

# A United States Budget Impact Analysis of Budesonide/Glycopyrrolate/Formoterol Fumarate in the Treatment of Inadequately-Controlled Asthma

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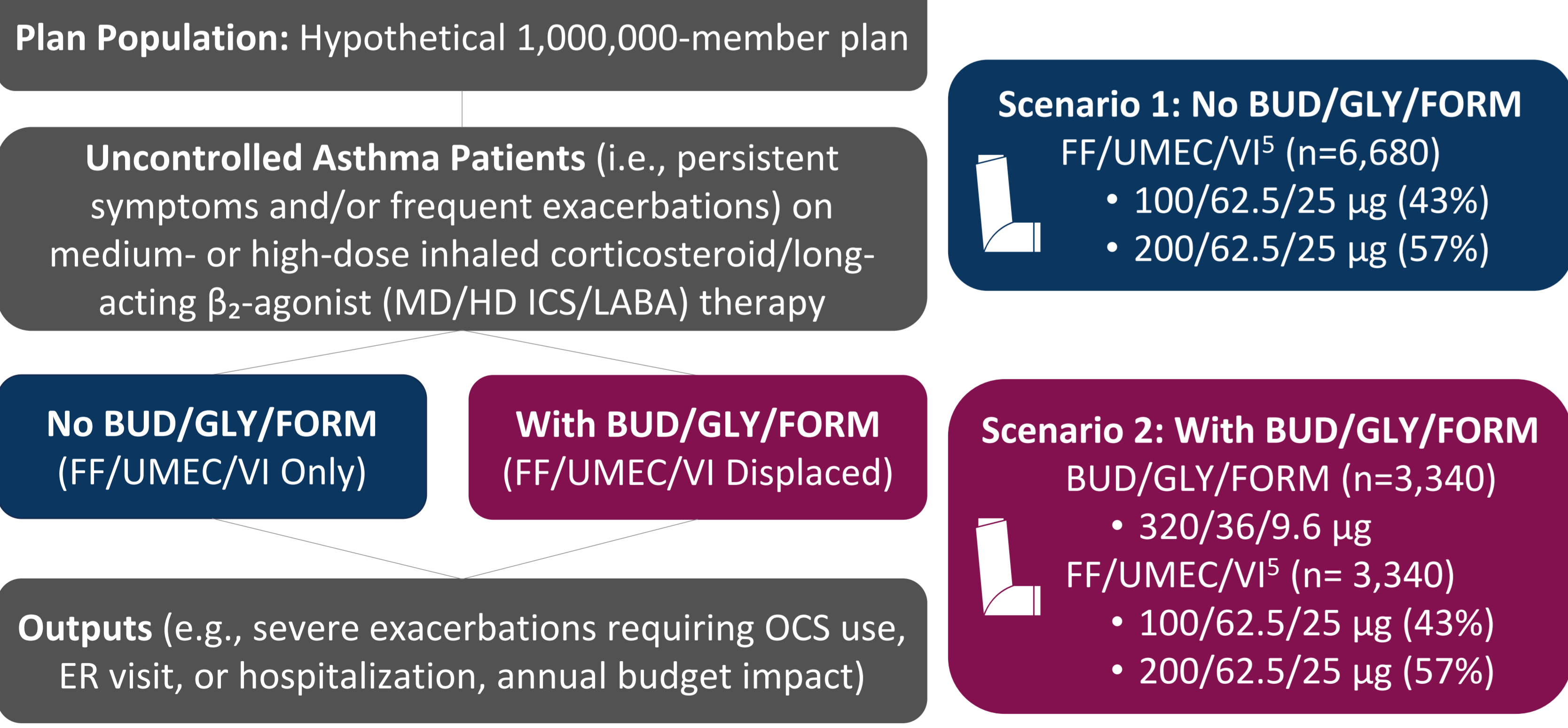
Poster Code: EE287

## Why did we perform this research?

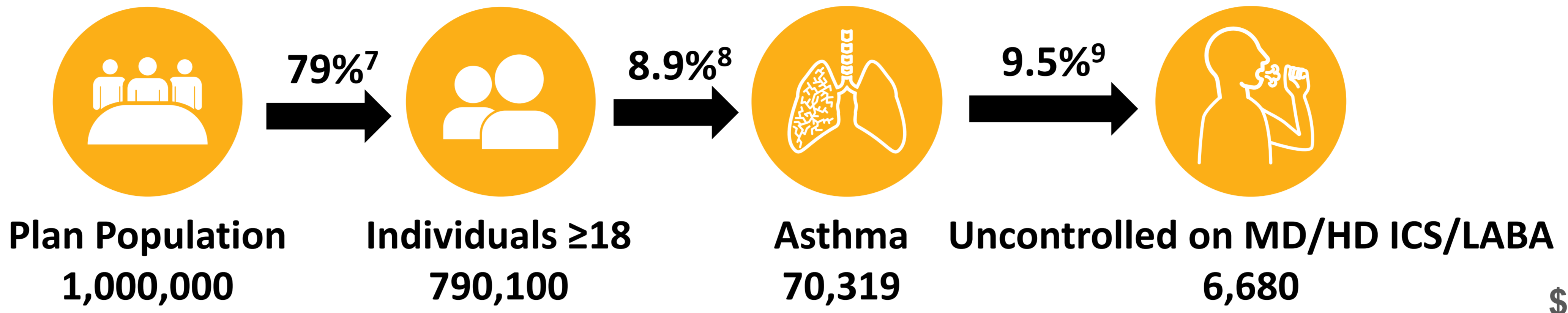
- Asthma imposes substantial burden on over 26 million patients in the U.S.<sup>1-3</sup>
- Single-inhaler triple therapies with a long-acting muscarinic antagonist offer important clinical benefits, yet comparative economic evaluations are limited.<sup>4,5</sup>
- Objective:** For patients moving to triple therapy, estimate the potential impact of introducing Budesonide/Glycopyrrolate/Formoterol Fumarate (BUD/GLY/FORM) compared to Fluticasone Furoate/Umeclidinium/Vilanterol (FF/UMEC/VI).

## Methods

- 3-year budget impact model** for a U.S. payer plan (1,000,000 members)
- An indirect treatment comparison informed severe exacerbation rates.<sup>6</sup>
- Costs:** maintenance inhaler therapy, exacerbation-related emergency room (ER) visits, hospitalizations, and oral corticosteroid (OCS) use (Figures 1-2).
- Output:** incremental annual costs and per member per month (PMPM) impact.

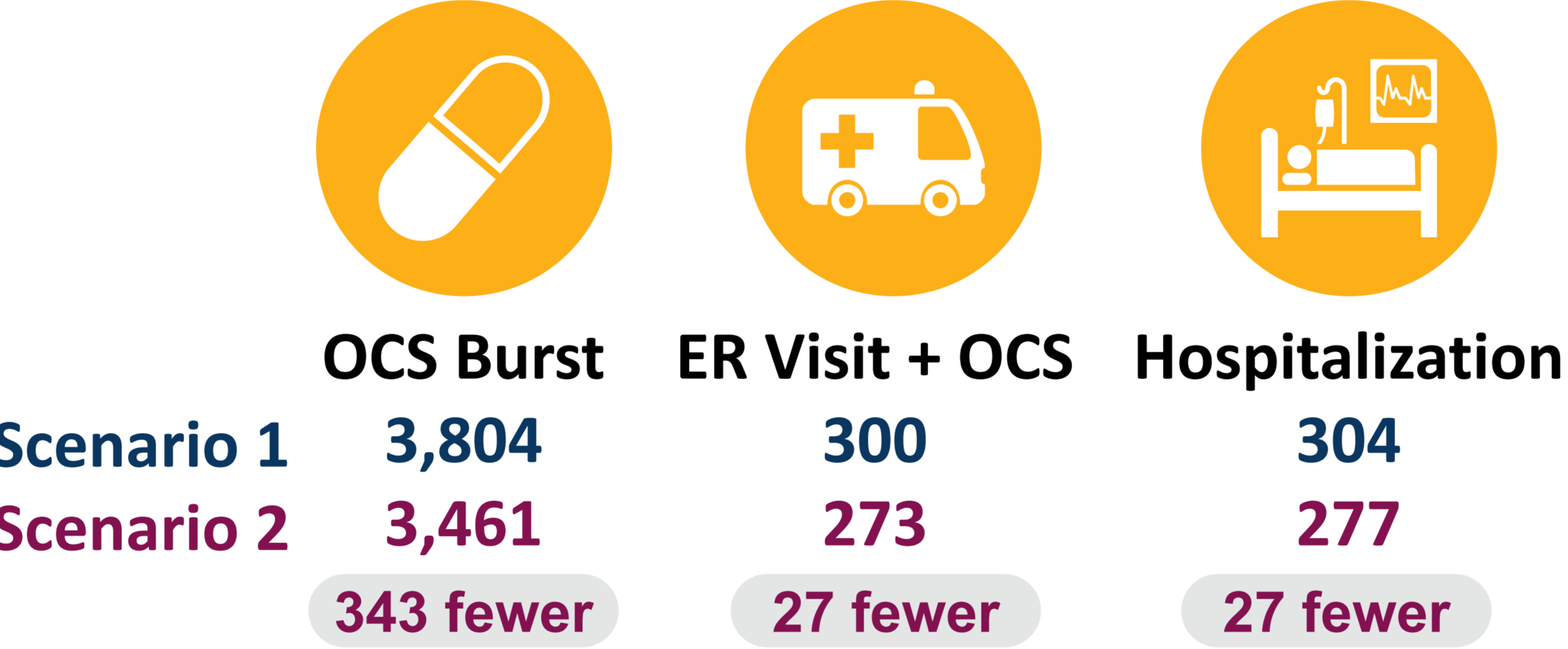


## Results



6,680 eligible patients were identified in a 1,000,000-member U.S. health plan.

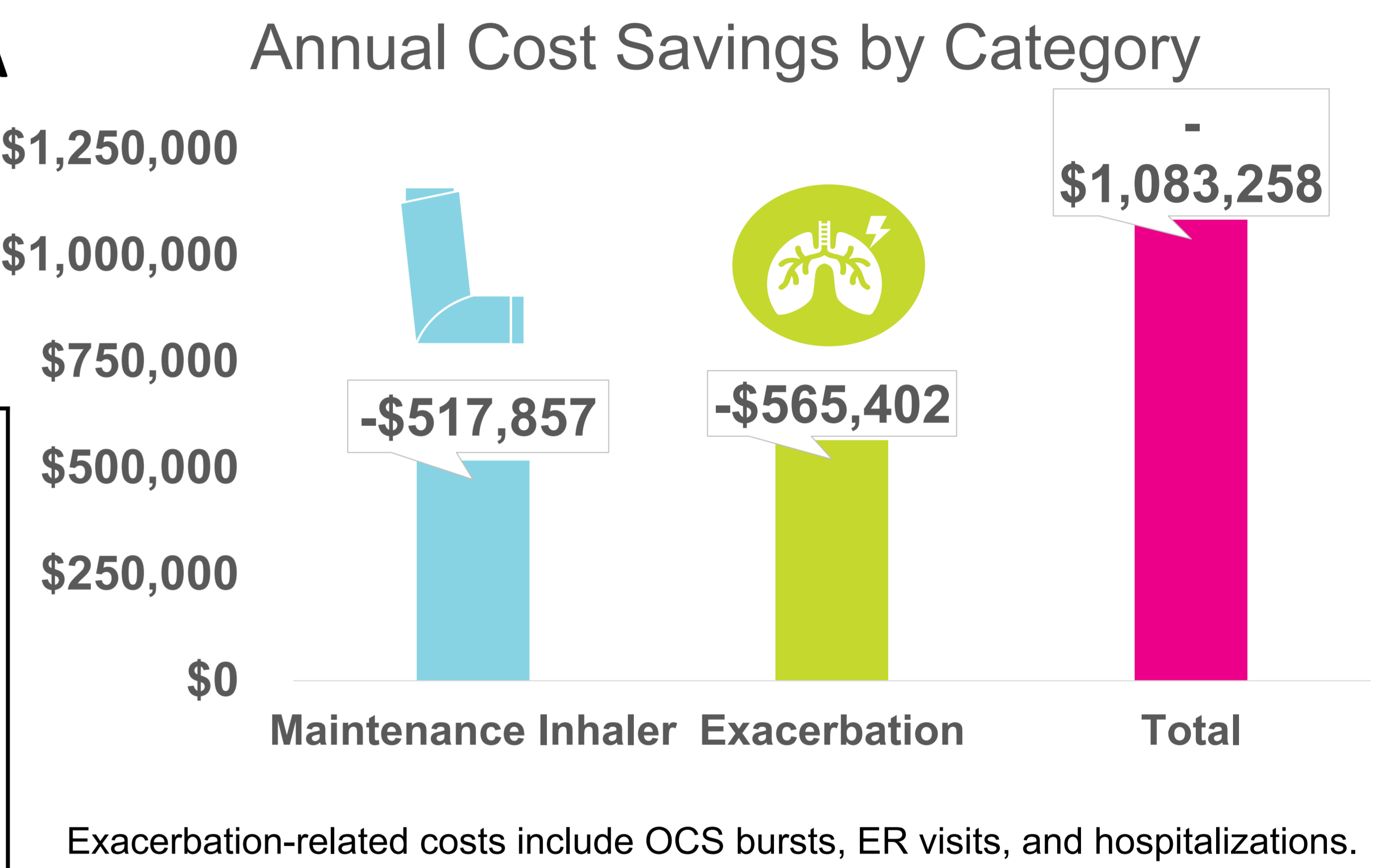
Figure 1. Severe Exacerbations per Year by Scenario



Introduction of BUD/GLY/FORM was associated with **397 fewer severe exacerbations annually** (Figure 1) and ~100 hospital bed days avoided annually (~4 days/stay).<sup>10</sup>

Three-Year Cumulative Events		
Total	13,222	12,032
OCS Burst	11,411	10,384
ER Visit + OCS	899	818
Hospitalization	912	830
<b>Difference</b>		1,190

Figure 2. Budget Impact Breakdown of Replacing FF/UMEC/VI with BUD/GLY/FORM



**Net Budget Impact**  
-\$3,249,775 (3-Year Cumulative)  
-\$0.09 PMPM

## Conclusion

- BUD/GLY/FORM reduced severe exacerbations, resulting in 397 fewer events annually in a 1,000,000-member U.S. health plan.
- Reductions included 343 fewer OCS bursts, 27 fewer ER visits, and 27 fewer hospitalizations, corresponding to ~100 hospital bed days avoided annually.
- Lower exacerbation-related utilization and maintenance inhaler costs generated net savings of ~\$1.0M annually (-\$0.09 PMPM; ~\$3.2M over 3 years).
- BUD/GLY/FORM represents a clinically effective and economically favorable option for payers managing uncontrolled asthma.

### Abbreviations

**BUD/GLY/FORM**, budesonide/glycopyrrolate/formoterol fumarate; **ER**, Emergency Room; **FF/UMEC/VI**, fluticasone furoate/umeclidinium/vilanterol; **HD**, High Dose; **ICS/LABA**, Inhaled Corticosteroid/Long-acting  $\beta_2$ -agonist; **MD**, Medium Dose; **OCS**, Oral Corticosteroids; **PMPM**, Per Member Per Month; **U.S.**, United States

### Acknowledgments

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- The authors acknowledge Paul Steel for medical writing support.

### Disclosures

- WVP declares personal fees and equity holdings with Stage Analytics. Unrelated to this work, WVP has also received funding support from PhRMA Foundation, BMS, and AbbVie.
- HGD, KW, ES, CE, and KP are employees of AstraZeneca.
- BGC and PS are employees of Stage Analytics, which received funding from AstraZeneca for conducting this study.

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## Annual Severe Exacerbation Rates

- **BUD/GLY/FORM 320/36/9.6 µg**
  - 0.541<sup>4</sup> (\$141.35/patient)
- **FF/UMEC/VI 100/62.5/25 µg + 200/62.5/25 µg (pooled)**
  - 0.660 (\$168.28/patient)
    - **Rate Ratio = 0.82<sup>6</sup>**
    - Annualized rate = 0.660 (0.541/0.82)

## Exacerbation Resource Use and Costs

	OCS*	ER Visit*	Hospitalization*
Percent of severe exacerbations	86.3%	6.8%	6.9%
Cost Estimates** <sup>11</sup>	<b>\$109.11</b>	<b>\$584.66</b>	<b>\$18,717.07</b>

\*Provisional data from KALOS/LOGOS; the same distribution was applied for FF/UMEC/VI and BUD/GLY/FORM.

\*\*Exacerbation costs were sourced from data on file and inflated from 2017 to 2025 using Federal Reserve Economic Data (FRED) Consumer Price Index (1.218).<sup>11,12</sup>

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