# **Costs and Outcomes of Implementing a Prevention Program With** the HD-QIV Vaccine in a Brazilian Healthcare Payer: A Real-World Analysis

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## INTRODUCTION

• Promoprev is a program established by the Brazilian National Supplementary Agency (ANS) to promote prevention initiatives at the healthcare system.<sup>1</sup>



- Elderly individuals (older than 60 years old) are highly susceptible to Influenza infections due to immunosenescence and comorbidities, therefore it is crucial to enhance healthcare assistance for this population.<sup>2</sup>
- Influenza infections and their complications beyond classic respiratory symptoms in the elderly are associated with significant morbidity and substantial burdens on healthcare systems, individuals, their families, and society.<sup>3</sup>
- As part of Promoprev a healthcare payer executed an immunization program aimed at elderlies with differing strategies: Standard-dose inactivated influenza vaccines, both trivalent and quadrivalent (SD-TIV and SD-QIV, respectively), and high-dose quadrivalent inactivated influenza vaccine (HD-QIV).

### OBJECTIVE

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This retrospective economic study aimed to assess the outcomes (outpatient visits; hospitalizations related to influenza; all-cause events) and costs of an elderly immunization program using a high-dose quadrivalent inactivated influenza vaccine (HD-QIV) within a Brazilian private healthcare plan during influenza season.

### **METHODS**

- An anonymized database from a healthcare plan in the northeastern region of Brazil was analyzed, 246 patients were immunized with the high-dose vaccine in 2023, and cost data were compared to the same cohort immunized with standard-dose SD-TIV or SD-QIV vaccines in the previous seasonality period of 2022.
- Total cost data were also evaluated in a group of 210 unvaccinated patients aged  $\geq$  60 years during the period from June 2022 to May 2023.



- Outpatient visits and hospitalizations related to influenza and all-cause events were assessed by analyzing patient records grouped according to 189 ICD codes and the TUSS code (unified supplementary health terminology – medical procedure lists).
- The analysis enabled the estimation of healthcare resource utilization from the payer's perspective using the healthcare insurance database.
- In addition, a satisfaction survey was conducted at the seventh month after vaccination with HD-QIV.



ICD: International Classification of Diseases. HD-QIV: high-dose quadrivalent influenza vaccine. SD-QIV: standard-dose quadrivalent influenza vaccine. SD-TIV: standard-dose trivalent influenza vaccine. TUUS: unified supplementary health terminology.

#### RESULTS



All-cause hospital costs for HD-QIV-vaccinated patients decreased by 25% vs SD-vaccinated and 83% vs non-vaccinated patients. The direct medical costs were 287,771 BRL for HD-QIV; 381,396 BRL for SD and 1,740,200 BRL for non-vaccinated patients (Figure 2 and 3). Overall, no influenzarelated hospitalizations costs were reported for HD-QIV patients during the follow-up period.





HD-QIV: high-dose quadrivalent influenza vaccine. SD-QIV: standard-dose quadrivalent influenza vaccine. SD-TIV: standard-dose trivalent influenza vaccine.

Patient satisfaction was assessed using scores from 1 to 10, with 1 to 6 considered detractors, 7 to 8 neutral and 9 to 10 promoters (Figure 4). According to the survey, 90% of the patients who were vaccinated with HD were satisfied with the program, giving a score between 9 and 10, in addition to 2% were neutral and justified that they would like home vaccination.







### CONCLUSIONS



• The use of high-dose influenza vaccine in elderly population has shown not only to prevent more influenza-related events, but also reduces hospitalizations due to other causes, leading to real economy and healthcare plan sustainability improvement. Reducing healthcare costs by around 25% when patients used the high-dose vaccine compared to the standard dose vaccine, and this cost reduction was even greater, 83% when compared to non-vaccinated patients in the previous year.

#### REFERENCES

1. PROMOPREV - Programa de Promoção da Saúde e Prevenção de Riscos e Doenças available at https://www.gov.br/ans/ptbr/assuntos/operadoras/compromissos-e-interacoes-com-a-ans-1/programas-ans-1/promoprev

2. Haq K, McElhaney JE. Immunosenescence: Influenza vaccination and the elderly. Curr Opin Immunol. 2014 Aug;29:38-42. doi: 10.1016/j.coi.2014.03.008. Epub 2014 Apr 25. PMID: 24769424.

3. Araújo R, Watanabe S, Boiron L, Pereira AC, Asano E. Impacto econômico da infecção por influenza no Brasil: uma análise sob a perspectiva dos sistemas de saúde e da sociedade em 2019. Jornal Brasileiro de Economia da Saúde. 2021;13(3):300-9.

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