Budget impact analysis of upadacitinib for moderate-to-severe atopic dermatitis for social security and private third-party payers in Argentina.

Natalia Espinola MSc¹, Federico Rodriguez Cairoli MD¹, Carlos Rojas-Roque MSc¹, Paula Luna MD², Diego Kanevsky, MSc³, Valeria Migliazza³, Andrés Pichon-Riviere MD MSc PhD¹

¹Instituto de Efectividad Clínica y Sanitaria, Buenos Aires Argentina, ²Hospital Alemán, Buenos Aires Argentina ^{3,}AbbVie Argentina, Buenos Aires.

OBJECTIVE

To estimate the budget impact of upadacitinib 15 mg and 30 mg for treating adults and adolescents patients with moderate-to-severe atopic dermatitis (AD) and inadequate response to topical and non-targeted systemic immunosuppressive therapies, for social security and private third-party payers in Argentina

CONCLUSIONS



The incorporation of upadacitinib 15mg and 30mg for moderate-to-severe AD patients with an inadequate response to topical and non-targeted systemic immunosuppressive therapies was associated with net savings for social security and private third-party payers in Argentina. These findings are informative to support policy decisions aimed to expand the current treatment landscape of AD.

DISCLOSURES

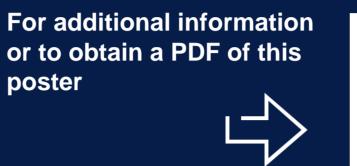
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Natalia Espinola, Federico Rodriguez Cairoli, Andrés Pichon Riviere, Carlos Rojas-Rogue declare that they have no conflict of interest.

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INTRODUCTION

- Atopic dermatitis (AD) is a common chronic pruritic inflammatory skin disease frequently associated with an elevated serum immunoglobulin E (IgE) level and a personal or family history of atopy¹
- Although the treatment is not curative, it aims to reduce symptoms (itching and skin lesions), prevent
 exacerbations, and minimize therapeutic risks. According to international and local practice
 guidelines,7 if conventional therapies are not effective, patients with moderate to severe AD would be
 candidates for receiving other systemic therapies, such as biologic drugs directed against IL4/IL13
 (dupilumab).
- Likewise, other therapies are proposed, which unlike dupilumab have an anti-Jak intracellular action. Patients could benefit of these drugs given the efficacy demonstrated in experimental studies. Upadacitinib is a selective oral JAK inhibitor approved in the United States, Europe, Argentina, and other countries for the treatment of AD.
- However, no economic evaluation have been found in Argentina that described the budgetary impact of the incorporation of the drug upadacitinib, nor its cost-effectiveness in AD.

METHODS

- A budget impact analysis was done using a cost difference framework for the respective third-party
 payer over five years. A hypothetical cohort of 1,000,000 covered subjects was modeled.
- The clinical and epidemiological parameters were obtained through comprehensive local e international literature review and the consensus of a group of expert using the modified Delphi technique. The eligible target population for upadacitinib is shown in Table 1.
- The costs were obtained through a micro-costing approach. The unit acquisition cost of the therapies is estimated from the retail price and divided by 1.7545 to reflect the ex-factory price. The retail price was obtained from public databases that report the retail price of drugs marketed in Argentina. The identification and measurement of health resources (amounts and rates of use), and the estimation of market share (Table 2) arise from the review of specialized literature and consultation with a local expert, and was validated by the Panel Delphi. The unit costs arise from the IECS Unit Cost database (BCU-IECS). All the costs are reported in Argentine pesos (\$) as for August 2021 (1 US\$ = 97.21 Argentine pesos). The time horizon is 5 years.
- The laboratory output price of upadacitinib 15mg is 96,538, and that of 30mg is 177,511 (as this last price was not yet available at the time of reporting, it is assumed based on the total maintenance cost of dupilumab).

RESULTS

The budget impact results are summarized in Figure 1. The first year budget upadacitinib 15 mg and 30 mg are expected to reach \$955,950,134, which is \$32,812,302 less than current status without upadacitinib. This is equivalent to a saving of 3.3% of the annual budget. In total, in these five years, this budget accumulates savings of \$359,782,329, which is equivalent to a saving of 7.3% of the total accumulated budget in terms of Social Security perspective. Similar results were obtained for the private sector.

Table 1. Target Population

Parameter	Population (N)	Source
Plan Population	1,000,000	Assumption
Adolescents + Adults	805,620	Argentinian Census
AD Incident cases	3,437	Delphi panel based on Bylund et al.
AD Prevalent cases	39,528	Delphi panel based on Barbarot et al.
Total AD cases	42,965	
Total diagnosed cases	22,170	Delphi panel
Total Moderate to Severe cases	8,114	Delphi panel based on Barbarot et al.
Immunomodulatory therapy eligible population – Social Security	439	Delphi panel
Immunomodulatory therapy eligible population – Private sector	454	Delphi panel

Table 2. Market Share

Parameter	Current scenario	Project escenario					
	Year 1 -Year 5	Year 1	Year 2	Year 3	Year 4	Year 5	
Upadacitinib 15 mg	0.0%	7.9%	13.9%	18.8%	21.4%	23.4%	
Upadacitinib 30 mg	0.0%	8.9%	17.9%	24.8%	27.4%	29.4%	
Dupilumab	100%	83.2%	68.2%	56.4%	51.2%	47.2%	
Total	100%	100%	100%	100%	100%	100%	

Figure 1. Annual budget impact per member per month (PMPM). Perspective Social Security and private sector. Costs expressed in Argentine pesos of August 2021.

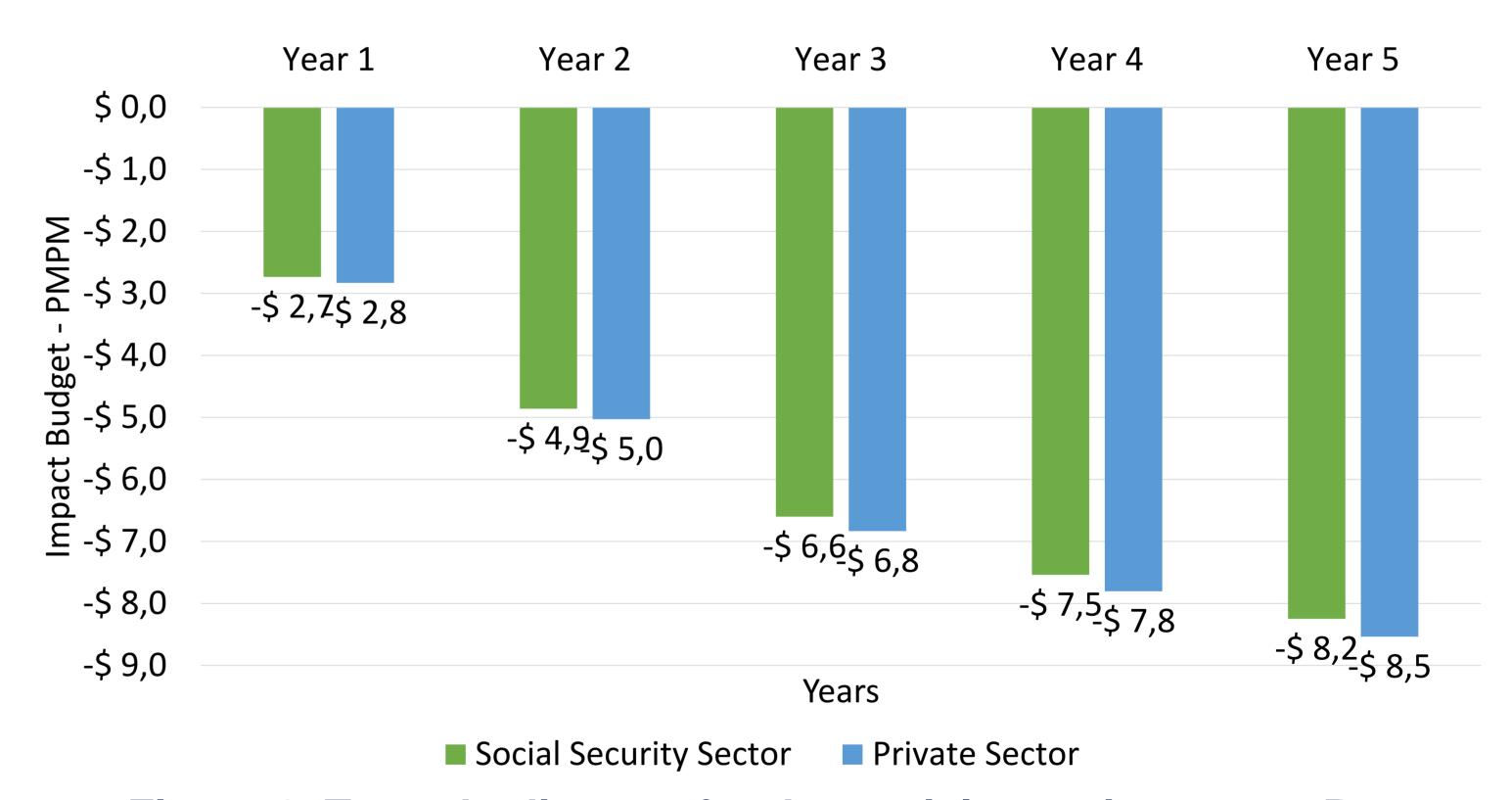
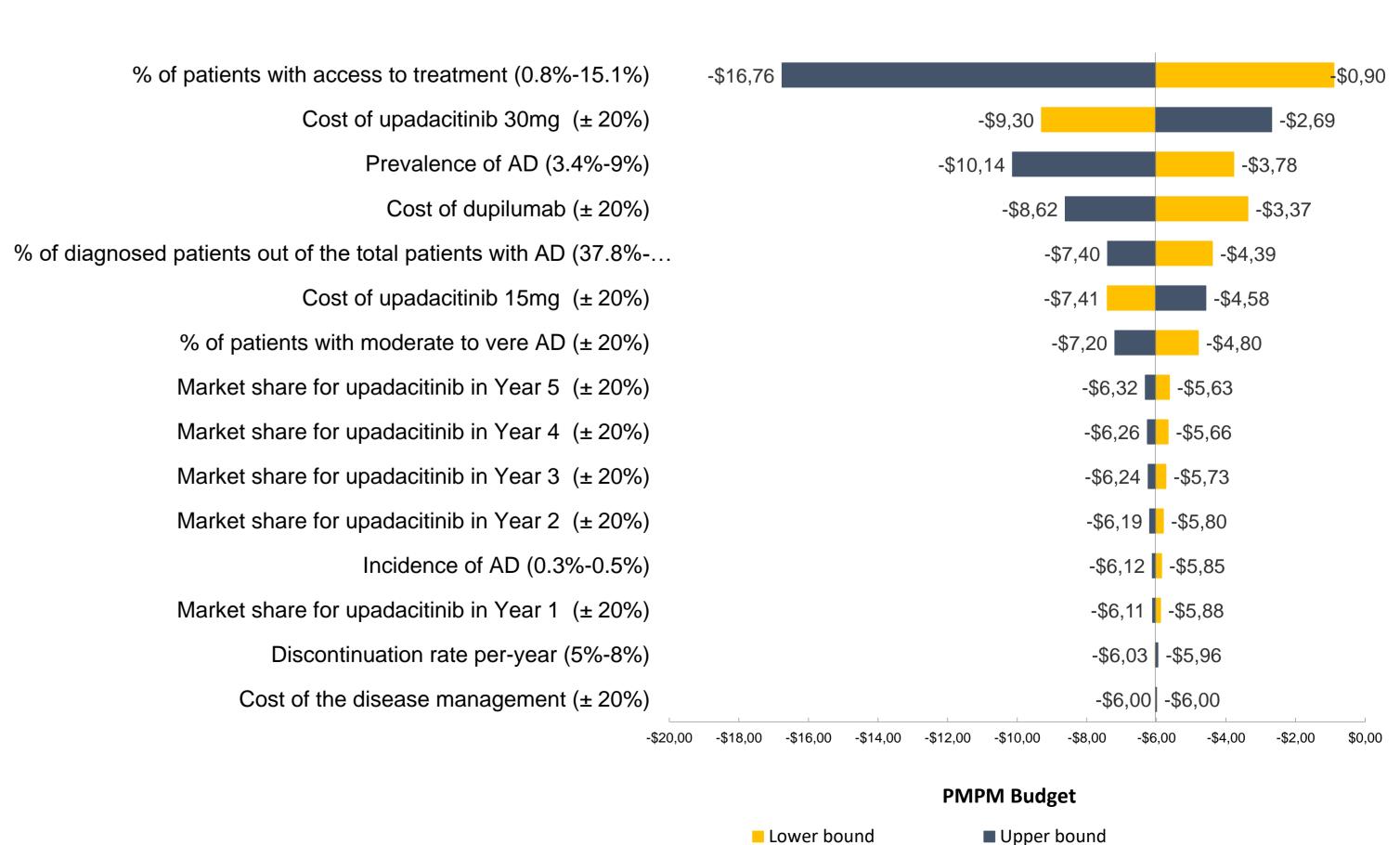


Figure 2. Tornado diagram for the social security sector. Permember per-month budget impact base case results: \$6



[4] Dato proveniente de panel Delphi con base en Bylund [5] Dato proveniente de panel Delphi [6] Dato proveniente de panel Delphi con base en Barbarot, [7] Dato proveniente de panel Delphi