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145 - EFFECTIVENESS OF HIGH-DOSE VS. STANDARD-DOSE INFLUENZA VACCINES AGAINST SEVERE RESPIRATORY AND CARDIOVASCULAR OUTCOMES IN ADULTS ? 80 YEARS

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Resumen

Background/Objectives: Vaccination is a key measure to prevent severe influenza in adults aged ? 80 years. Due to immunosenescence, enhanced formulations such as high-dose vaccines (HD-IIV) are recommended in the elderly. Real-world data on their effectiveness in adults aged ? 80 years remain scarce. Our aim was to quantify the relative vaccine effectiveness (rVE) of HD-IIV versus standard-dose vaccines (SD-IIV) in preventing severe influenza disease in adults aged ? 80 years.

Methods: Retrospective, population-based cohort study conducted in Andalusia, Spain, during the 2024-2025 influenza season, including 279,649 vaccinated adults aged ? 80 years. Data on sociodemographic characteristics, influenza vaccines, chronic diseases and clinical outcomes were taken from the Andalusian health population database. We used a directed acyclic graph to illustrate the relationships between variables. The rVE of HD-IIV versus SD-IIV was estimated using augmented inverse probability weighting models. Hospitalization for osteoporotic fractures or hip replacement surgery was included as a negative control outcome to assess the degree of bias in our estimates.

Results: Compared with SD-IIV, HD-IIV was associated with a lower risk of hospitalization for influenza (rVE = 34.0%; 95%CI = 15.8,52.2). HD-IIV also showed improved effectiveness against laboratory-confirmed influenza (rVE = 43.1%; 95%CI = 24.6,61.7), hospitalization for acute myocardial infarction (rVE = 26.4%; 95%CI = 5.6,47.2), for stroke (rVE = 32.9%; 95%CI = 17.4,47.4), for pulmonary embolism (rVE = 26.7%; 95%CI = 0.7,52.6) and for overall cardiovascular outcomes (rVE = 6.6%; 95%CI = 0.9,12.2). No association was observed for hospitalization due to pneumonia, influenza/pneumonia, heart failure, respiratory outcomes, or in-hospital mortality. The rVE of HD-IIV vs. SD-IIV may have been slightly underestimated but was not found to be significantly biased (-6.4%; 95%CI = -32.6,19.8).

Conclusions/Recommendations: Among adults aged ? 80 years, HD-IIV was more effective than SD-IIV in preventing hospitalization for influenza and severe cardiovascular outcomes (namely, acute myocardial infarction and stroke), supporting its use in this at-risk population. Future studies should include a causal approach, assess additional enhanced vaccine types and analyze outcomes such as quality of life, sequelae and institutionalization.

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