

Influenza vaccine effectiveness against influenza A subtypes in Europe: results from the 2021–22 I-MOVE primary care multicentre study

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October 21, 2022

Abstract

Background: In 2021–22, influenza A viruses dominated in Europe. The I-MOVE primary care network conducted a multicentre test-negative study to measure influenza vaccine effectiveness (VE). **Methods:** Primary care practitioners collected information on patients presenting with acute respiratory infection. Cases were influenza A(H3N2) or A(H1N1)pdm09 RT-PCR positive and controls were influenza virus negative. We calculated VE using logistic regression, adjusting for study site, age, sex, onset date, and presence of chronic conditions. **Results:** Between week 40 2021 and week 20 2022, we included over 11,000 patients of whom 253 and 1595 were positive for influenza A(H1N1)pdm09 and A(H3N2), respectively. Overall VE against influenza A(H1N1)pdm09 was 75% (95%CI: 43–89) and 81% (95%CI: 44–93) among those aged 15–64 years. Overall VE against influenza A(H3N2) was 29% (95%CI: 12–42) and 25% (95%CI: -41–61), 33% (95%CI: 14–49) and 26% (95% CI: -22 to 55) among those aged 0–14, 15–64 and over 65 years, respectively. The A(H3N2) VE among the influenza vaccination target group was 20% (95%CI: -6–39). All 53 sequenced A(H1N1)pdm09 viruses belonged to clade 6B.1A.5a.1. Among 410 sequenced influenza A(H3N2) viruses, all but 8 belonged to clade 3C.2a1b.2a.2. **Discussion:** Despite antigenic mismatch between vaccine and circulating strains for influenza A(H3N2) and A(H1N1)pdm09, 2021–22 VE estimates against circulating influenza A(H1N1)pdm09 were the highest within the I-MOVE network since the 2009 influenza pandemic. VE against A(H3N2) was lower than A(H1N1)pdm09, but at least one in five individuals vaccinated against influenza were protected against presentation to primary care with laboratory-confirmed influenza.

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