Influenza vaccine effectiveness in Europe: Results from the 2022–23 VEBIS (Vaccine Effectiveness, Burden and Impact Studies) primary care multicentre study

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Abstract

Influenza A(H3N2) viruses dominated early in the 2022–23 influenza season in Europe, followed by higher circulation of influenza A(H1N1)pdm09 and B viruses. The VEBIS primary care network estimated the influenza vaccine effectiveness (VE) using a multicentre test-negative study. Primary care practitioners collected information and specimens from patients consulting with acute respiratory infection. We measured VE against any influenza, influenza (sub)type and clade, by age group, by influenza vaccine target group and by time since vaccination, using logistic regression. We included 38,058 patients, of which 3,786 were influenza A(H3N2), 1,548 influenza A(H1N1)pdm09 and 3,275 influenza B cases. Against influenza A(H3N2), VE was 36% (95%CI: 25–45) among all ages, ranged between 30% and 52% by age group and target group. VE against influenza A(H3N2) clade 2b was 38% (95% CI: 25–49). Overall, VE against influenza A(H1N1)pdm09 was 46% (95%CI: 35–56) and ranged between 29% and 59% by age group and target group. VE against influenza A(H1N1)pdm09 clade 5a.2a was 56% (95% CI: 46–65) and 79% (95% CI: 64–88) against clade 5a.2a.1. VE against influenza B was 76% (95%CI: 70–81), overall; 84%, 72% and 71% among 0–14-year-olds 15–64-year-olds and those in the influenza vaccination target group, respectively. VE against influenza B with a position 197-mutation of the hemagglutinin (HA) gene was 79% (95% CI: 73–85) and 90% (95% CI: 85–94) without this mutation. The 2022–23 end-of-season results from the VEBIS network at primary care level showed high VE among children and against influenza B, with lower VE against influenza A(H1N1)pdm09 and A(H3N2).

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