

# Distribution of the Annual Costs of a Cohort of Patients with Diabetes in a Large Colombian Health Insurer

Eduar Echeverri <sup>1</sup>, Alvaro J Ruiz <sup>2</sup>, Martin Rondón <sup>2</sup>, Diego Rosselli <sup>2</sup>

<sup>1</sup> Pontificia Universidad Javeriana, Cali, Colombia, <sup>2</sup> Pontificia Universidad Javeriana, Bogota, Colombia



## Objectives

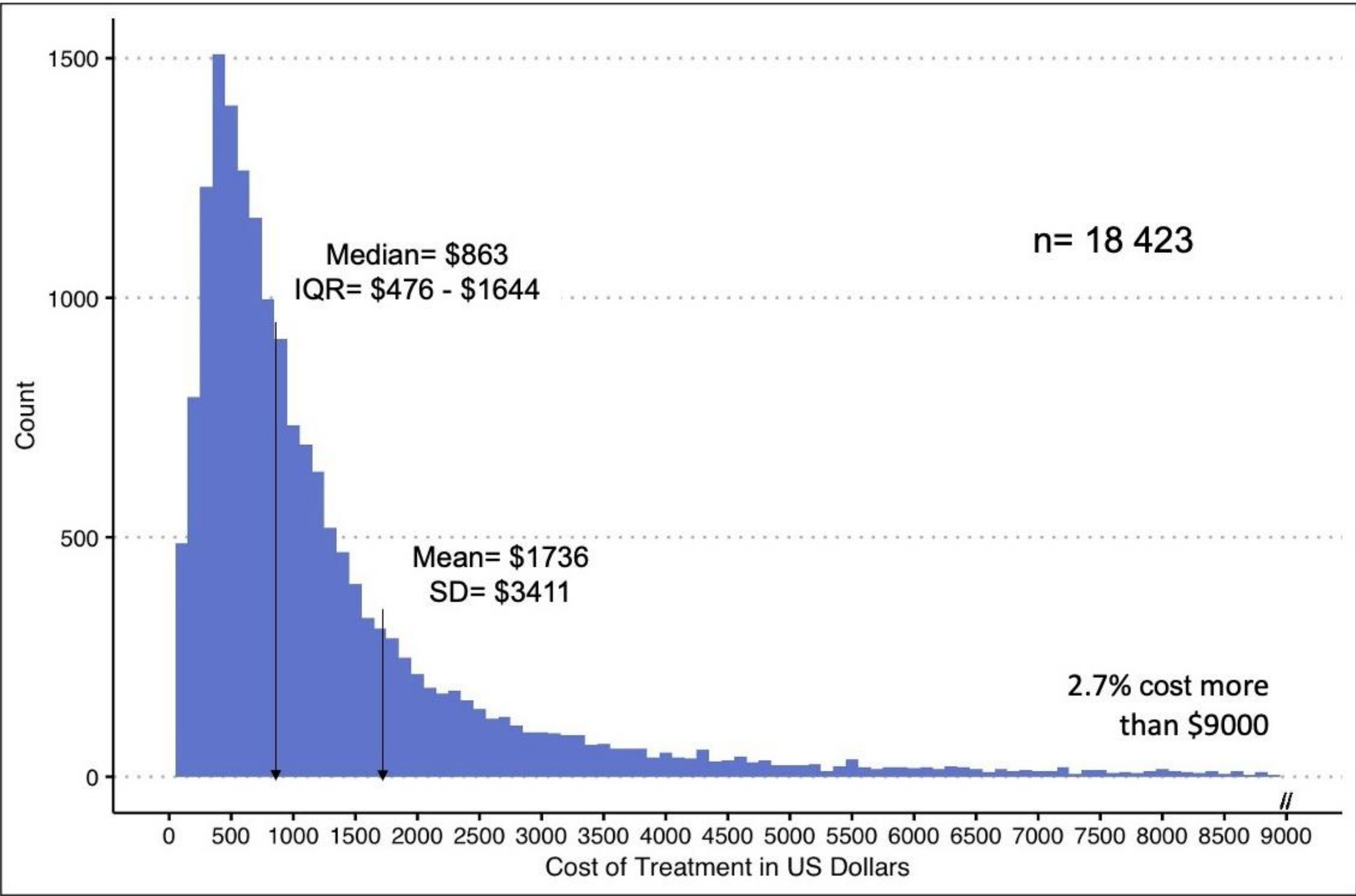
To analyze the distribution of overall annual costs of a cohort of adult patients with Type 2 diabetes, from the third-party perspective of a private health insurer in Colombia.

## Methods

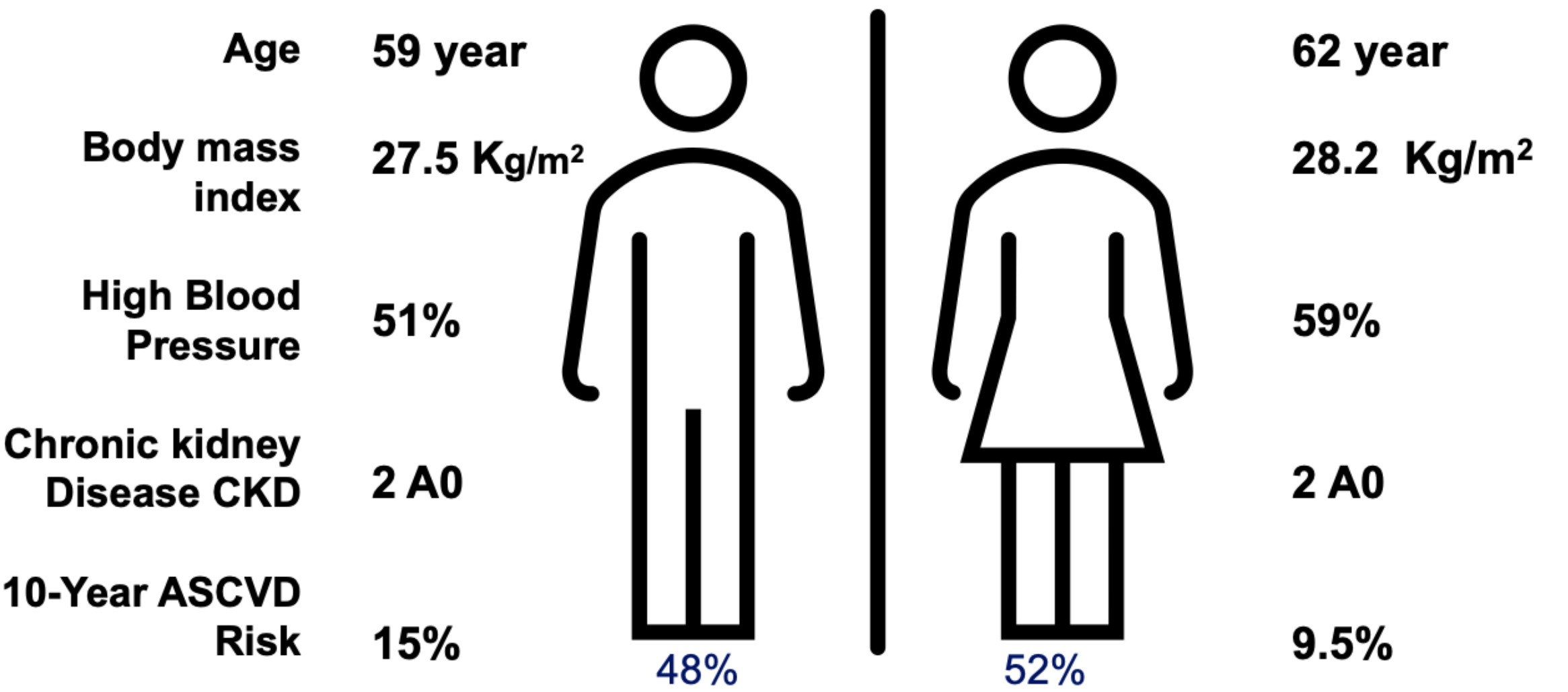
Direct medical costs were extracted from administrative claims provided by a large private health insurer, derived from the year prior to the introduction of a new disease management program for adults with type 2 diabetes which was gradually introduced nationwide during 2019. Costs in Colombian pesos (COP) were converted into US dollars (USD) at the average official exchange rate for 2019 (1 USD = 3 281 COP). Descriptive statistics of overall costs are presented.

## Results

Costs were obtained from 18 328 subjects. The average annual cost for this cohort was USD \$1 736, with a huge standard deviation (USD \$3 414). On the other hand, the median cost was well below the mean (USD \$863), and the interquartile range went from USD \$476 to \$1 644. While 4% of patients had an annual cost below USD \$150 and another 23.5% would cost between USD \$300 and \$600, a relatively small proportion (2.7%) had a cost above USD \$9 000. The gamma distribution was the best fit for the data (parameters 0.09;2).



**Figure 1.** The annual costs of a cohort of patients with type 2 diabetes in Colombia follows a typical gamma distribution.



**Figure 2.** Clinical characteristics of diabetics in primary prevention n= 16 803

## Conclusions

Overall costs of complex medical conditions like diabetes are far from having “normal” or uniform distributions. Median costs are normally well below the mean which tends to be skewed to the right due to a relatively small proportion of patients, those with several comorbidities or with high cost complications, which incur in disproportionally high costs for the healthcare system.

## This study has been published as

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More information:



drosselli@javeriana.edu.co  
diego.rosselli@gmail.com  
echeverri.eduar@javeriana.edu.co



@darosselli