

# Umeclidinium/Vilanterol Versus Tiotropium/Olodaterol in the Treatment of Severe to Very Severe Chronic Obstructive Pulmonary Disease (COPD) from the Brazilian Public Healthcare System Perspective: A Budget Impact Analysis

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Araujo M<sup>1</sup>, Silva D<sup>1</sup>, Bernardino G<sup>1</sup>

<sup>1</sup>GSK, Rio de Janeiro, RJ, Brazil.

## Aims

Umeclidinium/vilanterol (UMEC/VIL) and tiotropium/olodaterol (TIO/OLO), both combinations of long-acting muscarinic antagonist and long-acting beta2-adrenergic (LAMA/LABA) with similar efficacy and safety, are reimbursed for COPD treatment in Brazilian Public Healthcare System (SUS) since 2020.<sup>1</sup>

In 2021/2022, according to the Brazilian Government Price Panel (PP), TIO/OLO public sales volume were four times higher compared to UMEC/VIL.<sup>2</sup>

Our aim was to estimate the budget impact analysis (BIA) of switching TIO/OLO to UMEC/VIL for severe to very severe COPD treatment in SUS.

## Methods

Using a 5-year BIA, we evaluated the financial impact of the progressive switch from TIO/OLO to UMEC/VIL in SUS.

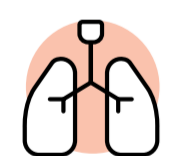
Population eligible to be treated with LAMA/LABA was calculated using local published epidemiological data.



9% COPD prevalence in adults ≥40 years;<sup>3,4</sup>  
(n = 7,878,326)



30% of which were diagnosed;<sup>5</sup>  
(n = 2,363,498)



10.7% with severe to very severe COPD.<sup>6</sup>  
(n = 252,894)

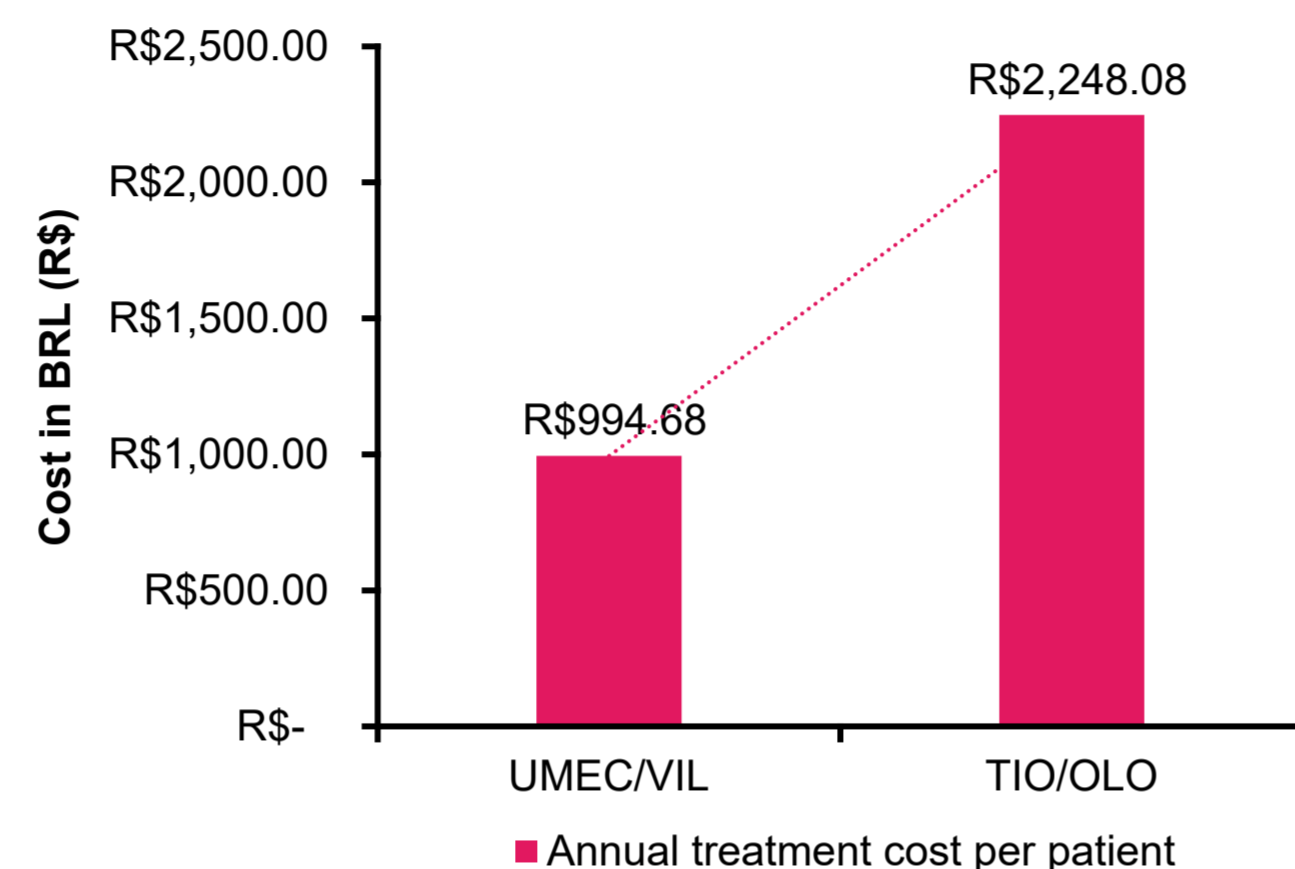
The analyses considered a conservative market share (**Table 1**). UMEC/VIL uptake was assumed to increase 5% each year afterwards.

The price considered for both were the lowest available in PP for the period (Cost per month UMEC/VIL= 82.89 BRL; TIO/OLO= 187.34 BRL).

Costs values were presented as Brazilian Real (1 BRL= 5.17 USD).

## Results

Figure 1. Treatment cost per patient per year.

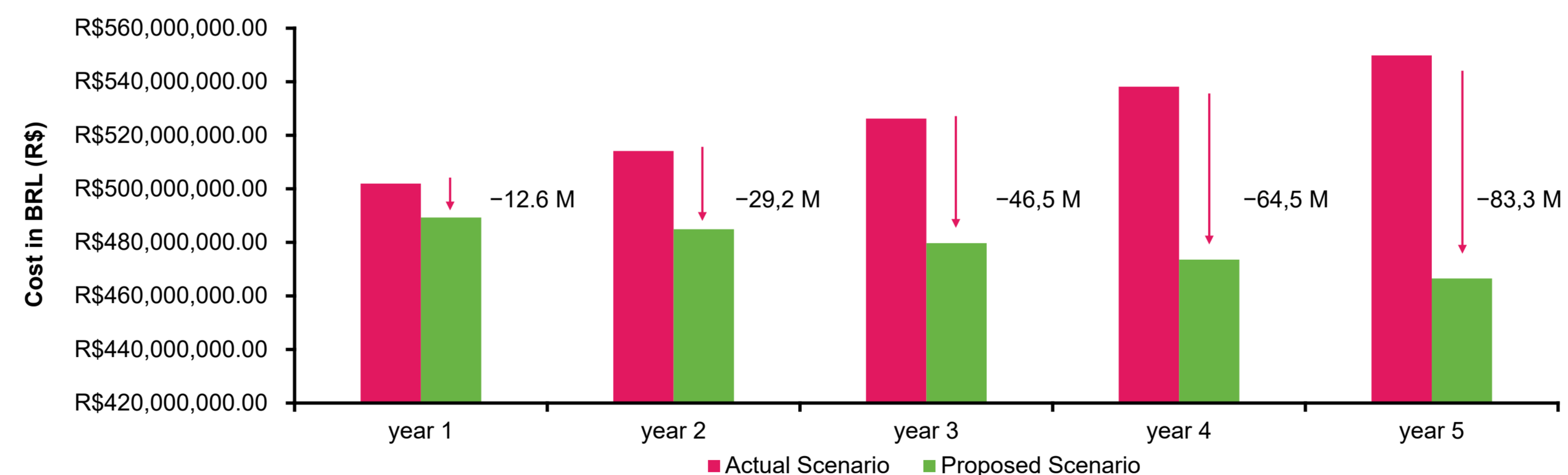


UMEC/VIL: umeclidinium/vilanterol; TIO/OLO: tiotropium/olodaterol; BRL: Brazilian Reals

Table 1. Conservative market share assumed increase of 5% per year.

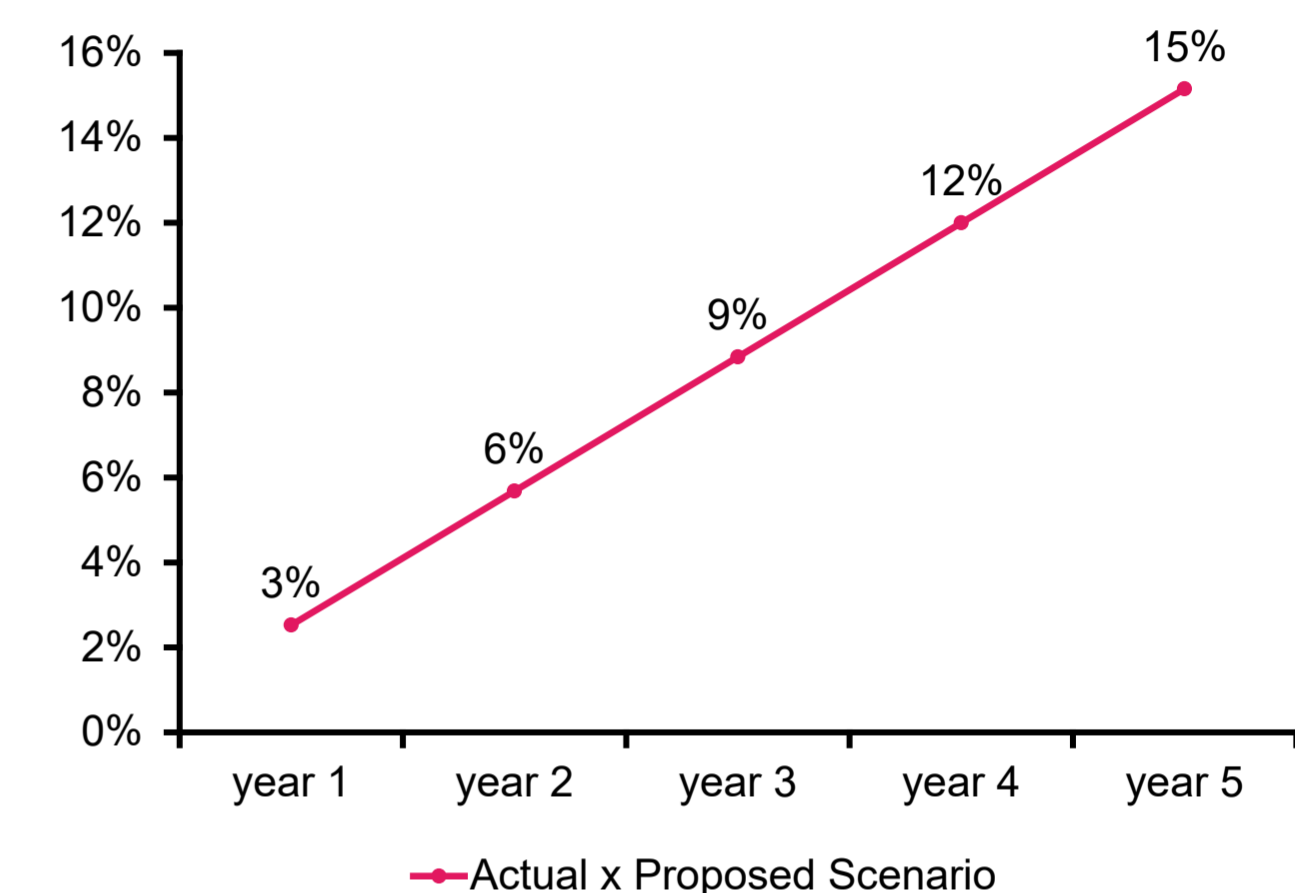
	Actual scenario		Proposed scenario	
	UMEC/VI	TIO/OLO	UMEC/VI	TIO/OLO
Year 1	21%	79%	25%	75%
Year 2	21%	79%	30%	70%
Year 3	21%	79%	35%	65%
Year 4	21%	79%	40%	60%
Year 5	21%	79%	45%	55%

Figure 2. Budget Impact Analysis for UMEC/VI versus TIO/OLO



M: million

Figure 3. Savings of the proposed versus actual scenario



## Conclusions

Difference in treatment costs per patient per year was **1,253.40 BRL lower** for UMEC/VIL;

Switching eligible COPD patients for UMEC/VIL can lead to savings of **12,679,107.35 BRL** in the first year, **83,330,959.85 BRL** in the fifth year and **236,318,936.80 BRL** accumulated in **five years** compared to TIO/OLO;

Switching to UMEC/VIL in the treatment of patients with severe to very severe COPD is predicted to be cost saving to Brazilian Public Healthcare System;

Therefore, rational choice among available LABA/LAMA alternatives has the potential to further extend savings to the healthcare system.

## Disclosures

This study was funded by GlaxoSmithKline (GSK study code 220093). The authors MA, DS and GB are GSK employees and eligible for stocks.

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