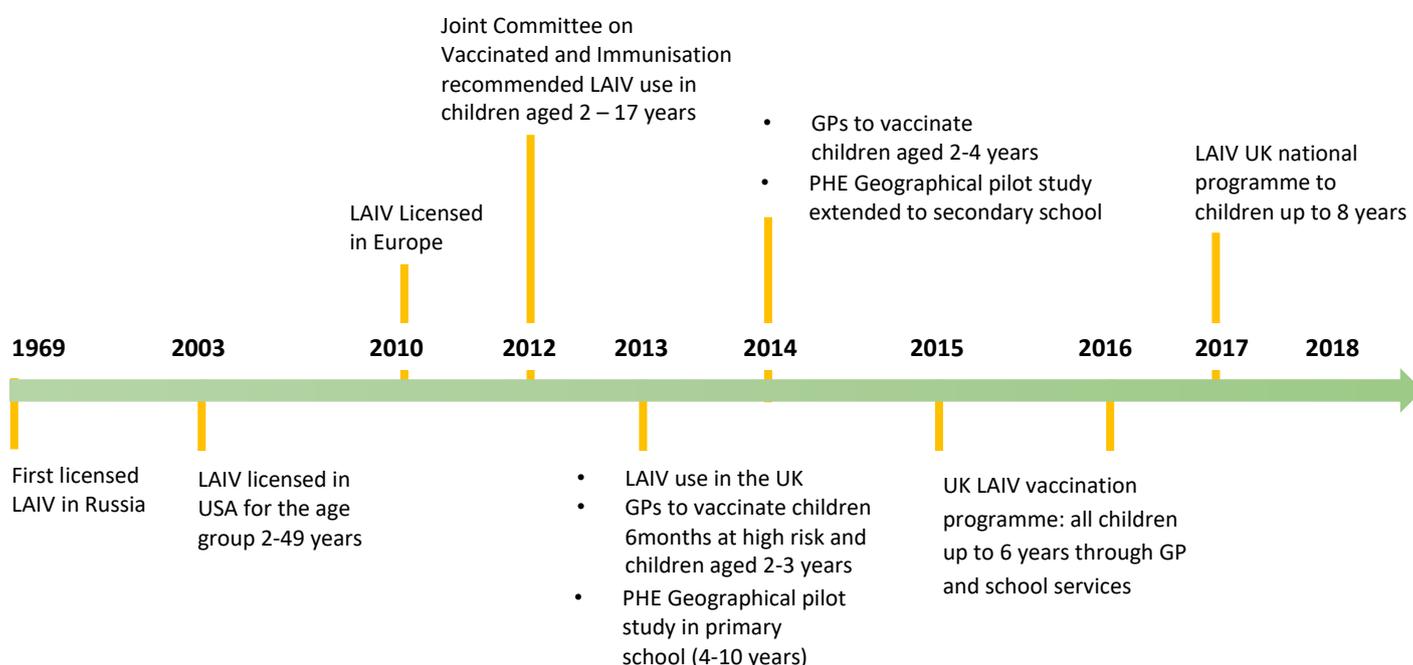


## Final Report for the Flu Questionnaire and Nasal Swab Study

Seasonal influenza (flu) affects lots of people around the world every year and is the most common cause of lower respiratory illness in children aged 6 months to 12 years presenting to General Practitioners (GPs) in the UK. In Europe, seasonal influenza generally occurs between November and April each year. Children contribute considerably to the spread of flu to their nursery and school friends, families, and communities as they have greater numbers of the virus in their nose for longer periods of time than adults. Flu vaccines are one of the most effective mechanisms in preventing infection and the spread of flu. Targeting children with flu vaccine would provide individual protection to the children themselves (direct programme impact), reduce spread across all age groups including elderly and individuals in high-risk groups (indirect programme impact) and thus reduce the burden of flu across the population.

In 2013, flu vaccination policy in the UK recommended the phased introduction of a newly licensed Live Attenuated Influenza Vaccine (LAIV) to vaccinate healthy children aged 2-16 years old to protect both them and indirectly others in the population



**Figure 1: Background about the Live Attenuated Influenza Vaccine (LAIV)**

In October 2015, Public Health England (PHE) and Imperial College London approached two private secondary schools in England including your school. This age group was chosen as the LAIV programme is being phased in and had yet to be implemented nationally in this group. The study took place over two flu seasons (2015-16 and 2016-17) with the aim of

understanding the direct and indirect protection of the LAIV vaccine in the study population to inform the roll-out of the programme.

To address the study aims, participants were asked to send a nasal swab if they had a flu-like illness or cold and complete a weekly symptomatic questionnaire reporting any flu related illness such as fever, cough, sore throat, headache, muscle ache and weakness.

### Survey Response and Uptake:

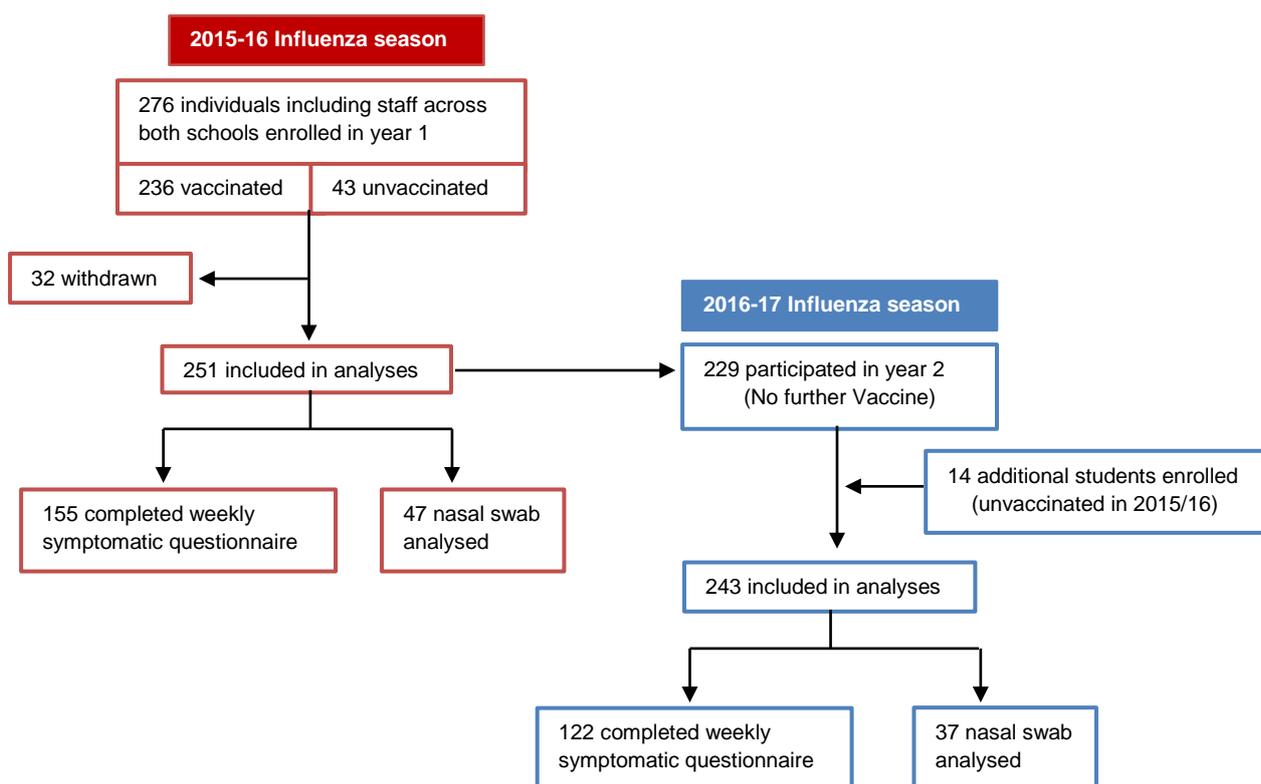


Figure 2: Study flow diagram of participants enrolled in over two flu seasons (2016-15 and 2016-17)

### Key Findings:

- ❖ Vaccine uptake was slightly higher in one school (93%) compared to the other (82%).
- ❖ The number of participants reporting flu-like symptoms did not change during both seasons. A total of 312 symptoms reported by 29 participants over the two flu seasons.
- ❖ The most common symptoms reported among participants over the two-time period were sore throat (238 episodes), cough (188 episodes) and headache (133 episodes).

- ❖ Flu like symptoms were mostly reported at end of January during the study period. This is slightly later to routine GP consultation for flu-like illness which peaked at the end of December. This may be due to the delay in reporting symptoms by our participants.
- ❖ Nasal swab results in the first year: one confirmed case of Influenza A (H1N1)pmd09 identified.
- ❖ Nasal swab results in the second year: Three positive cases of Influenza A (H3) were identified with three additional cases positive for other respiratory viruses (RSV b, hMPV a, and hMPV b.)
- ❖ All four individuals who had flu over the two years were at one school and received LAIV vaccine during the 2015/16 survey but did not report receiving vaccination in 2016/17.
- ❖ It is important to note that all influenza A positive cases were from children who were not schoolboarders and had constant interaction with the community, which may suggest they may have acquired their infection from their local community. The work did show the possibility of carrying out a prospective study within this cohort and has formed an important platform for an in-depth study of the immune response following vaccination amongst a sub-set of participants .

**We would like to thank you for your participation and your contribution towards this research.**