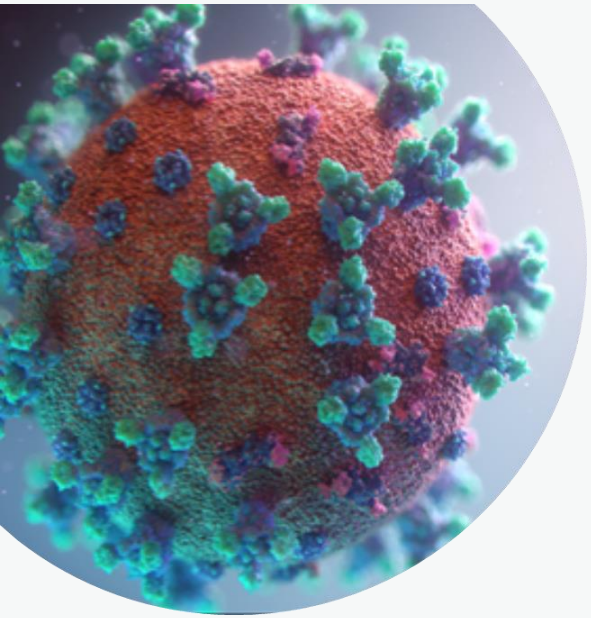
Influenza update 2024/2025

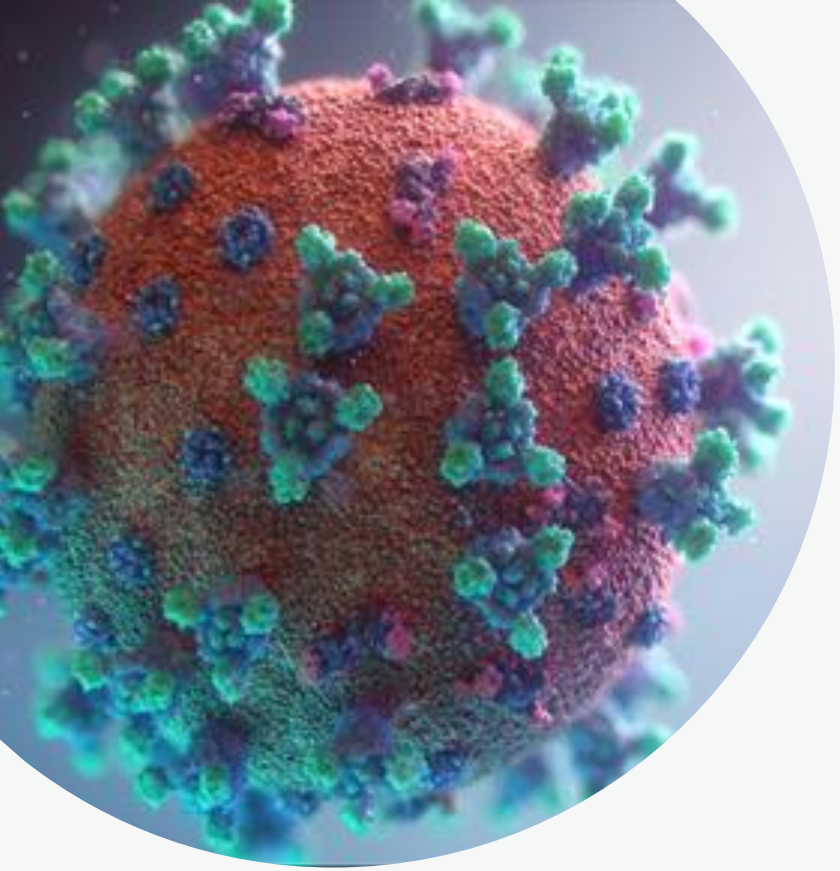
Presented by the EoE Screening and Immunisation Team



Put together by the EOE SIT. Credit to Emily Chedy for previous slide sets.
This presentation also contains information collated from the UKHSA flu slide set found here: Annual flu programme - GOV.UK (www.gov.uk)

Overview of the session

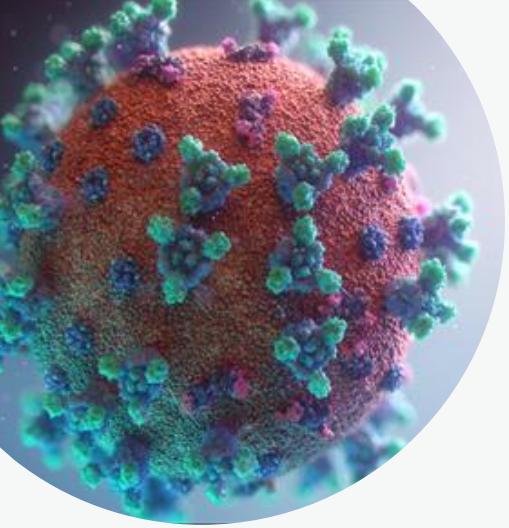
- Background and overview of the programme [this is intended as an update not full training for those new to the programme]
- Updates for this season
- Vaccines for 2024/2025 season
- Coadministration with other vaccines
- FAQs



Flu – back to basics

- Flu is an acute viral infection of the respiratory tract (nose, mouth, throat, bronchial tubes and lungs)
- Highly infectious illness which spreads rapidly in closed communities
- Even people with mild or no symptoms can infect others
- Most cases in the UK occur during an 8-10 week period during the winter

Seasonal flu vaccination is a critically important public health intervention to reduce morbidity and mortality in those most at risk including older people, pregnant women and those in clinical risk groups.



Flu – possible complications

Common:

- Bronchitis
- otitis media (children), sinusitis
- secondary bacterial pneumonia

Less common:

•meningitis, encephalitis, meningoencephalitis

•primary influenza pneumonia

Risk of most serious illness is higher in:

children under 6 months,

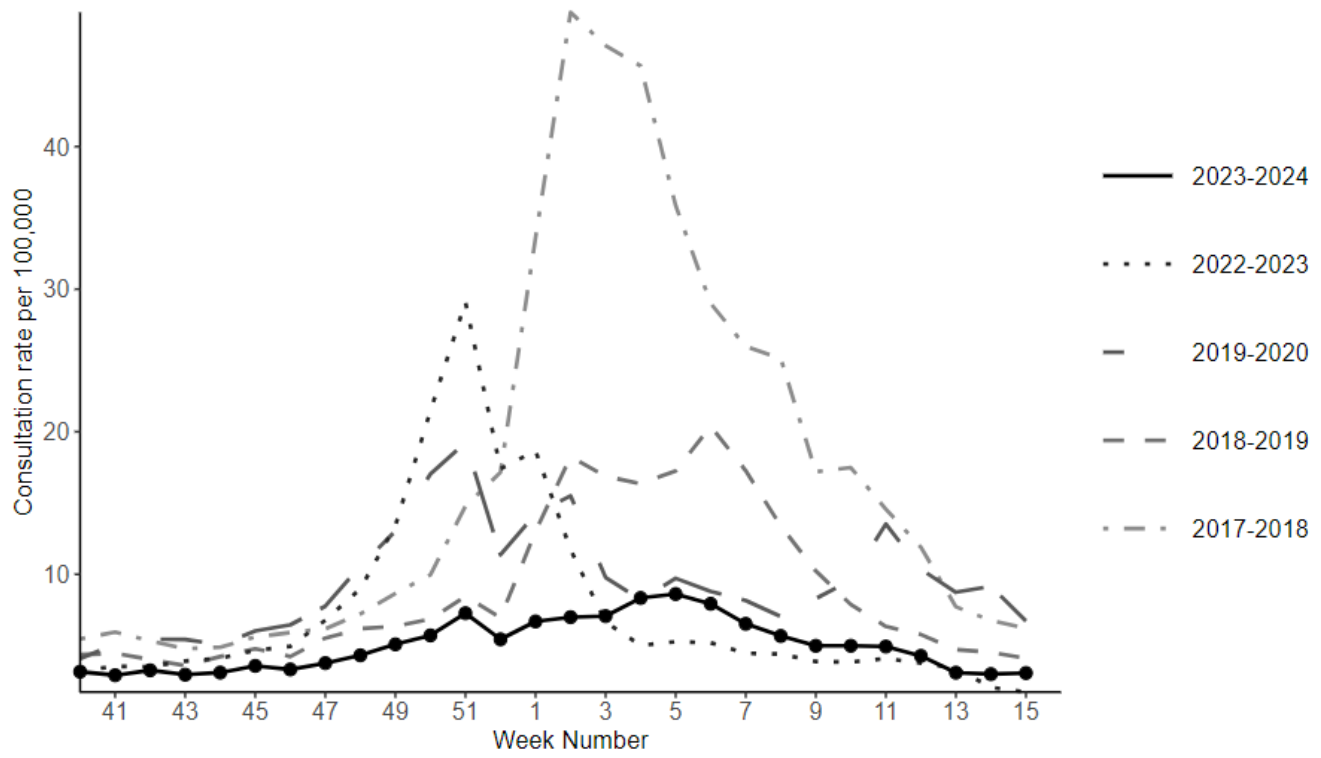
older people,

those with underlying health conditions such as respiratory disease, cardiac disease, long-term neurological conditions or immunosuppression

pregnant women (flu during pregnancy may be associated with perinatal mortality, prematurity, smaller neonatal size and lower birth weight)

Flu epidemiology

Figure 1. Weekly all age GP in-hours consultations for influenza-like illness (ILI), winter 2017 to 2024, England [note 1]



[note 1] Data from seasons 2020 to 2021 and 2021 to 2022 has been removed as there was low activity throughout these seasons.

- most flu activity usually occurs between mid-November and March
- flu activity in the 2023 to 2024 flu season was more prolonged than the 2022 to 2023 season, but peak activity was lower
- hospital flu admissions and intensive care and high-dependency unit admissions were lower than the previous flu season
- modelling of influenza-attributable mortality in England estimated approximately 2,776 deaths due to influenza, compared to 15,465 in the previous season

Credit: UKHSA flu slide pack 24/25
Annual flu programme - GOV.UK (www.gov.uk)

Programme Changes

The key changes to the flu vaccination programme for the 2024 to 2025 flu season are:

- change to recommendations as to when the flu vaccine should be given
- change to the live attenuated influenza vaccine (LAIV) from a quadrivalent to a trivalent vaccine
- the recombinant quadrivalent influenza vaccine (QIVr) will not be available for the 2024 to 2025 flu vaccination programme
- the high-dose quadrivalent influenza vaccine (QIV-HD) will be available and either this vaccine, or the adjuvanted quadrivalent influenza vaccine (aQIV), should be offered to those age 65 years and over and those age 60 to 64 in risk groups
- The start date has been moved to October for older people and risks groups. The exceptions to this are children and pregnant women and those who are about to become immunosuppressed

When to vaccinate

- based on the evidence that the effectiveness of flu vaccine can wane over time in adults, the JCVI have advised moving the start of the 2024 flu vaccination programme for most adults to the beginning of October

- this is on the understanding that the majority of the vaccinations will be completed by the end of November, closer to the time that the flu season commonly starts

- it is preferable to vaccinate individuals closer to the time when the flu virus is likely to circulate (which typically peaks in December or January), as this will provide optimal protection during the highest risk period

When to vaccinate

- as flu circulation in children normally precedes that in adults, the JCVI recommends that the children's programme should continue to start in September as early as delivery and supply allows

- protection from the vaccine lasts much longer in children, therefore the priority is to start vaccinating all children (including those in clinical risk groups) from 1 September, or as soon as vaccine becomes available

- vaccination of pregnant women should begin from 1 September 2024 in order to protect the baby in the first few months of life

- pregnant women are not expected to lose protection as rapidly as the elderly population and therefore starting vaccination (particularly in those women who are in the later stages of pregnancy) earlier than for those in other clinical risk groups, will still offer protection to women themselves in the peak season

	From 1 September 2024	From 3 October 2024
Flu	• Pregnant women • All children aged 2 or 3 years on 31 August 2024 • Primary school aged children (from Reception to Year 6) • Secondary school aged children (from Year 7 to Year 11) • All children in clinical risk groups aged from 6 months to less than 18 years	• Those aged 65 and over • Those aged 18-65 in clinical risk groups • Those in long-stay residential care homes • Carers • Close contacts of immunocompromised individuals • Frontline workers in social care
COVID-19		• Adults aged 65 years and over • Residents in care homes for older adults • Persons aged 6 months to 64 years in a clinical risk group (includes pregnant women, see Table 4 Green Book) • Frontline NHS and social care workers, including carers in care home for older adults
RSV	• Those aged 75 to 79 • Pregnant women from 28 weeks *Year-round*	

Key messages

- flu immunisation is one of the most effective interventions we can provide to reduce harm from flu and pressures on health and social care services during the winter

- it is important to increase flu vaccine uptake in clinical risk groups because of increased risk of death and serious illness if people in these groups catch flu

- flu during pregnancy may be associated with perinatal mortality, prematurity, smaller neonatal size, lower birth weight and increased risk of complications for mother

- vaccination of health and social care workers protects them and reduces risk of spreading flu to their patients, service users, colleagues and family members

Key messages

- by preventing flu infection through vaccination, secondary bacterial infections such as pneumonia are prevented. This reduces the need for antibiotics and helps prevent antibiotic resistance

- for a number of years, only around half of patients aged 6 months to under 65 years in clinical risk groups have been vaccinated

- the childhood flu programme should reduce the impact of seasonal flu on children and reduce transmission of flu within the community

- by reducing transmission of flu, it should also avert many cases of severe flu and flu-related deaths in older adults and people in clinical risk groups

Flu vaccine uptake by individual clinical risk group in 2023 to 2024 (%)

GP registered patients aged 6 months to under 65 years

Risk group	6 months to under 2 years	2 years to under 5 years	5 years to under 16 years	16 years to under 65	Total under 65 years
Patients with Diabetes	9.2	45.4	51.3	50.9	50.8
Patients with Chronic Kidney Disease	10.2	42.1	44.0	49.2	49.1
Patients with immunosuppression	7.3	40.4	45.9	48.5	48.3
Patients with Chronic Neurological Disease (including Stroke/TIA, Cerebral Palsy or MS)	9.7	42.6	6.9	42.5	42.7
Patients with Chronic Respiratory Disease	12.9	51.8	53.6	46.3	47.1
Patients with Chronic Heart Disease	10.4	42.6	49.4	41.4	41.7
Patients with Chronic Liver Disease	9.9	41.4	42.1	36.7	36.7
Patients with Asplenia or dysfunction of the spleen	15.0	50.7	54.0	46.5	47.2
Patients with morbid obesity (BMI>=40) (no other risk factor)	-	-	-	37.5	37.5

- vaccine uptake for those with an underlying clinical risk factor varies widely between the individual risk groups and by age category
- uptake for all those in clinical risk groups needs to improve since, despite continued efforts, only around half of those in most of the clinical risk groups are being immunised
- uptake in the youngest risk groups (6 months to 2 years) is around 10%

Chronic disease and flu mortality (2010/11) data

Flu mortality in a healthy person is 0.4/100,000

Super at risk

Immunocompromised

50x increased risk of dying from flu

20/100,000

Chronic Liver

Chronic neuro

~40x increased risk of dying from flu

15/100,000

Chronic heart

9x increased risk of dying from flu

3.7/100,000

Chronic respiratory

Diabetes

6x increased risk

~2/100,000

Influenza vaccines and their components

Two main types of flu vaccine available:

- Inactivated – given by injection
- Live attenuated – given by nasal application

None of the flu vaccines can cause clinical influenza in those that can be vaccinated

- Live attenuated vaccine is licensed for children aged 2 up to 18 years -
- Inactivated vaccines are recommended for people aged 18+, children in clinical risk groups aged 6m to 2 years and for children aged 2 to 18 years who cannot receive live attenuated vaccine

Recommendations for the use of inactivated influenza vaccine

For the 2024 to 2025 flu season, JCVI has advised the following vaccines be used (16). A visual aide of the vaccines for the 2024 to 2025 season and the clinical risk groups that they apply to is also available. A poster of this guidance can be downloaded or ordered from HealthPublications.

Table 1. Recommendations for the use of inactivated influenza vaccines

Eligible Group	Type of influenza vaccine
Those aged 65 and over and those who will become 65 before 31 March 2025	aQIV or QIV HD use QIVc only when every attempt to use aQIV or QIV-HD has been exhausted
Those aged 18 to 59 in eligible risk groups	QIVc QIVe can also be considered only when every attempt to use QIVc has been exhausted
Those aged 60 to 64 in eligible risk groups	QIVc or QIV-HD* QIVe can also be considered only when every attempt to use QIVc or QIV-HD has been exhausted
Children aged 2 years and over if LAIV is contraindicated or otherwise unsuitable (for example parents object to LAIV on the grounds of its porcine gelatine content)	QIVc QIVe can also be considered only when every attempt to use QIVc has been exhausted

Annual flu programme - GOV.UK (www.gov.uk)

UK Health Security Agency

All influenza vaccines marketed in the UK for the 2024 to 2025 season

Supplier	Product	Vaccine type	Age indications	Ovalbumin content micrograms/dose	Contact details
AstraZeneca UK Ltd	Fluenz®	Trivalent LAIV (live attenuated influenza vaccine) supplied as nasal spray suspension	From 24 months to less than 18 years of age	Less than 0.024 micrograms per 0.2 ml dose	0845 139 0000
Sanofi	Quadrivalent Influenza Vaccine	QIVe (standard egg-grown quadrivalent influenza vaccine), split virion, inactivated	From 6 months	Equal to or less than 0.05 micrograms per 0.5 ml dose	0800 854 430
Viatris	Influvac® sub-unit Tetra	QIVe (standard egg-grown quadrivalent influenza vaccine), surface antigen, inactivated	From 6 months	Equal to or less than 0.1 micrograms per 0.5 ml dose	0800 358 7468
CSL Seqirus UK	Cell-based Quadrivalent Influenza Vaccine Seqirus ▼	QIVc (cell-based quadrivalent influenza vaccine) surface antigen, inactivated	From 6 months	Egg-free	0345 0093 804
Sanofi	Quadrivalent Influenza Vaccine (Split Virion, Inactivated) High-Dose ▼	QIV-HD (High-dose egg-grown quadrivalent influenza vaccine), split virion, inactivated 60 micrograms HA/strain	From 60 years	Equal to or less than 1 microgram per 0.7ml dose	0800 854 430
CSL Seqirus UK	Adjuvanted Quadrivalent Influenza Vaccine Seqirus ▼	aQIV (adjuvanted egg-grown quadrivalent influenza vaccine) surface antigen, inactivated, adjuvanted with MF59C.1	From 65 years	Equal to or less than 1 microgram per 0.5ml dose	0345 0093 804

UK Health Security Agency

NHS

Flu vaccines 2024 to 2025 season

6 months to less than 2 years in a clinical risk group[v]	2 years to less than 18 years in eligible year groups or in a clinical risk group[v]		18 years to less than 60 years in a clinical risk group[v] and pregnant women	60 years to less than 65 years[iv] in a clinical risk group	65 years[iv] and over
QIVc (Cell-based quadrivalent influenza vaccine) or **QIVe** (Quadrivalent influenza vaccine, egg grown) if QIVc not available	**No contraindications to LAIV**: **LAIV** (Live attenuated influenza vaccine, nasal spray suspension)	**If LAIV contraindicated or otherwise unsuitable[iii]**: **QIVc** (Cell-based quadrivalent influenza vaccine) or **QIVe** (Quadrivalent influenza vaccine, egg grown) if QIVc not available	**QIVc** (Cell-based quadrivalent influenza vaccine) or **QIVe** (Quadrivalent influenza vaccine, egg-grown) if QIVc not available	**QIVc** (Cell-based quadrivalent influenza vaccine) **QIV-HD** (High-dose quadrivalent influenza vaccine, egg grown) or **QIVe** (Quadrivalent influenza vaccine, egg grown) if QIVc and QIV-HD not available	**aQIV** (Adjuvanted egg-grown quadrivalent influenza vaccine)[iv] **QIV-HD** (High dose quadrivalent influenza vaccine, egg-grown) or **QIVc** (Cell-based quadrivalent influenza vaccine) if aQIV or QIV-HD not available
1[i] or 3[iii] 4[iii]	2[i]	1[i] or 3[iii] 4[iii]	1 or 3 4	1 5 or 3 4	6 5 or 1

Cell-based Quadrivalent Influenza Vaccine ▼
CSL Seqirus
QIVc
Egg-free

licensed from 6 months of age

Fluenz
AstraZeneca
LAIV

licensed from 2 years to less than 18 years of age

Quadrivalent Influenza Vaccine
Sanofi
QIVe

licensed from 6 months of age

Influenza Tetra MYL
Viatris
QIVe

licensed from 6 months of age

Quadrivalent Influenza Vaccine – High Dose ▼
Sanofi
QIV-HD

licensed from 60 years of age

Adjuvanted Quadrivalent Influenza Vaccine ▼
CSL Seqirus
aQIV

licensed from 65 years of age

Eligible groups

- aged 2 and 3 years on 31 August 2024
- eligible school-aged children (Reception to Year 11)
- those aged 6 months to under 65 years in clinical risk groups
- pregnant women
- all those aged 65 years and over
- those in long-stay residential care homes
- carers in receipt of carer's allowance or main carer of an older or disabled person
- household contacts of immunocompromised individuals
- frontline health and social care staff

See Green Book Influenza Chapter 19 for full details on eligible groups

Resources

Annual flu programme
www.gov.uk/government/collections/annual-flu-programme

Green Book Influenza Chapter 19
www.gov.uk/government/publications/influenza-the-green-book-chapter-19

(i) QIVc and LAIV for eligible children (under 18 years of age) available to order from ImmForm
(ii) QIVe is not supplied by ImmForm
(iii) If the parent of an eligible child declines LAIV because of its porcine gelatine content they can request an alternative injectable vaccine. QIVc is available to order from ImmForm for these children
(iv) Those who become 65 years of age before 31 March 2025 may be offered aQIV 'off-label'
(v) Or household contact of an immunocompromised individual

Flu immunisation
Helping to protect people, every winter

UK Health Security Agency gateway number 2024060
July 2024

QIVr and flu 2024/2025 vaccine changes

IMPORTANT!

- Sanofi Pasteur are unable to supply any QIVr for the 2024/2025 seasonal influenza programme
- For any queries, please contact your Screening and Immunisation Team (SIT)
- QIV-HD can be used for patients aged 60years and over only.
- For 18–59-year-olds, QIVc is next choice.
- QIVe is only to be used if all other options have been exhausted

QIV-HD (High dose quadrivalent influenza vaccine)

•quadrivalent influenza vaccine high dose (QIV-HD) was licenced in the US in 2009 and in the UK in 2019 (as a trivalent vaccine initially)

•QIV-HD is a quadrivalent inactivated flu vaccine containing 2 subtypes of Influenza A and both B lineages

•QIV-HD contains 4 times the amount of antigen contained in standard-dose inactivated influenza vaccines

•the additional antigen content is intended to enhance the immune response made by people aged from 60 years and provide them with better protection against flu

•QIV-HD has been proven to be safe and effective

•QIV-HD is made using an egg-based manufacturing process

•it is licensed from 60 years of age

Change to trivalent LAIV

JCVI recommendations

June 2023

- Trivalent formulations of the advised influenza vaccines **equally suitable**

Oct 2023 - JCVI

- Advice strengthened to align with WHO recommendation and declaration that B/Yamagata no longer circulating - trivalent formulations preferred
- UK has the most comprehensive live attenuated influenza vaccine (LAIV) children's programme - potential theoretical risk of reassortment and the return of circulating B/Yamagata strains
- Committee agreed that it would **like to see LAIV move to a trivalent formulation**

- JCVI agreed that that the trivalent formulation of LAIV was preferred and that this change should happen as soon as possible, preferably in time for the 2024/25 season.

- For the inactivated vaccines the preference was to use a trivalent formulation within any vaccine type when this becomes available

Fluenz

- **June 2024:** LAIV SmPC published: https://www.medicines.org.uk/emc/product/15790/smpc

'Fluenz Trivalent nasal spray suspension Influenza vaccine (live attenuated, nasal) - Summary of Product Characteristics (SmPC)'

- The brand name for the trivalent vaccine is Fluenz® (the 'Tetra' has been dropped).
- Presentation of the vaccine (i.e. pre-filled single dose nasal spray, supplied in a ten dose pack) remains the same, and LAIV will be available to order via ImmForm for providers of the children's flu programme as usual.
- LAIV is currently expected to become available to order early to mid-September.
- Check ImmForm news and next edition of Vaccine Update for information on supply – latest info will always be on ImmForm

LAIV side effects

Safety and side effects

Side effects associated with the vaccine are:

Very common (affecting more than 1 in 10 people)

- runny or stuffy nose
- loss of appetite
- feeling generally unwell
- headache

Common (affecting up to 1 in 10 people):

- high temperature (fever)
- aching muscles

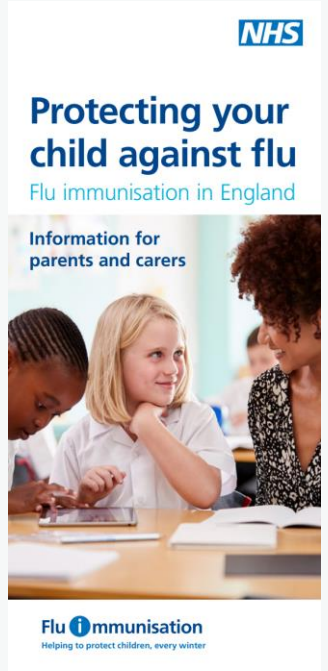
Uncommon (affecting up to 1 in 100 people):

- nose bleeds (it is thought these are unlikely to be caused by the vaccine itself)
- rash
- allergic reactions

- Cannot be given to anyone with a severely weakened immune system
- Children who are close contacts of people with severely weakened immune systems (e.g. bone marrow transplant people requiring isolation) should be vaccinated, but given the inactivate (injectable) vaccine

At risk Children Reminder

- At risk 6 months – 2 years are usually very small groups per practice
- Do a search and ensure all these children are invited in
- Parents may not be aware they are eligible for vaccination
- Check coding – why are they eligible? Is it something that has resolved
- Aim to have children vaccinated early in the season (September)
- GP surgery should be proactively calling in **all** at risk children, including school aged
- Children with certain health conditions such as diabetes and issues affecting lungs, heart, kidneys, liver or immune system, are at higher risk of severe complications if they get flu. It is especially important that these children are vaccinated



- 2 doses of the **inactivated** flu vaccines are required to achieve adequate antibody levels in younger children
- however, a **single dose of LAIV** should provide protection to previously unvaccinated healthy children
- only modest additional protection provided by a second dose of LAIV
- only children aged 6 months to less than 9 years who are in clinical risk groups or who are a household contact of an immunosuppressed individual who have not received flu vaccine previously should be offered a second dose of LAIV, given at least 4 weeks apart (if no contraindications – otherwise offer inactivated vaccine)
- healthy children under 9 years who cannot receive LAIV due to contraindications and those whose parents request they receive IIV instead of LAIV should be offered a single dose, even if they have not previously received influenza vaccine

Flu risks for pregnant women

- Maternal intensive care admission
- Pre-term labour
- Low birth weight
- 1 in 11 maternal deaths in 2009-2012, caused by influenza

- Flu vaccine required **in each pregnancy**
- If pregnancy is across two flu seasons, vaccines can be given in both seasons.
- Vaccine protects mum and infant

Safety and side effects

The inactivated flu vaccine does not contain the live virus and cannot cause flu. Flu vaccines have a very good safety record. The most commonly reported side effects of flu vaccines are:

- pain, swelling, bruising, hardness or redness at the injection site
- slightly raised temperature (fever)
- headache
- sweating
- aching joints or muscles
- shivering
- tiredness
- feeling generally unwell

A higher rate of these common side effects has been reported with Fluad, an adjuvanted trivalent vaccine (aTIV) which was recommended for people aged 65 and over in previous years. This year, a quadrivalent inactivated influenza vaccine which also uses an adjuvant (aQIV) is being offered to people aged over 65. Side effects usually last 1-3 days.

There are several different makes of flu vaccine available each year. For more information on side effects, ask for the Patient Information Leaflet for the vaccine you are offered. Additional information about vaccine side effects, anaphylaxis and adverse reactions can be found here.

Contraindication to flu vaccine

- there are very few individuals who cannot receive any flu vaccine
- **where LAIV cannot be given to a child, it is likely that inactivated vaccine could be given instead**
- where there is doubt, expert advice should be sought promptly so that the period the individual is left unvaccinated is minimised

Contraindications for all flu vaccines:

- confirmed anaphylactic reaction to a previous dose of flu vaccine
- confirmed anaphylactic reaction to a component of flu vaccine (for example to gelatine in LAIV) or residue from the manufacturing process (gentamicin), except egg proteins (see slide on egg allergy)

Additional contraindications for LAIV :

- clinically severely immunocompromised due to a condition or immunosuppressive therapy such as:
- acute and chronic leukaemias
- lymphoma
- HIV infection not suppressed by highly active antiretroviral therapy (HAART)
- cellular immune deficiencies
- high dose corticosteroids
- receiving salicylate therapy e.g. aspirin
- known to be pregnant

- Also contraindications for children with acute and severe asthma - see specific slide

Precautions to flu vaccination

- Acutely unwell/severe febrile illness:
  - Defer until recovered

- Heavy nasal congestion:
  - Defer live intranasal vaccine until resolved or, if the child is in a risk group, consider inactivated flu vaccine to provide protection without delay

- Use with antiviral agents against flu:

    - LAIV should not be administered at the same time or within 48 hours of cessation of treatment with flu antiviral agents

    - administration of flu antiviral agents within 2 weeks of administration of LAIV may adversely affect the effectiveness of the vaccine

Egg allergy

ADULTS

•the ovalbumin content for the 2024 to 2025 flu vaccines is published on the GOV.UK Annual flu programme webpage

•for the 2024 to 2025 season, those aged 18 years and over are recommended to receive QIVc which is egg free

•adults with egg allergy can be immunised in any setting using the cell-based quadrivalent inactivated egg-free vaccines QIVc

QIVe should only be offered if it is not possible to give QIVc. If QIVe is given, it must have an ovalbumin content less than 0.12 micrograms/ml (equivalent to <0.06 micrograms for 0.5ml dose)

•adults with severe anaphylaxis to egg which has previously required intensive care should be offered an egg-free vaccine or referred to a specialist for assessment with regard to receiving immunisation in hospital if this is not possible

CHILDREN

•children with an egg allergy (including those with previous anaphylaxis to egg) can be safely vaccinated with LAIV in any setting (including primary care and schools)

•children who have required admission to intensive care for a previous severe anaphylaxis to egg should be given LAIV in the hospital setting

•children with both egg allergy and a clinical risk factor that contraindicates LAIV (for example immunosuppression) should be offered an egg-free inactivated flu vaccine with no ovalbumin (QIVc) or, if this is not possible, a QIVe with a very low ovalbumin content (less than 0.12micrograms/ml)

•eligible children from 6 months of age with egg allergy can also be given the quadrivalent cell-based inactivated egg-free vaccine QIVc

•children aged 6 months to under 9 years in a clinical risk group who have not been previously vaccinated against influenza will require a second dose (of either LAIV (over 2 years) or inactivated vaccine as appropriate)

Ref UKHSA slides 59,60:
https://khub.net/documents/135939561/350113940/National+flu+immunisation+programme+2024+to+2025+training+slideset.pptx/cf399137-7e19-8a2f-9f6d-c637df4ed69b

Acute and Severe Asthma

- Children with asthma on inhaled corticosteroids may safely be given LAIV irrespective of the dose prescribed
- LAIV is not recommended for children and adolescents currently experiencing an acute exacerbation of symptoms including
  - those who have had increased wheezing and/or
  - needed additional bronchodilator treatment in the previous 72 hours

Such children should be offered a suitable inactivated influenza vaccine to avoid a delay in protection

- Children who require regular oral steroids for maintenance of asthma control, or have previously required intensive care for asthma exacerbation should only be given LAIV on the advice of their specialist
- These children may be at higher risk from influenza infection, those who cannot receive LAIV should receive a suitable inactivated influenza vaccine

- Children with significant asthma and aged under 9 years who have not been previously vaccinated against influenza will require a second dose (of either LAIV or inactivated vaccine as appropriate)

Porcine Gelatine

- LAIV contains a highly purified form of gelatine derived from pigs
- Gelatine is used in LAIV as a stabiliser - it protects the live viruses from the effects of temperature
- Gelatine is commonly used in a range of pharmaceutical products, including many capsules and some vaccines
- There is no other live attenuated flu vaccine available that does not contain porcine gelatine.
- Eligible children whose parents refuse LAIV due to the porcine gelatine content, injectable cell-based Quadrivalent Influenza Vaccine (QIVc) will be centrally supplied and should be ordered from ImmForm

Co-Administration with RSV

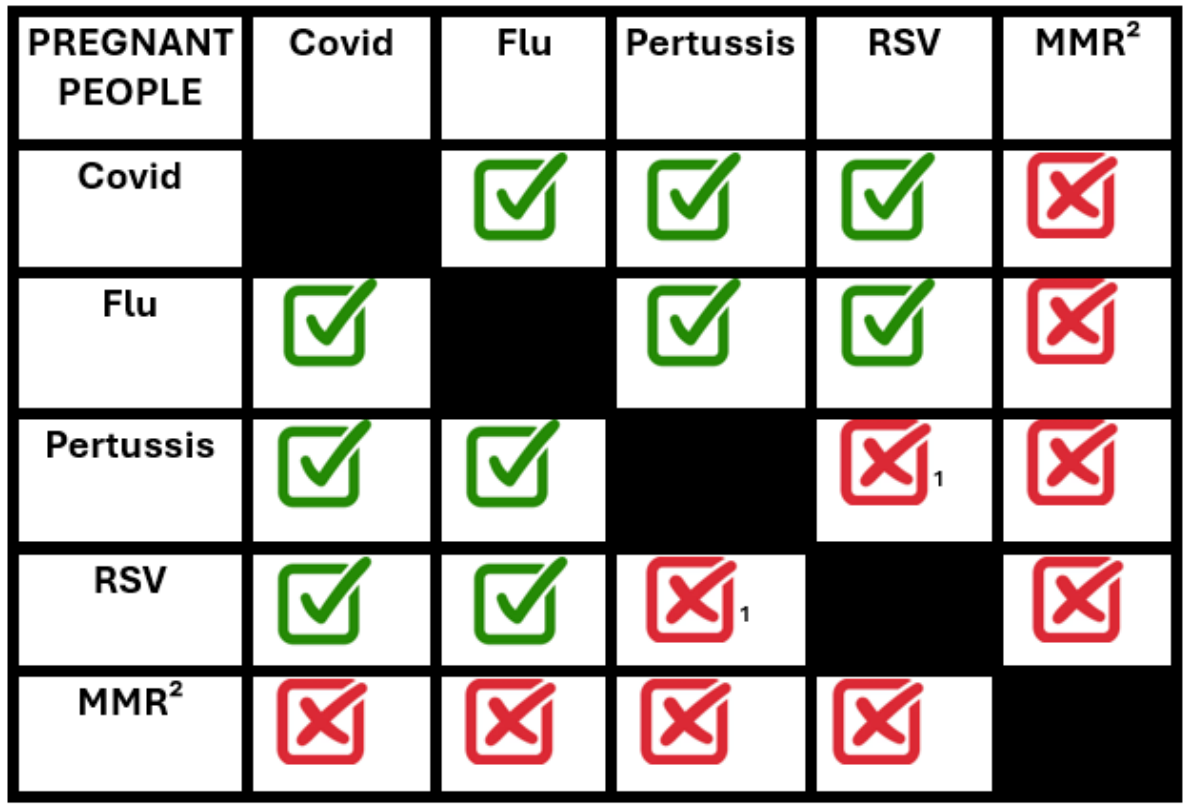
- RSV vaccination, Abrysvo®, should not be routinely scheduled to be given to older adults at the same appointment or on the same day as an influenza or COVID-19 vaccine.
- Abrysvo® can be given at the same time as pneumococcal, shingles vaccine and any other inactivated or live vaccines.
- No specific interval is required between administering the vaccines.
- If it is thought that the individual is unlikely to return for a second appointment or immediate protection is necessary, Abrysvo® could be administered at the same time as influenza and/or COVID-19 vaccine.
- flu vaccine can be given at the same time as the RSV vaccine to pregnant women

Coadministration – Older Adults

OLDER ADULTS	Covid	Flu	PPV	RSV	Shingrix	MMR
Covid		✓	✓	✗[1]	✓	✓
Flu	✓		✓	✗[1]	✓	✓
PPV	✓	✓		✓	✓	✓
RSV	✗[1]	✗[1]	✓		✓	✓
Shingrix	✓	✓	✓	✓		✓
MMR	✓	✓	✓	✓	✓	

1. It is recommended that RSV vaccine is not routinely scheduled to be given to an older adult at the same appointment or on the same day as an influenza or COVID-19. No specific interval is required between administering the vaccines. If it is thought that the individual is unlikely to return for a second appointment or immediate protection is necessary, Abrysvo® can be administered at the same time as influenza and/or COVID-19 vaccination.

Please refer to the appropriate chapters in the Green Book for full guidance and recommendations for other vaccines Immunisation against infectious disease - GOV.UK (www.gov.uk)



Coadministration – Pregnant Women

1. Giving pertussis and RSV vaccines separately at the typical scheduled times (around 20 weeks for pertussis and from 28 weeks for RSV) will avoid any potential attenuation of antibody response to the pertussis containing vaccine if co-administered. If a woman has not received a pertussis containing vaccine by the time she presents for Abrysvo® RSV vaccine, both vaccines can and **should** be given at the same appointment to provide timely protection against both infections to the infant. Ref Green Book on Immunisation chapter 27a Respiratory syncytial virus (RSV) (publishing.service.gov.uk)

2. MMR vaccination is contraindicated in pregnancy. Unvaccinated or partially vaccinated pregnant people should be offered missing doses post-partum, for example at the post-natal check or if they accompany their infant to their routine immunisations. If two doses of MMR are required, then the second dose should be given one month after the first. Ref Green Book of Immunisation - Chapter 21 Measles (publishing.service.gov.uk)

Please refer to the appropriate chapters in the Green Book for full guidance and recommendations for other vaccines Immunisation against infectious disease - GOV.UK (www.gov.uk)

Vaccine Storage

Efficacy, safety and quality may be adversely affected if vaccines are not stored at the temperatures specified in the licence

All flu vaccines, inactivated and LAIV, must be stored in accordance with manufacturer's instructions:

- store between +2ºC and +8ºC
- do not freeze
- store in original packaging
- protect from light

Check expiry dates regularly:

- the LAIV has an expiry date 15 weeks after manufacture – this is much shorter than inactivated flu vaccines
- it is important that the expiry date on the nasal spray applicator is checked before use

Vaccine Wastage

- Do **NOT** discard any vaccine until after discussion with manufacturers and they have confirmed the vaccines cannot be used.
- Any centrally procured vaccine that must be discarded (instructed by manufacturer) must be reported on ImmForm.
- Vaccine wastage cost £5.7 million of NHS funds in 2022.
- The vaccine is referred to as being used ‘off-label’ if it has been stored in a way other than that described in its licence.
- The decision to allow the vaccine to be used ‘off-label’ will only be taken if the vaccine is still considered to be safe and effective.
- The PGD’s cover off-label vaccine use.

Links to resources

Annual flu programme - GOV.UK (www.gov.uk)

Flu vaccination programme 2024 to 2025: information for healthcare practitioners - GOV.UK (www.gov.uk)

Home - Health Publications

The flu vaccination. Who should have it and why (publishing.service.gov.uk)

NHS England — East of England » East of England Immunisation Team

Look out for the flu bulletin which has lots of information and links to all the resources: