



Cost-benefit of influenza vaccination in preventing sudden cardiac arrest amongst Australian adults

CONTEXT

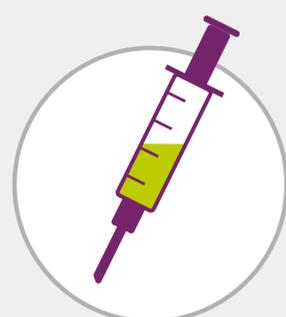
Research strongly suggests that seasonal flu exerts a significant impact on the cardiovascular (CV) system, leading to events such as acute myocardial infarction (AMI)

Sudden cardiac arrest (SCA) can be a presentation of AMI in up to 1 in 5 people with AMI. Survival rates from SCA, often a first sign of CV disease, remain poor

Given that influenza vaccination protects against influenza-triggered CV events, the authors hypothesized that preventing influenza infections may also reduce SCA cases

STUDY AIM

To estimate the economic cost-benefit of funding influenza vaccination to Australian adults aged 50–64 years and predict its effect on SCA deaths and hospitalization



METHODS



Australian Institute of Health and Welfare data on SCA hospitalizations were combined with survival rates, vaccination rates, and cost parameters from published sources to develop an economic cost-benefit model



Costs were evaluated from a governmental perspective, covering vaccine expenses and general practitioner consultations



Averted deaths were estimated through the age-adjusted value of a statistical life

KEY FINDINGS

among individuals aged 50–64 years



Annual SCA cases



Annual SCA hospitalizations



Annual SCA deaths

Average cases between 2002–2017

9,730

1,870

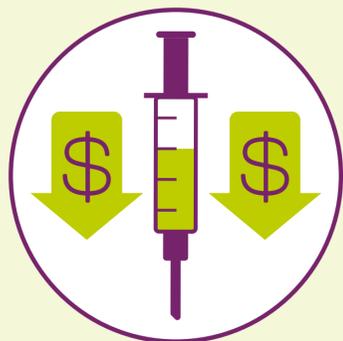
8,523

Predicted impact of influenza vaccination in 50-64-year-olds

-1,449
↓15%

-278
↓15%

-1,269
↓15%



- Universal **vaccination for adults aged 50–64** is cost-beneficial, potentially **saving nearly AUD 4 billion annually**, with an incremental **benefit-cost ratio of 59.94**
- A wide range of estimates tested in a sensitivity analysis confirms that **extending vaccination to the 50–64 year age group remains cost-beneficial**
- **The majority of savings arise from averted deaths**, reflecting the significant impact of **preventing SCA triggered by influenza infection** and the **substantial gain in life years** that would otherwise have been lost

Reducing SCA through extended vaccination is likely to be a cost-beneficial policy. SCA deaths account for a significant economic loss due to the high mortality rate, which was far greater than the costs saved through averted hospitalizations

To download a copy of this infographic visit the Nivel FluCov website:

[FluCov: Influenza-COVID-19, understanding and communicating the impact of COVID-19 on influenza activity | Nivel](#)

AMI, acute myocardial infarction; AUD, Australian dollar; CV, cardiovascular; SCA, sudden cardiac arrest.

Reference: Wei J, et al. Cost-benefit of influenza vaccination in preventing sudden cardiac arrest amongst Australian adults. *Vaccine* 2024;42(7):1593–1598