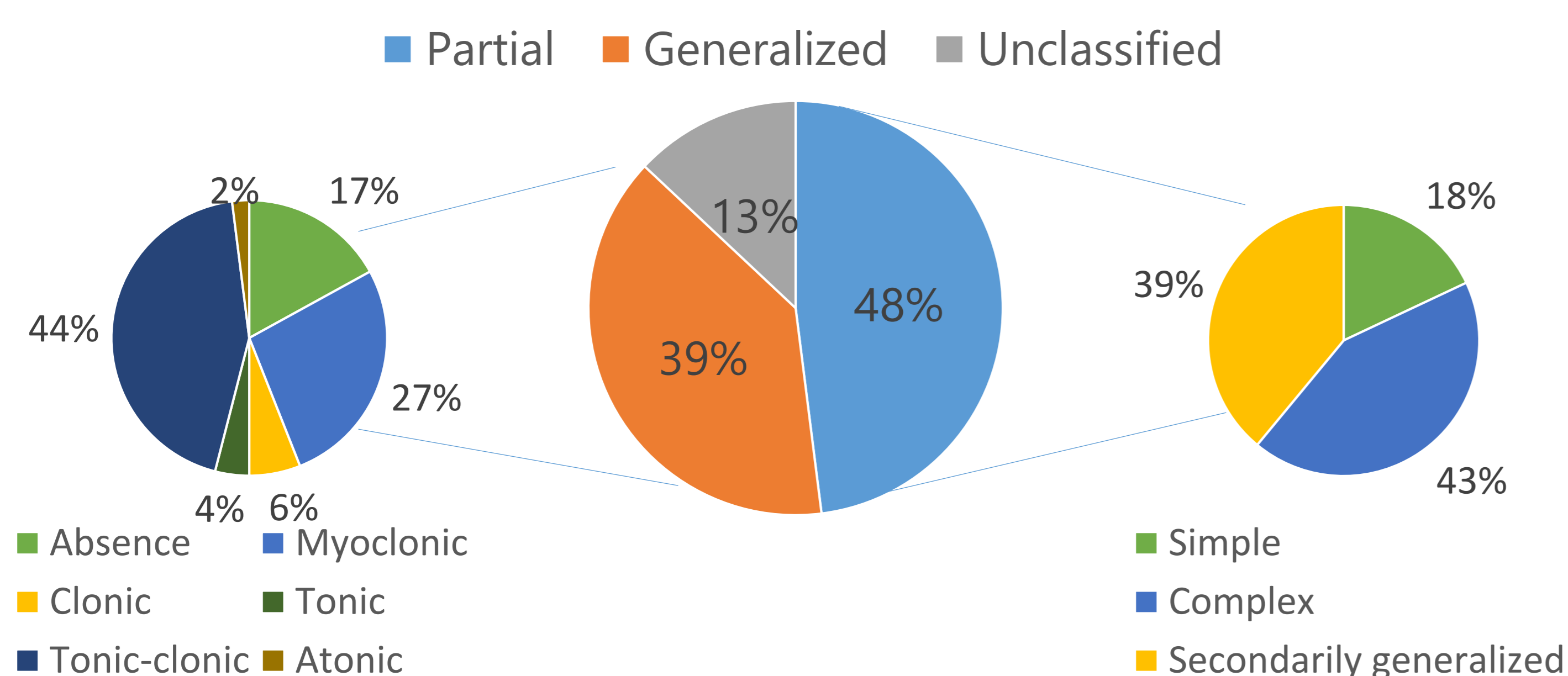
## RESULTS

In order to calculate the costs, several questions regarding epidemiology and classification of epilepsy were asked. In this regard, number of epilepsy patients and their distribution among epilepsy classes are summarized in Table 1 and Figure 1.

**Table 1:** Number of patients diagnosed with epilepsy

Approximate number of patients diagnosed with epilepsy in Turkey per year (per 100,000)	62
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**Figure 1:** Distribution of patients among epilepsy classes



The annual weighted average diagnose, treatment, monitoring and emergency cost per patient for epilepsy was calculated as 287.99TRY, 4875.23TRY, 385.82TRY and 151.68TRY respectively. The detailed costs per partial, generalized and unclassified epilepsy patients are summarized in Table 2.

**Table 2:** Annual weighted average costs per epilepsy patient

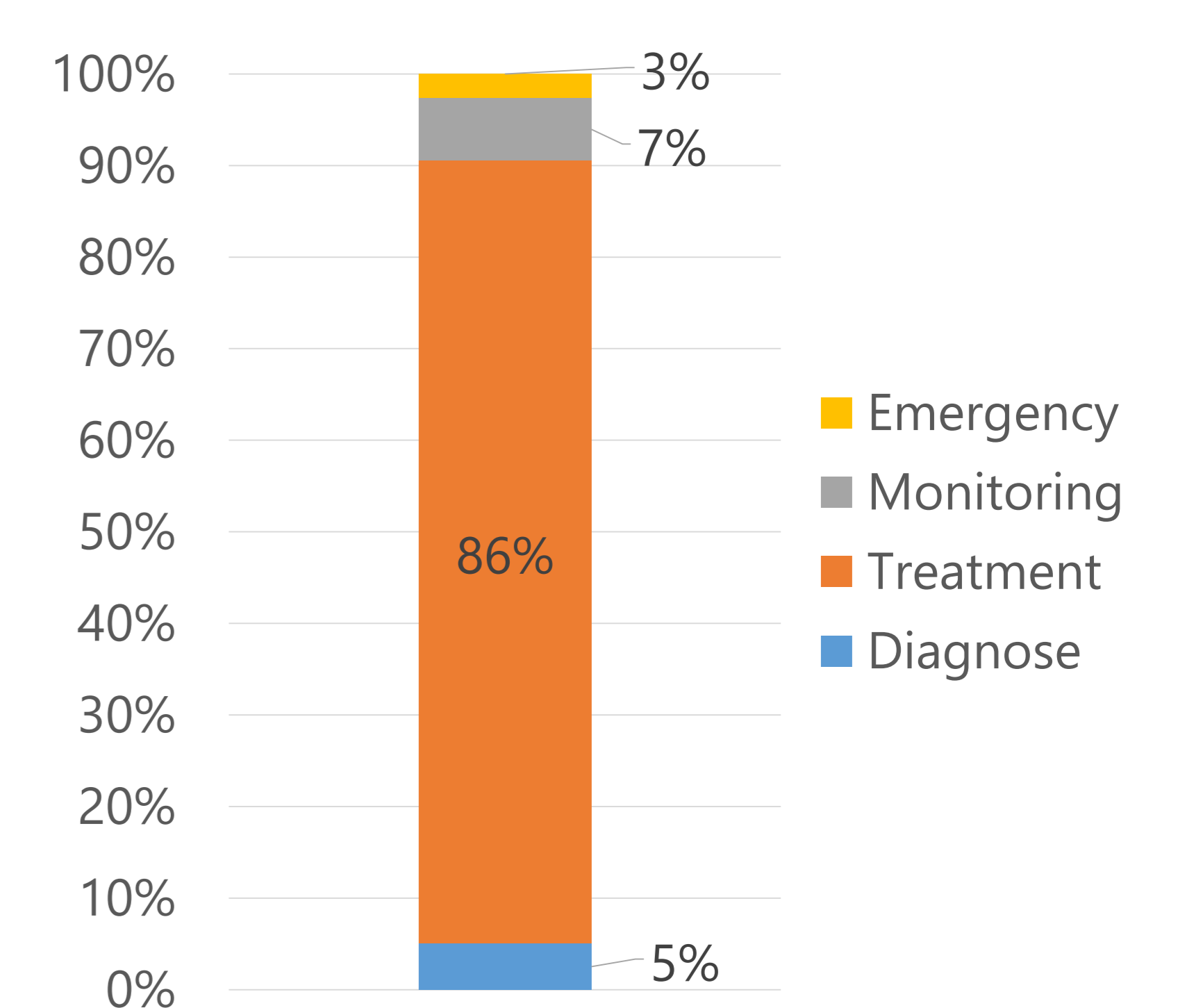
			Total Cost
<b>Annual weighted average cost per epilepsy patient</b>			<b>5.700,72</b>
	<b>Unit cost (TRY)</b>	<b>Patient ratio (%)</b>	
<b>Diagnose</b>	287,99	100%	287,99
<b>Treatment</b>			4875,23
<b>Partial</b>	5427,61	48,00%	2605,25
<b>Generalized</b>	4550,05	39,00%	1774,52
<b>Unclassified</b>	3811,18	13,00%	495,45
<b>Monitoring</b>			385,82
<b>Partial</b>	376,86	48,00%	180,89
<b>Generalized</b>	385,04	39,00%	150,17
<b>Unclassified</b>	421,20	13,00%	54,76
<b>Emergency</b>			151,68
<b>Partial</b>	151,83	48,00%	72,88
<b>Generalized</b>	150,77	39,00%	58,80
<b>Unclassified</b>	153,90	13,00%	20,01

The annual weighted average cost per patient for epilepsy was calculated as 5,700.72 TRY.

## CONCLUSION

**Figure 2:** Weighted Average Annual Cost Per Epilepsy Patient

Treatment costs have the largest share in the total annual cost of epilepsy, followed by monitoring and diagnosis costs. Emergency care cost has the lowest share among the total annual cost (Figure 2).



Epilepsy is a debilitating disease both for the patient and the society. As stated in the objective, prevalence of epilepsy in Turkey is approximately 4-10/1000. Taking the upper prevalence limit into account, number of epilepsy patients in Turkey is estimated as 776.959 in 2015.

Based on the calculations above, the total annual direct cost of epilepsy to the SSI is estimated to be 4,428,666,300TRY, comprising approximately 10% of the SGK health care budget.

## References

1. Senol M.G., et al. (2009), Hasta Bakış Açısı: Epilepsi Hakkında Bilgi ve Anlayış. Nobel Medicus, 7(1)