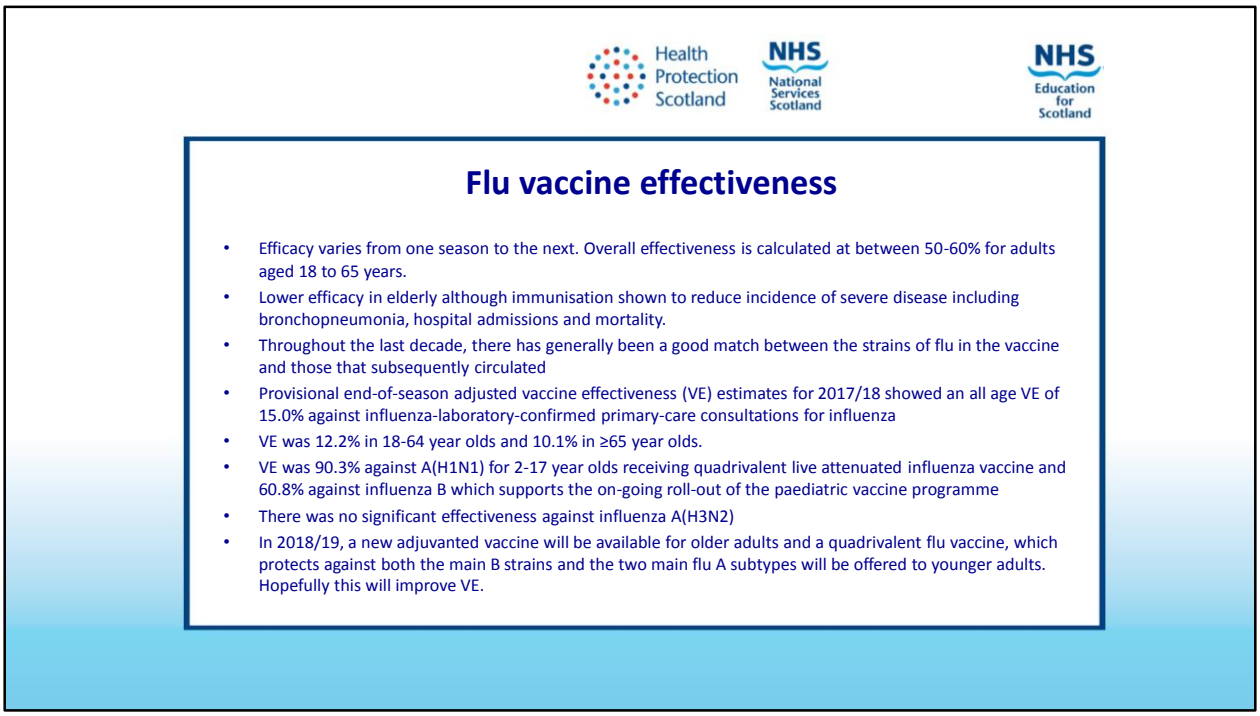
Vaccine effectiveness – 2017/18

- 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
- Overall moderate flu VE in children, but poor in adults in 2017/18
- There was no significant effectiveness against influenza A(H3N2)
- More details on: https://www.gov.uk/government/publications/influenza-vaccine-effectiveness-seasonal-estimates

- 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.



A 2012 meta-analysis included studies when the influenza virus strains in the vaccine were drifted or mismatched with those in circulation and suggested an overall efficacy against confirmed disease of 59% (95% confidence interval 51-67) in adults aged 18 to 65 years.[1] In the elderly, protection produced by the vaccine may be lower[2], although immunisation has been shown to reduce the incidence of severe disease including bronchopneumonia, hospital admissions and mortality.[3, 4]

A PHE study[5] found that the 2014/15 mid-season estimates of flu vaccine, which is used primarily in adults, provided low protection against flu infection due to one particular subtype, H3N2. This was because a drifted strain of flu A(H3N2) emerged in 2014/15 after the 14/15 A(H3N2) vaccine strain had been selected in February 2014. This resulted in a mismatch between the vaccine strain and the main A(H3N2) strain that circulated in the UK. The study was based on the results from 1,314 patients presenting in primary care across the UK and found that vaccine effectiveness in preventing laboratory confirmed influenza was estimated to be 3% overall (with an upper 95% confidence interval of 35%). This compares to approximately 50% vaccine effectiveness that has typically been seen in the UK over recent years, with generally a good match between the strains of flu in the vaccine and those that subsequently circulate in the population.

Flu vaccine effectiveness estimates are available at https://www.gov.uk/government/publications/influenza-vaccine-effectiveness-seasonal-estimates?utm_source=c046e1b3-777d-4b1d-8b4b-9f5eb6661fca&utm_medium=email&utm_campaign=govuk-notifications&utm_content=immediate

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Seasonal flu vaccine uptake in Scotland

	2014-15	2015-16	2016-17	2017-18
65 years and older	76.3%	74.5%	72.8%	**73.7%**
Under 65 - At risk (excluding healthy pregnant women and carers)	54.0%	48.0%	44.9%	**44.8%**
Pregnant women - no risk	49.5%	49.9%	49.3%	**48.1%**
Carers	51.5%	48.2%	46.2%	**47.4%**
Pre-School	56.4%	57.1%	59.0%	**56.9%**
Primary School	71.7%	71.5%	73.0%	**73.0%**
Healthcare Workers	36.3%	33.2%	35.3%	**45.7%**

Data source Health Protection Scotland