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

N.F. Fernández Martínez, L. Díaz Estévez, M. Rivera Izquierdo, D. Ocaña Rodríguez, D. Moreno Pérez, N. Lorusso

Escuela Andaluza de Salud Pública; Instituto de investigación biosanitaria ibs.GRANADA; CIBER de Epidemiología y Salud Pública; Hospital Universitario Virgen de las Nieves; Universidad de Granada; Centro de Salud Algeciras Norte; Hospital Regional Universitario de Málaga; Dirección General de Salud Pública y Ordenación Farmacéutica, Junta de Andalucía.

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

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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.

Disclosures: MRI has participated in courses and conferences organized by Sanofi and Seqirus. MRI has organized courses with honoraria paid to his institution by Sanofi. DOR has participated in advisory boards, conferences, courses and lectures organized by Sanofi (formerly Sanofi Pasteur) and Seqirus. Sanofi and Seqirus had no role in data collection, analysis, interpretations of results, or writing of the manuscript. Authors NFFM, LDE, DMP and NL have no conflict of interest to declare.

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