Economic Feasibility of 'Pay One Price': An Analysis of Three Biosimilar Molecules with Different Prices and Indicated for Rheumatoid Arthritis in a Medium Size HMO

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Francisco Prota, Ph.D [1], Ricardo Bueno, BA, MHA, PhD[2], Nanci Utida, MD[3].

1 - Pontifical Catholic University of Campinas (PUCCAMP), CAMPINAS, Brazil, 2 - Graduate Program in Corporate Governance (MP-FMU), São Paulo, Brazil; Public Policy Program of School of Public Administration (DDPP-ENAP), São Paulo, Brazil, 3 - Assoc. Dir, Medical Affairs of Organon Brazil; Faculty of Public Heath USP, São Paulo, Brazil.

INTRODUCTION

Rheumatoid arthritis (RA) is a chronic inflammatory disease that affects approximately 0.5% of the global population, with 25% of cases progressing to moderate or severe stages, requiring biological therapy for effective management. The high cost of biologic agents, particularly biosimilars, poses a significant challenge for healthcare systems, leading to disparities in treatment access and budget constraints.

OBJECTIVE

To evaluate the feasibility of a “Pay One Price” pricing model for biosimilar agents used in rheumatoid arthritis (RA) treatment, focusing on Adalimumab, Infliximab, and Etanercept.

METHODS

The analysis used medication prices regulated by Brazil’s Chamber for the Regula=on of the Medicine Market (CMED), a national reference for drug pricing. Biosimilar agents included Adalimumab, Infliximab, and Etanercept, with estimated usage percentages of 65%, 15%, and 20%, respectively, based on global sales data. RA prevalence was estimated at 0.5% of the population, with 25% developing moderate to severe cases requiring biological therapy. The analysis considered a cohort of 100,000 patients, focusing exclusively on medication costs during the maintenance phase over one year.

RESULTS

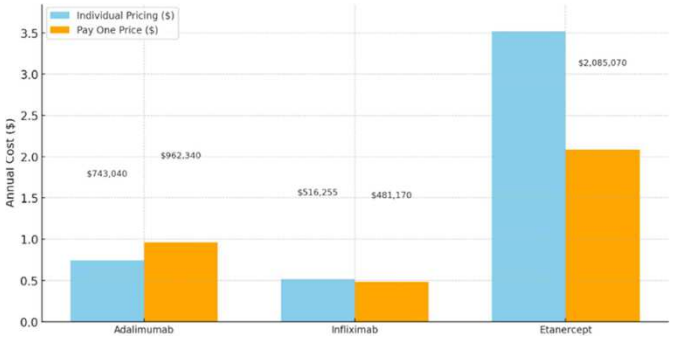
From the estimated cohort, approximately 125 patients were eligible for biological therapy. Annual costs for the three biosimilar agents were calculated based on recommended dosages: Adalimumab cost $247.68 (3,000 doses/year), Infliximab cost $344.17 (1,500 doses/year for a patient weighing ~70kg), and Etanercept cost $540.88 (6,500 doses/year) – Table 1.

Table 1. Annual Cost of Biosimilars

Medication	Doses/Year	Cost per Dose ($)	Annual Cost ($)	Weighted Cost ($)
Adalimumab	3,000	247.68	743,040	160.99
Infliximab	1,500	344.17	516,255	51.62
Etanercept	6,500	540.88	3,515,720	108.17

Considering these costs and their weighted usage proportions, the total costs per agent were $160.99 for Adalimumab, $51.62 for Infliximab, and $108.17 for Etanercept. The proposed “Pay One Price” model, calculated as a weighted average, resulted in a uniform price of $320.78 per dose. Annual expenditures totaled $157,895,469 under standard pricing and $139,322,188 with the “Pay One Price” model, leading to estimated savings of $18,573,281 – Figure 1.

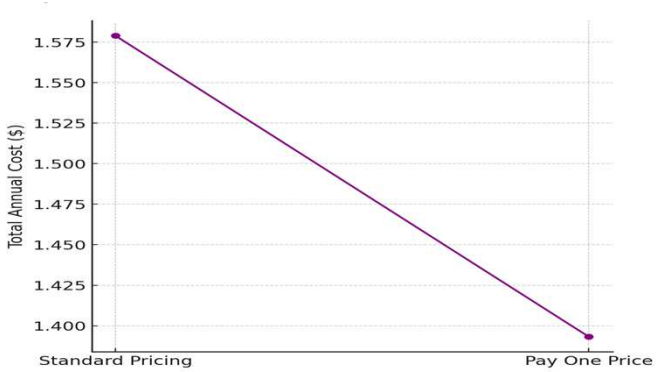
Figure 1. Cost Comparison - Conventional vs. "Pay One Price" Model



This highlights the economic feasibility of the proposed model, reducing price disparities and optimizing healthcare expenditures – Figure 2.

RESULTS

Figure 2. Cost Savings



CONCLUSION

The implementation of the “Pay One Price” pricing model for biosimilars in RA treatment proved economically feasible. It reduces cost disparities between agents, optimizes overall healthcare spending, improves budget predictability, and ensures equitable access to effective therapies. Additionally, it supports be]er allocation of healthcare resources, benefiting both patients and healthcare systems.

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