



## Influenza vaccine effectiveness (VE) in adults and children in primary care in the United Kingdom (UK): provisional end-of-season results 2017-18

The UK is in the fifth season of introducing a universal childhood influenza vaccine programme. The 2017/18 season saw influenza A(H3N2) circulation with care home outbreaks and increased excess mortality particularly in the elderly, together with circulation of influenza B. As in previous seasons, influenza vaccine effectiveness (VE) was measured using a test-negative case control design through five primary care influenza sentinel swabbing surveillance schemes in England (two schemes), Scotland, Wales and Northern Ireland.

The provisional end-of-season adjusted VE estimates showed an adjusted all age VE of 15.0% (95% CI: -6.3, 32.0) against influenza-laboratory-confirmed primary-care consultations for influenza. Effectiveness was 12.2% (95% CI: -16.8, 34.0) in 18-64 year olds and 10.1% (95% CI: -54.8, 47.8) in ≥65 year olds. VE was 90.3% (95% CI: 16.4, 98.9) against A(H1N1)pdm09 for 2-17 year olds receiving quadrivalent live attenuated influenza vaccine and 60.8% (95% CI: 8.2, 83.3) against influenza B. There was no significant effectiveness against influenza A(H3N2). These findings support the on-going roll-out of the paediatric vaccine programme, but also highlight the importance of effective interventions to protect the adult age-groups. Next year, the vaccine composition is being updated; a new adjuvanted vaccine will be available for older adults and a quadrivalent flu vaccine for younger adults, which protects against both the main B strains and the two main flu A subtypes.

**Table: Adjusted influenza vaccine effectiveness (VE) against medically-attended laboratory confirmed influenza by age group and influenza type in 2017/18, UK.**

| Group                                | A(H3N2) adjusted VE (95% CI) | A(H1N1)pdm09 adjusted VE (95% CI) | B adjusted VE (95% CI) | All adjusted VE (95% CI) |
|--------------------------------------|------------------------------|-----------------------------------|------------------------|--------------------------|
| <b>2-17 year old (LAIV only)</b>     | -75.5<br>(-289.6, 21.0)      | 90.3<br>(16.4, 98.9)              | 60.8<br>(8.2, 83.3)    | 26.9<br>(-32.6, 59.7)    |
| <b>18-64 year old (any vaccine)</b>  | -14.7<br>(-72.7, 23.8)       | 69.1<br>(11.4, 89.2)              | 18.2<br>(-15.1, 41.9)  | 12.2<br>(-16.8, 34.0)    |
| <b>&gt;65 year old (any vaccine)</b> | 16.8<br>(-74.2, 60.3)        | NA                                | 13.2<br>(-68.4, 55.2)  | 10.1<br>(-54.8, 47.8)    |
| <b>All age</b>                       | -16.4<br>(-59.3, 14.9)       | 66.3<br>(33.4, 82.9)              | 24.7<br>(1.1, 42.7)    | 15.0<br>(-6.3, 32.0)     |

CI: confidence interval; VE: vaccine effectiveness; NA: not applicable

\*Adjusted for age-group, sex, month, pilot area and surveillance scheme.