Poster code: EE440

Evaluating the Economic Benefit of Improved High-Dose Influenza Vaccine Coverage in Older Adults in Tokyo, Japan

Kobayashi Mizuha, MSc[1], Gerald Moncayo, PhD.[2*], Wang Xinyu, MBA, PhD[1]

[1]Sanofi, Tokyo, Japan, [2]Sanofi, Lyon, France

***Presenting author:** Gerald Moncayo (Gerald.Moncayo@sanofi.com)

Increasing VCR is essential for reducing healthcare expenditure and alleviating operational pressures during the influenza season

OBJECTIVE

To investigates the potential effect of improving vaccine coverage rate (VCR) levels on the budget impact of implementing high dose (HD) influenza vaccine compared to standard dose (SD) influenza vaccine in older adults in Tokyo, Japan

CONCLUSIONS

- Higher VCR coupled with comprehensive consideration of influenza's complications may result in less pressure on healthcare budget
- HD influenza vaccine has significant potential for reducing healthcare expenditure, mitigating the burden on healthcare providers during the flu season, and contributing towards a sustainable healthcare system

BACKGROUND

- In Japan, influenza annually infects 4% of the population, causing a substantial healthcare resource utilization (HCRU) with incidence proportions of 6.2 emergency room (ER) visits, 3950 outpatient visits, and 66.3 hospitalizations for influenza per 100,000 individuals[1]. Moreover, the incidence and mortality rates markedly increase in older age groups[1]
- Given the superior efficacy of HD vs. SD vaccine[2], HD influenza vaccine has been approved for older adults in Japan in December 2024[3]
- However, influenza VCR in Japan have significantly fluctuated, influenced by policy shifts, public health crises such as COVID-19, and emerging vaccine fatigue. The economic impact of these varying VCRs remains unclear

METHODS

Data Source

- 2023 national and prefectural VCR was analyzed from the portal site of Official Statistics of Japan[4], complemented by historical records from Ministry of Health, Labour and Welfare of Japan[5]

Study Model

- The budget impact model was created integrating clinical outcomes (i.e., general practitioner (GP) visits, ER visits, and hospitalizations) and associated costs from a Japanese Burden of Disease study **(Table 1)**[1]
- All costs were reported in 2024 Japanese yen (¥)

Age Group

Older adults (≥65 years) of Tokyo (approximately 3.20 million)[6]

Scenarios

- Influenza only
- Pneumonia & influenza (P&I)

VCR time frame and Data Points

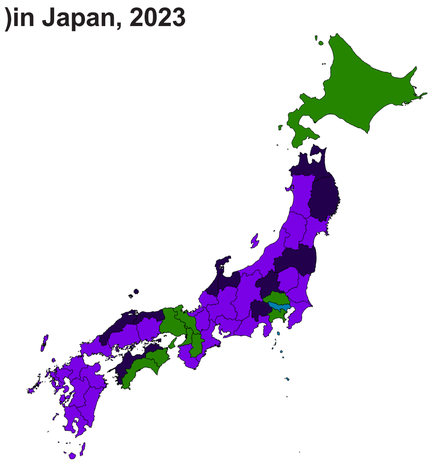
- **Time frame:** 2001-2023
- **Latest prefectural VCR: 48.4% (2023 Tokyo[4]), (Figure 1)**
- **National VCR Records[5]: 28.0% (2001, Lowest)**; **65.6% (2020,Highest)**; **54.3% (2023, Recent) (Figure 2)**

Table1. Unit costs[1]

Event	Cost (¥)
ER visit[a]	40,975.1
GP visit[a]	13,594.0
Hospitalization*	
Influenza[a]	679,552.4
Pneumonia & Influenza[c]	795,620.2

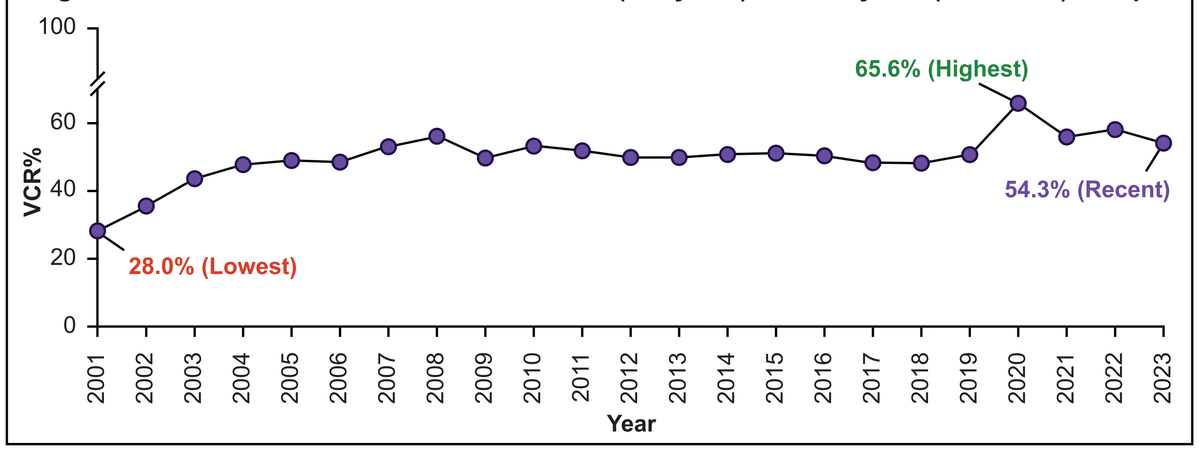
*60-day costs per hospitalization
[a]Defined as ICD-10 diagnostic codes J09–J11; [c]Defined as ICD-10 diagnostic codes J09–J18

Figure 1. Influenza VCR among older adults (aged >65+)in Japan, 2023



Note: The categorization of VCR into High, Medium, and Low is for illustrative purposes only and does not reflect any established criteria or validated classification system

Figure 2. National Influenza VCR for older adults (>65 years) over the years (2001-2023) in Japan



RESULTS

The transition from SD to HD yielded clinical impact and cost reductions across all VCR thresholds in both approaches **(Figure 3 and 4)**

Using the latest prefectural VCR of Tokyo (48.4%), the analysis estimated savings of ¥130.41 million in GP visits and ¥1.94 million in ER visits. Reductions specific to influenza-related hospitalizations reached ¥ 0.30 billion, while the P&I scenario resulted in higher hospitalization cost reductions of ¥2.06 billion

Among the three VCRs analyzed, the highest VCR to date (65%) showed lower budget impact across all health outcomes **(Figures 3 and 4)**, with additional hospitalization savings of **¥0.07 billion** in influenza only and **¥0.48 billion** in the P&I approach compared to the current national VCR

Figure 3. Healthcare Cost Reductions across VCR Categories

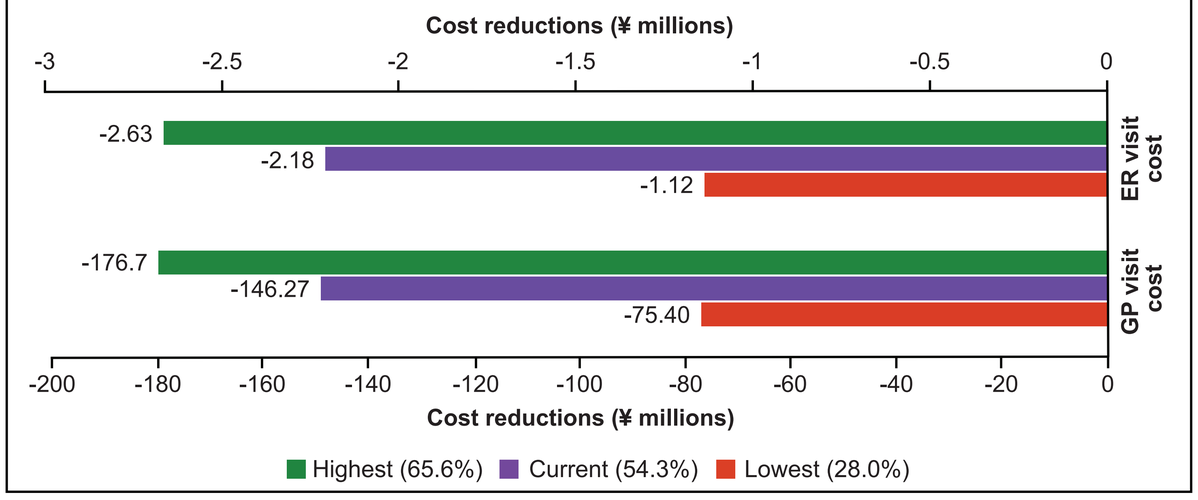
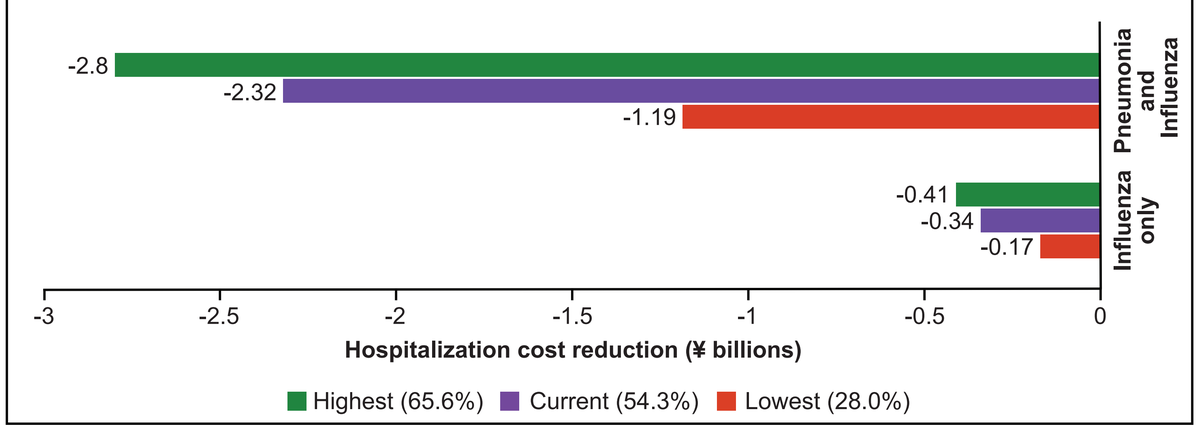


Figure 4. Hospitalization Cost Reductions across VCR Categories by Hospitalization Approaches



STRENGTHS

- This is the first budget impact analysis of HD influenza vaccine among Japanese older adults across Japanese prefectures and municipalities
- The study employs a comprehensive budget impact model using real-world VCR data from official Japanese sources across multiple VCR, while considering both influenza-specific and broader P&I outcomes across various healthcare settings

LIMITATIONS

- Unit costs were derived from a study that aggregated multiple HCRU events across four influenza seasons into a single event for cost calculations, potentially incorrectly estimating the true burden of influenza and its potential complications
- Economic analysis limited to influenza and pneumonia outcomes, excluding broader cardio-respiratory implications from influenza

REFERENCES: 1. Arashiro T et al. Influenza Other Respir Viruses 2024;18(11):e70032; **2.** DiazGranados CA et al.N Engl J Med. 2014;371(7):635–645; **3.** Sanofi. The high-dose influenza HA vaccine "Efluzeld® intramuscular injection" has obtained domestic manufacturing and sales approval as a new preventive option for influenza in adults aged 60 and above; 2025. Available from: Sanofi press release; **4.** Statistics Bureau of Japan (Statistics Bureau); **5.** Ministry of Health, Labour and Welfare of Japan (MHLW); **6.** e-Stat. (2025). Official Statistics of Japan (e-stat Japan)

ABBREVIATIONS: ER, Emergency room visit; GP, General practitioner visit; P&I, Pneumonia & influenza; VCR, Vaccine coverage rate

FUNDING: This study was funded by Sanofi

DISCLOSURES: MK, GM and XW are employees of Sanofi and may hold stock or stock options

ACKNOWLEDGEMENTS: Medical writing support was provided by Vengal Rao Pachava, Sanofi, India