



Addendum: October 2016

Equality Analysis: Extension of the flu immunisation programme to all children aged 2 to less than 17 years old

1. The Department of Health has given an undertaking to review the impact of the childhood flu immunisation programme as the programme is rolled out, and assess the impact on inequalities.
2. An [updated Equality Analysis](#) (EA) was published in 2015, to reflect the evidence from the 2013/14 winter flu season. This addendum to the EA summarises further evidence from the 2014/15 season, and confirms the current policy position.
3. During 2014/15, the vaccine was offered to all 2-4 year olds in GP practice, and saw the extension of the school-age vaccination programme to 14 pilot areas across England. The vaccine was offered to primary school children aged 4-11 years, and secondary school children aged 11-13 years in pilot areas (see table below):

Pilot Area 2014-2015	School cohort
Arden, Herefordshire and Worcestershire	Secondary (Pharmacy)
Birmingham and the Black Country	Secondary
Cumbria	Primary (Pharmacy/GP)
East Anglia	Secondary
Essex	Primary and Secondary
Greater Manchester	Primary and Secondary
Lancashire	Secondary

Leicestershire and Lincolnshire	Primary and Secondary
London	Secondary
	Special Schools
Northumberland, Tyne, and Wear	Primary
North Yorkshire and Humber	Secondary
Shropshire and Staffordshire	Secondary
South Yorkshire and Bassetlaw	Secondary
West Yorkshire	Secondary
	Community-model

4. As for 2013/14, Public Health England (PHE) has analysed vaccine uptake by school age, ethnicity, religious constitution, and index of multiple deprivation. Data on the 2014/15 pilots has been published in the PHE end of season report on the pilot programme¹.
5. In summary data from the 2014/15 programme indicated:
- Across pilot areas, overall uptake was higher in primary school aged children (56.8%) compared to secondary school children (49.8%).
 - When comparing uptake between the pilot areas, London had significantly lower uptake in primary school children (4-11 years). There is regional variation in coverage across the whole immunisation programme. Data for 2014/15 indicates that coverage levels were lowest in London for all routine childhood vaccinations².
 - As seen in 2013/14, uptake was lowest in areas delivering the programme through community based programme i.e. pharmacy and/or GP clinics.
 - Higher levels of deprivation and increasing ethnic diversity (% black or minority ethnicity) were significantly associated with lower uptake in both primary and secondary school children in 2014/15. Areas with a black or

¹ Childhood Influenza Vaccination Pilot Programme, England 2014/15: End of season report

² NHS Immunisation Statistics England 2014/15

minority ethnic population of 34% or more had a decrease in uptake of 21% compared to areas with a minority population of <5%.

- Areas identifying with Muslim faith were associated with significantly lower uptake in both primary and secondary school children. As the programme is expanded we will be able to gain evidence on whether lower uptake rates in these communities are leading to an increased level of flu compared to communities with higher uptake rates.
6. The EA for the child flu immunisation programme was updated in 2015, this set out in full the purpose of the programme and the rationale for offering the live attenuated influenza vaccine (LAIV) nasal spray. The EA provided a detailed analysis of the impact of the programme across protected groups as demonstrated by the evidence at that time. The additional evidence in this summary has only strengthened those findings and does not indicate any other change. As no new information has come to light, a full revision of the Equality Impact Analysis has not been carried out at this time. Evidence will be kept under review, with the next data analysing the impact of the 2015/16 season, when the programme was extended to all children in school years 1 and 2 in England.
 7. In view of the lack of any new evidence, Ministers have confirmed that there will be no change to the policy regarding implementation of the childhood flu programme with respect to its impact on groups sharing protected characteristics. Prior to making this decision Ministers have considered available evidence in terms of some of those groups. Information is summarised below:

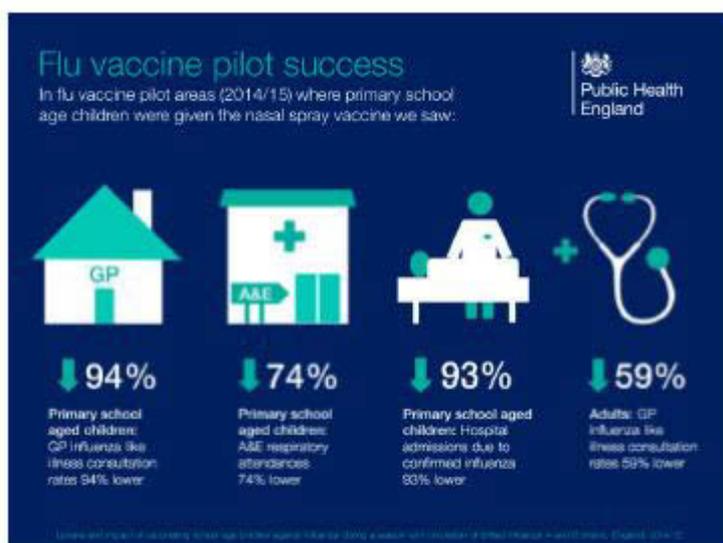
Disability

8. The updated EA explained why LAIV is the vaccine of choice. Some children in at risk groups have contraindications that means they cannot receive LAIV. In these cases, an inactivated influenza vaccine is offered as an alternative to LAIV. Data on contraindications was variable across the pilot areas. However, the most common contraindications reported prior to the day of vaccination were severe asthma and egg allergy followed by immunosuppression of a family member.

Age

9. The updated EA explains the rationale for offering the vaccine to children aged 2 –17 years of age, and the basis for the roll-out. The programme is being rolled out by age, starting with the youngest children first, unless children are in a clinical risk group in which case they are already eligible for flu vaccination. All children who are eligible for vaccination should be offered the vaccination.

10. In June 2015, the Joint Committee on Vaccination and Immunisation considered evidence from the pilot studies, and further modelling. The committee agreed that it would wish to see evidence from several years of the programme focussed on vaccinating young children and those in primary school, and to evaluate the impact of this, before deciding whether to pursue vaccination in secondary schools. This policy will be reviewed in 2019/20.
11. Children who are vaccinated will gain personal protection from the vaccine. However, the aim of the programme is to reduce the transmission of influenza in the community, thereby reducing the spread of flu to unvaccinated children and to those in other age groups.
12. Data from 2014/15 indicates that the flu vaccine uptake rate was 38.5% for two year olds, 41.3% for three year olds, and 32.9% for four year olds. The overall uptake for children in the pilot areas (primary and secondary) was 53.2%. As in the 2013/14, there was a reduction in the uptake rate as the age of children increased.
13. Uptake rates were higher for children being offered vaccinations in schools than for pre-school children offered vaccination by GPs. School-based immunisation programmes are effective in helping to achieve good uptake rates.
14. Surveillance data from 2014/15 showed lower rates of GP consultation for flu-like illness, and lower rates of confirmed cases of flu across the whole population in pilot areas, compared to non-pilot areas (see graphic below).



15. The data is not yet sufficient to determine whether children who were not able to have the vaccine experienced the same reduced levels of GP consultations for influenza-like illness, A&E attendances for respiratory illness and hospital

admissions due to flu. This will be a key factor in determining whether the reduction in transmission affords unvaccinated children equivalent protection.

16. Since publication of the EA last year, we have revised our plans for the programme. The table below provides information on the programme to date.

Year	Status	Pre-school age	Primary school age	Secondary school age
2013 to 2014	Completed	2 to 3 year olds	Pilots in 7 areas	
2014 to 2015	Completed	2 to 4 year olds	Pilots in expanded areas	Pilots for children in year 7 & 8 (aged around 11 and 13 years) in 12 areas
2015 to 2016	Completed	2 to 4 year olds	Children in school year 1 to 2 (5 to 6 year olds), plus primary school-aged children in areas that previously participated in the pilots	
2016 to 2017	Confirmed	2 to 4 year olds	Children in school year 1 to 3 (5 to 7 year olds), plus primary school-aged children in areas that previously participated in the pilots	

Race and religion or belief

17. The updated EA set out in detail the rationale for offering LAIV under the childhood flu immunisation programme. The vaccine is not acceptable to some members of the Muslim faith and other faith groups, and those who restrict certain dietary products because the vaccine contains porcine gelatine. Local intelligence from some of the pilot areas indicated that the porcine gelatine content of LAIV had adversely affected uptake rates, and that information about the porcine content was not clear enough. For the 2014/15 season, PHE revised their leaflets for parents to make clear that the vaccine contained porcine gelatine, the consent form was also revised to make information clearer.
18. Data for 2014/15 has shown that uptake is associated with ethnicity and deprivation, with the lowest uptake being reported in the most deprived quintile of deprivation or areas with a larger black or ethnic minority population. In addition, areas which had a higher proportion of the population from the Muslim faith were associated with significantly lower uptake in both primary and secondary school

children. These results are similar to the first year of the pilot vaccination programme in 2013/14, where lower uptake was seen in increasingly deprived areas and areas with the highest non-white population quintile. Other data from, during and after the pandemic has shown that deprivation and ethnicity are independent risk factors for severe outcome following influenza infection ³.

19. Opinion on the acceptability of the vaccine varies within the Muslim faith. In 2014/15 greater clarity about the porcine gelatine content of the vaccine in leaflets and on the consent form improved awareness of the vaccine's contents and ensured that parents were able to give informed consent, or not. At a local level, some teams engaged with Muslim communities to do this. At a national level, we continue to welcome discussion with faith leaders as the programme grows.
20. In 2014, PHE commissioned a qualitative study by the London School of Hygiene and Tropical Medicine which explored the concerns of parents who had refused LAIV. Interim findings indicated some parental concerns including the presence of porcine gelatine, concerns around effectiveness and of side-effects, and beliefs about the lack of perceived need for the flu vaccine. This feedback was reflected in leaflets produced on the programme.
21. There is currently no evidence of Muslim communities experience higher levels of flu than the wider population. However, we will continue to monitor the evidence gathered from the programme and wider data on disease surveillance by PHE.

Conclusions

22. As mentioned in the full EA the key issue for the childhood flu immunisation programme is not whether vaccination uptake rates vary between different groups, but whether groups with lower uptake of vaccination go on to experience higher rates of influenza by comparison. This addendum, summarises some of the main findings from 2014/15. However, it will take several years' data before we are able to establish how vaccination of children impacts on flu rates across the whole population, and in particular for groups with protected characteristics.
23. As the programme is extended, we will keep the EA under review and assess the impact of the policy on groups with protected characteristics.

**Department of Health
September 2016**

³ Zhao H, Harris RJ, Ellis J, Pebody RG. Ethnicity, deprivation and mortality due to 2009 pandemic influenza A(H1N1) in England during the 2009/2010 pandemic and the first post-pandemic season. *Epidemiol Infect.* 2015 Dec;143(16):3375-83