

**From the Chief Medical Officer
Professor Sir Michael McBride**



Department of
Health
An Roinn Sláinte
Máinnystrie O Poustie
www.health-ni.gov.uk

HSS(MD) 64/2021

For Action:

Chief Executives, Public Health Agency/Health and Social Care Board/HSC Trusts/NIAS
GP Medical Advisers, Health and Social Care Board
All General Practitioners and GP Locums (*for onward distribution to practice staff*)
HSCB Head of Pharmacy and Medicines Management (*for onward distribution to community pharmacies*)

Castle Buildings
Stormont
BELFAST
BT4 3SQ

Tel: 028 9052 0563
Email: cmooffice@health-ni.gov.uk

Our Ref: HSS(MD) 64/2021
Date: 15 September 2021

Dear Colleague

SEASONAL INFLUENZA VACCINATION PROGRAMME 2021/22

ACTION REQUIRED

Public Flu Vaccination Programme

Chief Executives must ensure this information is drawn to the attention of all staff involved in the seasonal influenza vaccination programme, including:

- school health teams, health visitors, community children nurses, and paediatricians
- physicians managing patients with chronic medical conditions, oncologists, geriatricians, district nurses, treatment room nurses
- midwives, obstetricians
- Occupational Health Departments, Trust Peer Vaccinators

The HSCB must ensure this information is cascaded to all General Practitioners, practice managers and community pharmacies for onward distribution to all staff involved in the seasonal flu vaccination programme.

The RQIA must ensure this information is cascaded to all Independent Sector Care Homes for onward distribution to all staff involved in the seasonal flu programme.

Frontline Health and Social Care Worker Flu Vaccination Programme - including Independent Sector

Chief Executives should ensure all frontline staff are actively encouraged to receive the flu vaccine to help protect their families, themselves, their patients and the wider population.

The RQIA should actively encourage all Independent Sector Care Home staff to receive the flu vaccine either via OHS clinics, community pharmacy or local vaccination arrangements.

Introduction

1. The purpose of this letter is to provide information about the annual seasonal influenza vaccination programme for 2021/22. This includes influenza vaccination for the general public (adults and children) and for frontline Health and Social Care Workers (HSCWs) (Trust and non-Trust employed). The best way to improve the prevention and management of flu is to increase the uptake of vaccination, especially among health and social care workers with direct patient contact.
2. Last year saw the roll out of the biggest HSC influenza vaccination programme ever, with the aim of offering protection to as many eligible people as possible during the coronavirus (COVID-19) pandemic. We would like to extend our thanks to all those involved for your hard work during very challenging times which led to the best influenza vaccine uptake rates ever achieved.
3. As a result of non-pharmaceutical interventions in place for COVID-19 (such as mask-wearing, physical and social distancing, and restricted international travel) influenza activity levels were extremely low globally in 2020 to 2021. As a result, a lower level of population immunity against influenza is expected in 2021 to 2022. In the situation where social mixing and social contact return towards pre-pandemic norms, it is expected that winter 2021 to 2022 will be the first winter in the UK when seasonal influenza virus (and other respiratory viruses) will co-circulate alongside COVID-19.
4. Seasonal influenza and COVID-19 viruses have the potential to add substantially to the winter pressures usually faced by the HSC, particularly if infection waves from both viruses coincide. The timing and magnitude of potential influenza and COVID-19 infection waves for winter 2021 to 2022 are currently unknown, but mathematical modelling indicates the 2021 to 2022 influenza season in the UK [could be up to 50% larger than typically seen](#) and it is also possible that the 2021 to 2022 influenza season will begin earlier than usual.
5. Influenza vaccination is therefore an important priority this coming autumn to reduce morbidity and mortality associated with influenza, and to reduce hospitalisations during a time when the HSC may also be managing winter outbreaks of COVID-19.
6. We do not underestimate the challenges involved in delivering the flu programme to tens of thousands of children and adults over a short period, while ensuring public

health measures and social distancing advice is adhered to, but it is essential that we achieve as high an uptake rate as possible.

Eligibility

7. The annual seasonal influenza immunisation programme aims to provide direct protection to those who are at higher risk of influenza associated morbidity and mortality. Groups eligible for influenza vaccination are based on the advice of the Joint Committee on Vaccination and Immunisation (JCVI) and include older people, pregnant women, children, those with certain underlying medical conditions and frontline health and social care workers.
8. Since 2013, influenza vaccination has been offered to children in a phased roll-out to provide both individual protection to the children themselves and reduce transmission across all age groups to protect vulnerable members of the population.
9. As a temporary measure, the programme will also be extended this year to 4 additional cohorts in secondary school so that all those from years 8 to year 12 will be offered vaccination. Vaccinating children reduces transmission of influenza and JCVI have recommended that expanding into secondary schools would be cost-effective, particularly if COVID-19 is still circulating.
10. The expanded influenza vaccination programme that we had last year will continue in 2021 to 2022 as part of our wider winter planning when we are likely to see both influenza and COVID-19 in circulation. This means that as a temporary measure the offer for 50 to 64 year olds will continue this year to protect this age group, as hospitalisation from COVID-19 also increases from the age of 50 years onwards.

Therefore, those eligible for influenza vaccination in 2021 to 2022 are:

- all preschool children aged 2 to 4 years on 1 September 2021
- all primary and secondary (up to year 12) school children
- those aged 6 months to 2 years and 16 to 49 years in clinical risk groups
- pregnant women
- those aged 50 years and over
- those in long-stay residential care homes
- carers
- close contacts of immunocompromised individuals
- frontline¹ health and social care workers employed by:
 - Health and Social Care Trusts including NIAS
 - community HSC providers including GP practices, pharmacies, dentists
 - registered independent sector residential care or nursing home
 - registered domiciliary care providers
 - voluntary managed hospice provider

¹ **Frontline health care workers (HCWs):** provide health-related services in acute HSC hospitals, mental health hospitals, community-based services, ambulance care, that are in direct contact with patients.

Frontline social care workers (SCWs): provide social care to patients or clients through the Trust, community-based services to individuals in their own home, in care homes or other long-term care facilities that is in direct contact with patients.

See Annex 1

11. All frontline health and social care workers are expected to have influenza vaccination to protect those they care for. A separate communication will follow about staff vaccination.
12. The influenza chapter in '[Immunisation against infectious disease](#)' (Green Book), which is updated periodically, gives detailed descriptions of the groups outlined above and guidance for healthcare workers on administering the influenza vaccine.
13. The vaccination programme will officially begin on 1 October 2021, however, those administering the vaccine can and should begin offering the vaccine as soon as they have received their first delivery of vaccine, prioritising groups as set out in Annex 3. Please see Annex 6 for ordering and delivery details.
14. For ease of use, information relating to the various parts of the programme are set out in the attached annexes as follows:
 - Annex 1 – Definitions of Frontline HSCWs
 - Annex 2 – Flu Vaccines available in 2021/22
 - Annex 3 - Public Vaccination Programmes 2021/22
 - Annex 4 – Clinical risk groups 2021/22
 - Annex 5 – HSCWs Vaccination Programme 2021/22
 - Annex 6 – Details of how to order vaccine
15. The following are important points to note:

Flu vaccines available in 2021/22

- Influenza viruses change continuously and the World Health Organization (WHO) monitors the epidemiology of influenza viruses throughout the world, making recommendations about the strains to be included in vaccines, with [recommendations now confirmed for 2021 to 2022](#). Every year JCVI reviews the latest evidence on influenza vaccines and recommends the type of vaccine to be offered to patients.

In summary the recommended vaccines are:

- **for those aged 65 years and over** an adjuvanted Quadrivalent Inactivated Vaccine (aQIV). The aQIV is more effective and cost-effective in the elderly than non-adjuvanted vaccines and reflects current JCVI advice and Green Book guidance. (See Annex 2 para 14).
- **For under-65s (including those in at risk groups aged 2 years and over, pregnant women and 50 to 64 year old cohort)** offer a Quadrivalent Inactivated Vaccine (cell-based) (QIVc). **Children over 2 years of age** may also receive QIVc if they have a contraindication to Live Attenuated Influenza Vaccine (LAIV). This reflects current JCVI advice and Green Book guidance (See Annex 2 paras 15-16).
- A Live Attenuated Influenza Vaccine (LAIV) (Fluenz Tetra®) as first line for eligible children **aged 2 years up to less than 18 years**, except those

with contraindications such as immunodeficiency, severe asthma or active wheezing. (See Annex 2 paras 17-31).

- Children in clinical risk groups aged 6 months to less than 2 years should be offered Quadrivalent Inactivated Vaccine (egg-based) QIVe.

Children's vaccination programme

- **This year** the school based vaccination programme will be extended to include **all young people in academic years 8 to 12** of secondary school i.e. those born between 2 July 2005 and 1 July 2010.
- School Health teams **will actively call and offer** the flu vaccine to **all children (including those in a clinical risk group) attending primary school, special school and years 8-12 of secondary school** during the 2021/22 academic year i.e. those born between 2 July 2005 to 1 July 2017 (See Annex 3 para 6).
- School teams prioritise special schools for early vaccinations. However, if a child in one of the **clinically extremely vulnerable groups** (which also correlates with higher risk for serious disease from flu) is attending a mainstream school scheduled for vaccinations later in the season, GPs (or their paediatrician if they attend the hospital during the early season) are asked to facilitate where possible earlier vaccination of these children on parental request. Please see [Chapter 19 of the Green Book, table 19.1](#), for relative risk rates of clinical risk groups in flu and the CEV definition in the [RCPCH website](#).
- GPs **should actively call and** offer flu vaccine to **all pre-school children aged two years or more on the 1 September 2021 i.e. those born between 2 July 2017 to 1 September 2019, as early as possible**, once they take delivery of the Fluenz Tetra® vaccine. We would urge that an increased effort is given to the vaccination of preschool children to ensure uptake rates are maximised (See Annex 3 paras 2-4).
- GPs **should actively call** and offer flu vaccine to **any young people who are in a clinical risk group and who are born before 2 July 2005 i.e. 16 years and older**. This includes young people from 16 years of age with morbid obesity. Children and young people with chronic neurological disease should be prioritised (See Annex 3, para 5).
- GPs are also asked to facilitate the vaccination of **all school age children 16 of years and under** referred by school nursing teams who cannot have Live Attenuated Influenza Vaccine (LAIV) with QIVc.

Adult's vaccination programme

- Flu causes significant morbidity and mortality in adults with chronic medical conditions. The benefits of influenza vaccination among all eligible groups should be communicated and vaccination made as accessible as possible. **GPs should actively call all patients aged 50 and over and any eligible patients under 65 years old** for flu vaccine. All secondary care staff involved in the

patient care of these individuals should actively encourage their patient at every contact to receive the flu vaccine (See Annex 3 paras 13-14).

- **GPs should actively call all pregnant women** for flu vaccine at any stage during pregnancy. All maternity staff, including midwives and obstetricians, should actively encourage pregnant women at every contact to receive the flu vaccine (See Annex 3 paras 15-20).
- In light of the risks posed to the most vulnerable in society - care home residents, patients with clinical risks and frontline health and social care workers, and in light of the phased release of vaccine to all those delivering the programme this year: in the early stages of the programme GPs are asked to prioritise their vulnerable patients and community pharmacies to prioritise HSCWs.
- In the interests of ensuring early protection to the most vulnerable, Trust mobile teams will also be delivering seasonal influenza vaccine, where necessary, at the same time they administer COVID-19 boosters to care homes.
- During 2021/22 community pharmacies will continue to provide additional capacity in support of the flu vaccination programme by offering an additional route to accessing the vaccine to anyone aged over 50 from the start of the season. Community pharmacy service providers do not have a fixed patient list from which to undertake call and recall activities. However, they should proactively offer influenza vaccination to any patient they identify as being eligible to receive it on the basis of age should they present in the pharmacy for any reason. They should also encourage uptake by at risk groups by signposting to patients' GPs.

Frontline Health and Social Care Workers - including Independent Sector

- We would like to re-emphasise the importance of vaccination for frontline Health and Social Care workers, including those working in the Independent Sector to ensure they **protect their families, themselves and the vulnerable patients in their care** (see Annex 5).
- Last year, to further support frontline Health and Social Care workers to avail of vaccination, a new service was introduced that enabled HSCWs to receive their flu vaccine from participating community pharmacies. Over 14,500 HSCWs availed of this new service, which was of particular benefit in increasing vaccine uptake among staff working in the independent care sector.
- During 2021/22 community pharmacies will continue to play an important role in the flu vaccination programme by offering the vaccine to HSCWs.
- The influenza chapter in 'Immunisation against infectious disease' (Green Book), which is updated periodically, provides definitions of healthcare workers. Outside of the Green book descriptions, for this year, in line with the rest of the UK the NI definition of **front line staff** has been amended to align with COVID-19 staff definitions to include non-clinical staff who have contact with patients. See Annex 1 for the full definition.

- For information, Annex 1 also sets out definitions of frontline health and social care workers which can also be found in the 2021-22 PHA data collection guidance contained in PHA website: Information for health professionals | HSC Public Health Agency (hscni.net).

Achieving high vaccine uptake levels

16. Last season saw the most successful programme ever. Despite the challenges due to the COVID-19 pandemic, at the end of March 2021 HSC services had vaccinated a record [79.1% of those aged over 65 years](#) in Northern Ireland. This is the highest uptake ever achieved for this group and exceeds the WHO uptake ambition of 75%. For [frontline healthcare workers](#), [2 to 4 year olds](#), and [at risk groups](#) the highest ever recorded levels of influenza vaccine uptake were also achieved.
17. The DoH ambitions for the 2021 to 2022 programme are set out below. We want to build on the momentum of last year’s achievements and the successful roll-out of the COVID-19 vaccination programme, achieving even higher uptake this year.
18. The high ambitions reflect the importance of protecting against flu this winter and should be regarded as a minimum level to achieve. The different ambitions across the cohorts reflect what is regarded as achievable so, for instance, for those aged 65 and over the high ambition reflects the already high uptake levels achieved last year whereas for school-aged children the large expansion into secondary school this year will be challenging in itself.
19. Please note that the uptake targets are set collectively across the eligible population and not against individual providers e.g. GPs or community pharmacies.

Table 1. Vaccine uptake ambitions in 2021 to 2022

Eligible groups	Uptake ambition
Routine programme for those at risk from influenza	
Aged 65 years and over	90%
Aged under 65 ‘at risk’, including pregnant women	75% in all clinical risk groups
Aged 50 to 64 years	75%
Children’s programme	
Preschool children aged 2 to 4 years old	80%
School-aged children up to year 12	80%
Health and social care workers	
Frontline health care workers	75%

Eligible groups

Uptake ambition

Frontline social care workers

75%

Vaccine supply and ordering

20. Quotas on orders will be applied across the board this year from the outset of the campaign for aQIV, QIVc, and LAIV.
21. All GP practices must confirm or update their details on the current Movianto ordering system prior to being permitted to order vaccines for the 2021/22 campaign. Practices requiring vaccine to be delivered to multiple sites must advise Movianto. This is for mass vaccination clinics only and is not an option for business as usual venues. GP practices must complete initial registration **before placing their order**.
22. Central procurement of the injectable annual seasonal influenza vaccines has been completed. GPs and Trusts can **now** place orders for all age groups requiring an injectable flu vaccine. Deliveries to practices will begin **w/c 20 September 2021**. Community Pharmacies can place orders for injectable flu vaccine from w/c 20 September 2021 for delivery from w/c 27 September 2021.
23. UK wide procurement is carried out for Fluenz Tetra® vaccine. GPs can **now** place orders for pre-school (aged 2-4 years) children and young people that have finished school year 12 i.e. aged 16 years to under 18 years in at risk groups requiring Fluenz Tetra®. Deliveries to practices will begin **w/c 20 September 2021**. Trust schools teams should place orders for the school programmes as normal. The details of how to order are attached at Annex 6.
24. All vaccinators in GP Practices, community pharmacies and Trusts are reminded of the importance of **not over ordering**. While there is not expected to be an issue with vaccine supply, it is essential that vaccine orders are realistic in order to conserve and tailor supplies to the expected need. **Orders can normally be fulfilled within 1 working day provided the order has been placed before the cut-off time (2 working days if ordering flu vaccine along with COVID vaccine)**.
25. At the start of the season, some deliveries of LAIV vaccine may be GB stock rather than that packaged specifically for use in Northern Ireland. MHRA have confirmed that these will be licensed packs and that these can be supplied and used in Northern Ireland. A letter will accompany the packs explaining that the stock has been supplied via a labelling exemption under article 63(3) of Council Directive 2001/83/EC which will cover the FMD issue. [HSS \(MD\) 61/2021 provides further details](#).

Delivering the programme during the pandemic

26. Patients will need reassurance that appropriate measures are in place to keep them safe from COVID-19, as it is likely to be co-circulating with flu. This reassurance will be especially important for those on the shielding list. Providers will be expected

to deliver the programme according to Public Health guidelines on social distancing, and follow the current Infection Prevention Control Guidance on the use of PPE

Influenza and COVID-19 vaccination

27. On the 14 September JCVI released their statement on the [COVID-19 vaccine booster programme for 2021/22](#). It is not the intention of JCVI that the 2021 COVID-19 booster vaccine programme should disrupt or delay deployment of the annual influenza vaccination programme. Both of these programmes are important for individual and public health, especially over winter 2021 to 2022. Where operationally expedient, COVID-19 and influenza vaccines may be co-administered.

Shingles vaccine supply

28. The shingles vaccination programme for 2021/22 will also officially commence in September 2021. Please see [HSS \(MD\) 62/2021 - SHINGLES VACCINATION PROGRAMME – ELIGIBILITY CRITERIA FOR 2021/22 AND INTRODUCTION OF SHINGRIX® FOR IMMUNOCOMPROMISED](#).
29. From 1 September 2021, there will be a change to the GP delivery of the shingles vaccination programme. From that date, GPs should also offer a non-live shingles vaccine (Shingrix®) to all those aged 70-79 who are eligible for shingles vaccination but are clinically contraindicated to receive the live vaccine Zostavax® due to their immunocompromised status.
30. The groups that should be offered Shingrix® instead of Zostavax® amongst this age group are summarized in the [Shingles \(herpes zoster\) Green Book chapter](#).
31. **Please note** some shingles Zostavax® stock has an expiry date of **30 November 2021, 31 December 2021 and 30 January 2022**. GPs should ensure they only order enough vaccine to meet their weekly needs.
32. It should be emphasised that whilst for ease of administration the majority of Zostavax® has previously been given to eligible patients at the same time as their flu vaccine; **Zostavax can and should be given throughout the year** to those who did not receive it during the flu season period for whatever reason. Practices should consider the practicalities of possible co-administration of COVID-19 and influenza vaccines when deciding to provide Shingles at the same time or separately. A 7 day period between COVID-19 and the shingles vaccine is necessary. If you submit a combined order for flu and Zostavax® vaccines you will receive both vaccines in a single delivery from mid to late September onwards. **Please place a single order if you require shingles vaccines outside the flu vaccine programme months.**

Conclusion

33. I would like to express my sincere appreciation to all who worked hard to manage seasonal flu during the 2020/21 season. While it was a mild flu season, events have now shown with the COVID-19 pandemic that it is vital that we do all we can to ensure the HSC is prepared for winter pressures and unexpected events. Morbidity and mortality attributed to flu is a key factor in HSC winter pressures and a major cause of harm to individuals.

34. The annual flu immunisation programme is a critical element of the system-wide approach for delivering robust and resilient health and care services during the winter. The Flu vaccination will help protect our staff from flu. It will help to reduce GP consultations, unplanned hospital admissions, pressure on Emergency Departments and staff sickness levels. In light of the ongoing pandemic this will be more important than ever.

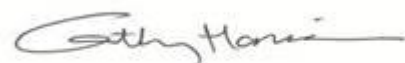
Yours sincerely



Prof Sir Michael McBride
Chief Medical Officer



Prof Charlotte McArdle
Chief Nursing Officer



Mrs Cathy Harrison
Chief Pharmaceutical Officer

This letter is available on the Department of Health website at

<https://www.health-ni.gov.uk/topics/professional-medical-and-environmental-health-advice/hssmd-letters-and-urgent-communications>

CIRCULATION LIST

Director of Public Health/Medical Director, Public Health Agency (*for onward distribution to all relevant health protection staff*)
Assistant Director Public Health (Health Protection), Public Health Agency
Director of Nursing, Public Health Agency
Assistant Director of Pharmacy and Medicines Management, Health and Social Care Board (*for onward distribution to Community Pharmacies*)
Directors of Pharmacy HSC Trusts
Director of Social Care and Children, HSCB
Family Practitioner Service Leads, Health and Social Care Board (*for cascade to GP Out of Hours services*)
Medical Directors, HSC Trusts (*for onward distribution to all Consultants, Occupational Health Physicians and School Medical Leads*)
Nursing Directors, HSC Trusts (*for onward distribution to all Community Nurses, and Midwives*)
Directors of Children's Services, HSC Trusts
RQIA (*for onward transmission to all independent providers including independent hospitals*)
Medicines Management Pharmacists, HSC Board (*for cascade to prescribing advisers and practice based pharmacists*)
Regional Medicines Information Service, Belfast HSC Trust
Regional Pharmaceutical Procurement Service, Northern HSC Trust
Donna Fitzsimons, Head of School of Nursing and Midwifery QUB
Sonja McIlpatrick, Head of School of Nursing, University of Ulster
Siobhan Murphy, CEC
Donna Gallagher, Open University

Professor Paul McCarron, Head of School of Pharmacy and Pharmaceutical Sciences, UU
Professor Colin McCoy, Head of School, School of Pharmacy, QUB Professor
Colin Adair, Postgraduate Pharmacy Dean, NI Centre for Pharmacy Learning and
Development, QUB
Joe Brogan, Assistant Director of Integrated Care, HSCB
Michael Donaldson, Head of Dental Services, HSCB (for distribution to all General Dental
Practitioners)
Raymond Curran, Head of Ophthalmic Services, HSCB (for distribution to Community
Optometrists)
Trade Union Side
Clinical Advisory Team
Louise McMahon, Director of Integrated Care, HSCB

Frontline Health and Social Care Worker Definitions

Definition of frontline healthcare workers

The definition of frontline healthcare workers includes clinical and non-clinical staff who have contact with patients. This is as set out in the [C1008 Operational Guidance of Frontline Healthcare Workers](#). This definition, as applied to trust staff, includes – but is not limited to – the following:

- staff who have frequent face-to-face contact with patients
- laboratory, pathology and mortuary staff
- those working for a sub-contracted provider of facilities services such as portering or cleaning
- temporary, locum or ‘bank’ staff, including those working in the COVID-19 vaccination programme, students, trainees and volunteers who are working with patients.

Please note that for flu this extends the definition used in the Green Book to include non-clinical staff.

Table 1: Definitions and examples of staff groups that are FRONTLINE HCWs²
Please refer to the [PHA 2021-22 Data Collection Guidance](#) for full details

Staff Grouping	Definition
All doctors	<ul style="list-style-type: none"> • doctors working in hospital, community or GP³ • all grades of hospital, community and public health doctor or dentist⁴ • medical and dental students
All qualified nurses	<ul style="list-style-type: none"> • qualified nurses, midwives, health visitors working in hospital, community or GP • at least first level registration • includes nurse consultants, nurse managers • agency nurses⁵ • bank nurses⁶

² Please note that while this list is a useful reference point, it does not represent an exhaustive list of staff who are eligible for vaccination (and ultimately the decisions on this will vary from Trust to Trust based on the work role of the member of staff)

³ GPs that are Trust-employed only i.e. those that work in a Trust managed out of hours service.

⁴ Consultant, registrar, senior house officer, foundation 1&2, staff grade, associate specialist, clinical assistants, and hospital practitioners

⁵ Agency nurses are employed by a nursing agency that provides nurses to organisations who need the services of healthcare professionals.

⁶ Bank nurses are included in the Trust nurse bank and provide temporary cover as a result of staff shortages or short term unfilled vacancies.

	<ul style="list-style-type: none"> nursing and midwifery students
All Allied Health Professionals	<ul style="list-style-type: none"> physiotherapists occupational therapists dieticians radiographers sonographers chiroprodists/podiatrists orthoptists speech & language therapists clinical psychologists art/music/drama therapists all AHP students
All pharmacists	<ul style="list-style-type: none"> pharmacists working in hospital, community pharmacy or general practice settings pharmacy technicians pharmacy support staff pharmacy students including foundation year pharmacists
Other qualified professional staff	Other qualified staff working in direct patient contact e.g. medical technical officers, cardiographers, biomedical scientists, clinical scientists, healthcare scientists, optometrists
Qualified ambulance staff	<ul style="list-style-type: none"> ambulance paramedics technicians emergency care practitioners
Support to qualified staff groupings	<ul style="list-style-type: none"> staff with direct patient care working in direct support of clinical staff: nursing assistants, auxiliaries, nursery nurses care assistants phlebotomists health care assistants technology assistants pharmacy technicians and support staff physiotherapy assistants ambulance personnel porters involved in moving patients around the hospital maintenance & works staff in open clinical areas

Table 2: Definitions and examples of staff groups that are FRONTLINE SCWs

Staff Grouping	Definition
Social Workers	Assesses and manages care, support and intervention needs for individuals and families: social workers
Social Care workers	<ul style="list-style-type: none"> Provides service users with direct personal community-based

	<ul style="list-style-type: none">• care and practical support to people in their own home: home• help / domiciliary care worker / community care worker• Provides care for people in care homes or other long-stay• care facilities: Trust-employed
--	---

2021/22 AVAILABLE FLU VACCINES FOR PUBLIC AND HSCW PROGRAMMES

1. As with previous years, there will be several different flu vaccines available, some of which are specifically recommended for different ages groups. None of the influenza vaccines for the 2021/22 season contain thiomersal as an added preservative.
2. The Joint Committee on Vaccination and Immunisation (JCVI) has reviewed the latest evidence on influenza vaccines and recommended the following for the 2021 to 2022 season (summarised in table below).

Aged 65 years and over

3. These patients should be offered an adjuvanted quadrivalent influenza vaccine (aQIV).

An adjuvanted Quadrivalent Inactivated Vaccine (aQIV) will be available and should be offered to all those aged 65 years and over (see para 14 for more information). **aQIV vaccine is only licensed for those aged 65 years and over.** The aQIV is **NOT** suitable for egg or latex allergic people. In these instances the cell-based (QIVc) Quadrivalent Inactivated Vaccine can be given (see egg allergic section paras 34 to 36).

Aged 18 to 64 years (including at risk adults, pregnant women, and 50 to 64 year olds cohort)

4. This group should be offered QIVc as there is a clear benefit to offering quadrivalent vaccines compared to trivalent influenza vaccines and also in the fact it is cell-based rather than egg-based. There is also a potential advantage to using vaccines that do not use egg in the manufacturing process due to the possible impact of 'egg-adaptation' on the effectiveness of influenza vaccines, particularly against A(H3N2) strains.
5. QIVc should also be offered to all HSCWs over 18 years of age; this includes HSCWs that are over 65 years. (Annex 4 paras 11-12 for more information). QIVc is licensed for children aged from 2 years of age and so can be offered to 2 to 18 year olds who cannot receive LAIV).

Children aged 2 years to less than 18 years

6. The Live Attenuated Influenza Vaccine (LAIV) (Fluenz Tetra®) will again be available for eligible children **aged two years up to less than 18 years, except those with contraindications** such as immunodeficiency, severe asthma or active wheezing. (See paras 17-26 for more information). As the vaccine contains porcine gelatine an alternative injectable vaccine can be offered should a child/parent object to use of the

LAIV for religious reasons.

7. JCVI recommended that at risk children for whom LAIV is not suitable should be offered QIVc (now licensed from the age of 2), or QIVe, in that order of preference.

At risk children aged 6 months to 2 years of age

8. These children should be offered QIVe, which has been procured for this age group. Please note that neither LAIV nor QIVc are licensed for children under 2 years of age. QIVc should also be offered to children aged 2 years of age and above who cannot receive the LAIV vaccine.

Table 1: Influenza Vaccines available for 2021-22 programme

Marketing Authorisation Holder	Type of flu vaccine	Name	Vaccine Type	Admin route	Age	Eligible Group	Suitable for egg allergic resulting in anaphylaxis	Suitable for latex allergic
Seqirus UK Ltd, Netherlands B.V. Paasheувelweg 28 1105BJ Amsterdam Netherlands	Adjuvanted Quadrivalent Influenza Vaccine (aQIV)	Fluad® Tetra	Surface antigen, inactivated Adjuvanted with MF59C.1	Intramuscular injection	65 years and over	All 65 years and over (GP campaign)	No	Yes*
Seqirus UK Ltd, Netherlands B.V. Paasheувelweg 28 1105BJ Amsterdam Netherlands	Quadrivalent Influenza Vaccine (cell grown) (QIVc)	Flucelvax® Tetra	Surface antigen, inactivated prepared in cell cultures	Intramuscular injection	Adults and children from 2 years of age	Children aged 2 years and over who cannot receive LAIV (GP and schools campaign) Children from 2 years of age who cannot receive LAIV (GP campaign) Anyone aged 18- 64 years in at risk group (GP campaign) All 18 years and over (HSCW campaign)	Yes – egg free	Yes*
Sanofi Pasteur Europe 14 Espace Henry Vallée 69007 Lyon FRANCE	Quadrivalent Influenza Vaccine (egg grown) (QIVe)	Quadrivalent influenza vaccine	Split virion, inactivated virus	Intramuscular injection	From 6 months	6 month to 2 year olds in at risk groups (GP campaign)	Yes – if no history of severe anaphylaxis that required intensive care	Yes

AstraZeneca UK Limited 600 Capability Green Luton, LU1 3LU United Kingdom	Live Attenuated Influenza Vaccine (LAIV)	Fluenz Tetra®	Live Attenuated	Nasal spray	From 24 months to less than 18 years old	All 2- 4 year olds (GP campaign) All primary school children plus Years 8-12 children (schools campaign) 11- 17 year olds in at risk groups (GP campaign)	Yes - if no history of severe anaphylaxis that required intensive care (see para 36)	Yes
--	--	----------------------	-----------------	-------------	--	---	---	-----

* Flud Tetra and Flucelvax Tetra are supplied in single-dose prefilled syringes, with a plunger stopper (bromobutyl rubber), with attached needles. None of the components of this staked needle prefilled syringe presentation that are in direct contact with the vaccine (syringe barrel, plunger and rubber stopper) are made with natural rubber latex. The needle shield for Flud Tetra and Flucelvax Tetra contains natural rubber latex. The risk of allergy is extremely small and is considered to be safe in those patients that have latex allergy / latex anaphylaxis.

Please refer to the Green Book Chapter 6: Contraindications and special considerations for further information pages 2&3.
<https://www.gov.uk/government/publications/contraindications-and-special-considerations-the-green-book-chapter-6>

2021/22 influenza virus subtypes

9. Flu viruses change continuously and the World Health Organization (WHO) monitors the epidemiology of flu viruses throughout the world. Each year, in February, WHO makes recommendations on the strains that should be included in the northern hemisphere flu vaccines for the forthcoming flu season, which begins in October. Throughout the last decade, there has generally been a good match between the strains of flu virus in the vaccine and those that subsequently circulated.

The WHO has announced that quadrivalent and [vaccines for use in the 2021/22 northern hemisphere influenza season](#) should contain the following:

Egg-based Vaccines

- an **A/Victoria/2570/2019 (H1N1)pdm09-like virus;**
- an **A/Cambodia/e0826360/2020 (H3N2)-like virus;**
- a **B/Washington/02/2019 (B/Victoria lineage)-like virus;** and
- a **B/Phuket/3073/2013 (B/Yamagata lineage)-like virus**

Cell- or recombinant-based Vaccines

- an **A/Wisconsin/588/2019 (H1N1)pdm09-like virus;**
- an **A/Cambodia/e0826360/2020 (H3N2)-like virus;**
- a **B/Washington/02/2019 (B/Victoria lineage)-like virus;** and
- a **B/Phuket/3073/2013 (B/Yamagata lineage)-like virus**

Vaccine Effectiveness

10. Vaccine effectiveness (VE) varies from one season to the next. The United Kingdom has a well-established system to monitor influenza VE each season using data from primary care influenza sentinel swabbing surveillance schemes in England, Scotland, Wales and Northern Ireland.
11. As a result of non-pharmaceutical interventions in place for COVID-19 (such as mask-wearing, physical and social distancing, and restricted international travel) influenza activity levels were extremely low globally in 2020 to 2021. Consequently, the latest data on vaccine effectiveness is from 2019/20. The provisional overall adjusted end-of-season VE for 2019/20 was significant at 43% against laboratory-confirmed flu. Adjusted VE was highest against influenza A(H1N1)pdm09 (54%), but as seen in the past 2 seasons, reduced VE against influenza AH3N2 (31%)⁷.
12. In previous years, there has been lower effectiveness in older people from the non-

⁷ Surveillance of influenza and other respiratory viruses in the UK: Winter 2019 to 2020. Available here: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/895233/Surveillance_Influenza_and_other_respiratory_viruses_in_the_UK_2019_to_2020_FINAL.pdf

adjuvanted inactivated vaccines compared to younger age groups, although the immunisation still provides important protection against cases of severe disease, such as flu confirmed hospital admission and reductions in numbers of GP consultations.

Adjuvanted Quadrivalent Inactivated influenza Vaccine (aQIV)

13. The adjuvanted Quadrivalent Inactivated Vaccine (aQIV), was licensed in 2021 and is available for use this season. [JCVI concluded at its November 2020 meeting](#) that **an aQIV is more effective and highly cost effective in those aged over 65 years and above** compared with the non-adjuvanted or 'normal' influenza vaccines used in the UK for this age-group. If aQIV is unavailable QIVc should be offered instead.

Quadrivalent Inactivated Influenza Vaccine (QIVc and QIVe)

14. JCVI had reconsidered the use of quadrivalent influenza vaccines (QIV), which offer protection against two strains of influenza B rather than one. As influenza B is relatively more common in children than older age groups, the main clinical advantage of these vaccines is in childhood. Because of this, those vaccines centrally supplied for the childhood programme in recent years have been quadrivalent preparations.

15. Further modelling work by Public Health England suggests that, the health benefits to be gained by the use of quadrivalent vaccines compared to trivalent vaccines, **is more substantial in at risk adults under 65 years of age, including pregnant women**. On average, use of quadrivalent over trivalent is likely to lead to reduced activity in terms of GP consultations and hospitalisations.

Live Attenuated Influenza Vaccine (LAIV) (Fluenz Tetra®)

16. JCVI have recommended that a live attenuated influenza vaccine (LAIV) be used as the vaccine of choice for children. There is currently only one LAIV on the market, Fluenz Tetra® (a quadrivalent live attenuated intranasal influenza vaccine).

17. JCVI recommended that extending the flu vaccination to all children should reduce the impact of flu by directly averting many cases in children and by reducing flu transmission in the community. This in turn will avert many cases of severe flu and flu related deaths in older adults and people with clinical risk factors.

18. While the long term effectiveness of the children's flu programme is still being assessed it should be noted that since the programme was introduced the levels of GP consultation rates for influenza-like illness during each flu season has been lower in Northern Ireland compared to other parts of the UK and the Republic of Ireland where either a more limited or no flu vaccination programme for healthy children was operating.

19. JCVI recommended Fluenz Tetra® as it has:

20

- higher efficacy in children, particularly after only a single dose;
- the potential to provide coverage against circulating strains that have drifted from those contained in the vaccine;
- higher acceptability with children, their parents and carers due to intranasal administration;

20. Fluenz Tetra® is administered by the intranasal route and is supplied in an applicator that allows a divided dose to be administered in both nostrils. The device allows intranasal vaccination to be performed without the need for additional training. Neither dose needs to be repeated if the patient sneezes, or blows their nose following administration. The live attenuated vaccine can be given at the same time as other vaccines including live vaccines.

21. The vaccine is licensed for those aged from 24 months to less than 18 years of age. **Given that this vaccine gives better protection for children, Fluenz Tetra® should be administered to all children eligible for vaccination except those with contraindications (see below).**

22. The patient information leaflet provided with Fluenz Tetra® states that children should be given two doses of this vaccine if they have not had flu vaccine before. However, JCVI considers that a second dose of the vaccine provides only modest additional protection. On this basis, JCVI has advised that most children should be offered a **single dose** of Fluenz Tetra®. However, children in clinical risk groups aged two to less than nine years who have not received flu vaccine before should be offered two doses of Fluenz Tetra® (given at least four weeks apart).

23. For children for whom Fluenz Tetra® is contraindicated or not recommended, a suitable inactivated flu vaccine should be offered. If these children are aged six months to less than nine years and have not received flu vaccine before, two doses of the inactivated vaccine should be offered (given at least four weeks apart).

24. Fluenz Tetra® has a shelf life of **18 weeks** that starts at the point of release from the manufacturer. This is a shorter shelf life than other influenza vaccines and some of this time will have passed when the vaccine reaches GPs/School Health Teams. It is important that the expiry date on the nasal spray applicator is checked before use. If the expiry date has passed, please make arrangements to have the vaccine disposed of safely.

25. Vaccine has been ordered to cover the period extending from September to late March.

26. Whilst a limited volume of stock has been ordered to expire later in the flu season, it is highly likely that most of the Fluenz Tetra® supplied will have expired before mid January 2022. In light of this it will be important to ensure that efforts are made to vaccinate all children as early in the season as possible.

Contraindications and precautions

27. **None** of the influenza vaccines should be given to those who have had:

- a confirmed anaphylactic reaction to a previous dose of the vaccine, or
- a confirmed anaphylactic reaction to any component of the vaccine (other than ovalbumin – see the Green Book influenza chapter for egg allergy and inactivated influenza vaccines).

28. **Fluenz Tetra®** is contraindicated in children and adolescents who are:

- clinically severely immunodeficient due to conditions or immunosuppressive therapy such as: acute and chronic leukaemias; lymphoma; HIV infection not on highly active antiretroviral therapy (HAART); cellular immune deficiencies; and high dose corticosteroids;
- receiving salicylate therapy because of the association of Reye's syndrome with salicylates and wild-type influenza infection.
- currently taking or have been prescribed high dose oral steroids in the last 14 days

29. **Fluenz Tetra®** is **not contraindicated** for use in children or adolescents with stable HIV infection receiving antiretroviral therapy; or who are receiving topical corticosteroids, inhaled corticosteroids or low-dose systemic corticosteroids, or those receiving corticosteroids as replacement therapy, e.g. for adrenal insufficiency.

30. **Fluenz Tetra®** is not recommended in children with a history of active wheezing at the time of vaccination (until at least 72 hours after wheezing has stopped); or those who have increased their use of bronchodilators in the previous 72 hours. If their condition has not improved after a further 72 hours then, to avoid delaying protection in this high risk group, these children should be offered an inactivated influenza vaccine;

31. The advice in contraindications and precautions sections in the Green Book influenza chapter and in the relevant Summary of Product Characteristics (SPC) should be referred to.

Egg allergy

32. In recent years, inactivated flu vaccines that have a very low ovalbumin content (<0.12 micrograms/ml) have become available and studies show that they may be used safely in individuals with an egg allergy (*Gagnon et al, 2010*). The only exception to this is when the egg allergy resulted in anaphylaxis that required an intensive care admission. This year one of the vaccines, (Inactivated egg-grown Quadrivalent Influenza Vaccine (QIVe) from Sanofi Pasteur t/a Aventis Pharma), has an ovalbumin content of < 0.12 micrograms/ml, and can be used for most egg allergic patients aged 6 months to under

2 years of age.

NOTE – The advice in the Green Book differs from the SPC for the quadrivalent vaccine which lists as a contraindication:

“Hypersensitivity to the active substances, to any of the excipients listed in Section 6.1 or to any component that may be present as traces such as eggs (ovalbumin, chicken, proteins), neomycin, formaldehyde and octxinol-9”

33. For anyone aged 2 years of age or older who has had **confirmed anaphylaxis to egg (requiring intensive care)** a cell-grown Quadrivalent Influenza Vaccine (QIVc) should be used.
34. The adjuvanted influenza vaccine (aQIV) however, has a higher ovalbumin content and is **NOT** suitable for egg allergic patients. Any egg allergic patient aged 65 years and above should be offered the Inactivated Quadrivalent Influenza vaccine (QIVc).
35. Fluenz Tetra®, which previously had an upper ovalbumin limit of 1.2 micrograms/ml, has also been shown (JCVI, 2015) to be safe for use in egg-allergic children. The ovalbumin content of LAIV has been further reduced since 2016 (≤ 0.024 micrograms per 0.2ml dose). JCVI has advised (JCVI, 2015) that 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). The only exception is for children who have required admission to intensive care for a previous severe anaphylaxis to egg, for whom no data are available; such children are best given LAIV in the hospital setting. LAIV remains the preferred vaccine for this group and the intranasal route is less likely to cause systemic reactions. Children with egg allergy but who also have another condition which contraindicates LAIV should be offered an inactivated influenza vaccine with a very low ovalbumin content (less than 0.12 micrograms/ml). Children in a clinical risk group and aged under nine years who have not been previously vaccinated against influenza will require a second dose (of either LAIV or inactivated vaccine as appropriate).
36. Facilities should be available and staff trained to recognise and treat anaphylaxis (as is the case when any vaccines are given).

PUBLIC (CHILDREN AND ADULTS) VACCINATION PROGRAMME DETAILS 2021/22

Individuals eligible for 2021/22 flu vaccine

Children

1. Fluenz Tetra® vaccine is the vaccine of choice for children aged two and over, except those with contraindications.
2. **GPs** are responsible for **actively calling and vaccinating** the following children for flu vaccine:
 - a. **all pre-school children** aged two to four years of age on the 1 September 2021 i.e. children with date of birth range: **2 July 2017 to 1 September 2019**
 - b. young people in a clinical risk group who are **NOT** in primary school or years 8-12 in secondary school i.e. children with date of birth after: **2 July 2003**
3. Only pre-school children who are two years old or more on the 1 September 2021 should be actively called for vaccination. However, if a child turns two years old during the vaccination period i.e. from September to December 2021 and their parents request that they receive the vaccine, GPs should vaccinate the child once they are two years of age, in line with the vaccine license. GPs can claim the normal Item of Service (IOS) fee for these patients.
4. **School aged children in secondary school years 13 and 14 and in a clinical risk groups will NOT** be vaccinated in school so it is important that those at risk are identified and vaccinated in primary care. When any doubt exists as to whether the vaccine should be given it is best to err on the side of caution and offer the vaccine.
5. The H1N1 pandemic flu in 2009 highlighted that children with complex medical healthcare needs, such as (but not confined to), those attending special schools for severe learning disability and day care centres, are particularly vulnerable to influenza infection and **should be offered seasonal flu vaccine as a priority**.
6. **School Health Teams** are responsible for offering flu vaccine to **all children (including those in a clinical risk group) attending primary school** (P1 to P7 inclusive), and **Years 8 to 12 of secondary school** during the academic year 2021/22.

This means GP practices **do not** need to actively call at risk children with date of birth range: **2 July 2005 to 1 July 2017**.

7. This year school health teams have to visit more schools than before to include secondary schools, and may also need to visit each school on more than one occasion, due to social distancing requirements when delivering immunisation sessions. The school programme has to be delivered over a short space of time so if a child is absent from school during any of the prearranged date(s) OR if they require a second dose of the flu vaccine, the parent/guardian will be advised by the school health team to contact their GP.
8. Some school aged children might be outside of the age ranges outlined in the above paragraph (for example, if a child has been accelerated or held back a year). It is acceptable to offer and deliver immunisations to these children with their class peers.
9. **This is especially important for children in clinical risk groups**. Parents will be advised of the need for this and the onus will be on them to contact the GP surgery. GPs are asked to facilitate vaccination when contact is made but do not need to identify and call these children. GPs can claim the normal IOS fee for these children. This will only apply to those school children born between 2 July 2005 and 1 July 2017.
10. In 2020/21, the uptake rate achieved in pre-school children was 55.2%. **A key objective of the children's programme this year is to maximise uptake rates in order to achieve reduction of flu transmission.** Enough vaccine will be available to achieve an uptake rate of 80%. With this in mind, GPs should actively call the children they are responsible for as early as possible and when they have received delivery of Fluenz Tetra®. GPs are urged to encourage the parents/guardians of eligible children to take up the offer of vaccination and recall children if required.
11. Only suitably trained GP employed staff should be used to vaccinate children as part of the children's flu programme.

JCVI advice regarding the number of flu vaccine doses for children

12. The patient information leaflet provided with LAIV states that all children should be given two doses of this vaccine if they have not had flu vaccine before. However, JCVI considers that a second dose of the vaccine provides only modest additional protection and on that basis has advised that most children should be offered a single dose of LAIV. Children in clinical risk groups aged two to less than nine years of age who have not received flu vaccine before should be offered two doses of LAIV (given at least four weeks apart).

Given that some influenza vaccines are restricted for use in particular age groups, the SPCs for individual products should always be referred to when ordering vaccines to ensure that they can be given appropriately to particular patient age groups.

Individuals under 65 years in a clinical at risk group

13. **Annex 4** sets out the eligible 'clinical risk' groups in full. In offering influenza vaccine to people in the clinical risk groups, GPs should take into account the risk of influenza infection exacerbating any other underlying disease that a patient may have as well as the risk of serious illness from influenza itself.
14. The lessons learnt from recent years should be taken into account when deciding who should be included within the target groups. For chronic neurological disease, in particular, it is now clear that this group should also include children and young people with any chronic neurological disease and includes Multiple Sclerosis and related conditions and hereditary and degenerative diseases of the central nervous system.
15. **All pregnant women** should be offered the seasonal flu vaccine by their GP, including those who become pregnant during the flu season. For those pregnant women who are also HSCWs, they can be vaccinated by their Trust OH service or peer vaccinators. This applies to pregnant women at any stage of pregnancy (first, second or third trimesters).
16. Inactivated quadrivalent vaccine should be used, including for anyone under 18 years old as Fluenz Tetra® is contraindicated in pregnancy.
17. There is good evidence that pregnant women are at increased risk of complications if they contract flu.^{1,2} In addition, there is evidence that flu during pregnancy may be associated with premature birth and smaller birth size and weight^{3,4} and that flu vaccination may reduce the likelihood of prematurity and smaller infant size at birth associated with influenza infection during pregnancy⁵. Furthermore, a number of studies show that flu vaccination during pregnancy provides passive immunity against flu to infants in the first few months of life.^{6,7,8,9}
18. A review of studies on the safety of flu vaccine in pregnancy concluded that inactivated flu vaccine can be safely and effectively administered during any trimester of pregnancy and that no study to date has demonstrated an increased risk of either maternal complications or adverse foetal outcomes associated with inactivated influenza vaccine¹⁰.
19. Pertussis vaccination for pregnant women can be given at the same time as the flu vaccine, if it is convenient to do so. However as set out in HSS (MD) 9/2016, the

pertussis vaccine can now be given from 16 weeks gestation, see attached link: www.health-ni.gov.uk/sites/default/files/publications/dhssps/hss-md-9-2016.pdf, whereas flu vaccine can be given at all stages of pregnancy. It is important not to delay flu vaccine in order to give it at the same time as pertussis vaccine.

When to stop offering the vaccine to pregnant women

20. The ideal time for flu vaccination is between October and early December before flu normally reaches its peak of circulation. However flu can circulate considerably later than this and it may therefore be necessary to continue offering the vaccine to groups such as newly pregnant women. Clinicians should apply clinical judgement to assess the needs of an individual patient, taking into account the level of flu-like illness in the community and the fact that the immune response following flu vaccination takes about two weeks to develop fully. The PHA will provide advice on extending the flu vaccination period if necessary.

Vaccination of patients outside the clinical risk groups

21. The list of clinical at risk groups, as set out in Annex 4, is not exhaustive. Where a person **not in a clinical risk group** requests/requires an influenza vaccination, the decision to immunise is based on the GP's clinical judgement. Vaccination should also be offered to:

- a. household contacts of immunocompromised individuals i.e. individuals who expect to share living accommodation on most days over the winter
- b. those who are in receipt of a carer's allowance, or who are the main carer of an older or disabled person whose welfare may be at risk if the carer falls ill
- c. Those living in long stay residential care homes or other long-stay care facilities where rapid spread is likely to follow introduction of infection and cause high morbidity and mortality (this does not include prisons, young offender institutions, university halls of residence etc. Separate arrangements are being put in place for adult prison populations);
- d. Individuals where a medical practitioner recommends flu vaccine based on clinical judgement of the risk of flu exacerbating an underlying disease and the risk of serious illness from flu itself

22. In such cases, influenza vaccine should be offered from the centrally procured stock even if the individual is not in one of the clinical risk groups specified in this circular. For monitoring purposes these patients should be recorded as 'others'.

23. For any other patients who wish to avail of the flu vaccine they should be advised that these are available (privately) at many community pharmacies.

Funding and Contractual Arrangements

24. The arrangements and funding for the seasonal flu vaccination programme remain the same as in previous years. Under the arrangement associated with the GMS contract financial envelope, the HSCB has already been allocated funding for the immunisation with flu vaccine of those over 65s and for those under 65s at risk.

25. As before, for 2021/22, additional money will be allocated to PHA for onward transfer to:

- I. **HSCB Integrated Care (Primary Care)** to cover payment to GPs for:
 - Immunisation of all pre-school children aged 2 years old or more
 - Immunisation of primary school aged children and Years 8-12 post-primary school children i.e. those born between **02/07/2005** to **01/07/2017**, who present for vaccination if they were unable to be vaccinated by the school health team
 - Immunisation of carers
 - Immunisation of pregnant women
 - Data collection fee
 - Active call and recall of eligible patients

- II. **HSC Trusts to:**
 - support delivery of the influenza programme by treatment room nurses and district nurses for housebound individuals
 - support the expansion of the schools' influenza programme
 - support Occupation Health in delivering the vaccine to frontline HSCWs

- III. **HSCB Integrated Care (Pharmacy) to cover payments to community pharmacies for:**
 - Immunisation of all adults aged 50 years and over
 - Immunisation of health and social care workers (HSCWs)

Consent and Capacity

26. Health professionals must ensure that consent is obtained from individuals attending for administration of any vaccine although it is not a legal requirement for this to be in writing. Individuals should be given appropriate information and advice about the flu vaccine before attending. Individuals coming for vaccination should be given a reasonable opportunity to discuss any concerns before being vaccinated.

For further information on consent, please see Chapter 2 of the 2006 edition of *Immunisation against infectious disease* (the 'Green Book').

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/144250/Green-Book-Chapter-2-Consent-PDF-77K.pdf

27. Health professionals should refer to relevant guidelines and legislation when assessing a person's capacity to consent to vaccination: <https://www.health-ni.gov.uk/articles/consent-examination-treatment-or-care>
28. Some individuals, for example those with learning difficulties, may require reasonable adjustments to support administration of vaccination to ensure equal access to the vaccine for people with disabilities.

Ordering, storage and the cold chain

29. For ordering vaccine please see Annex 6.
30. GP practices, community pharmacies and Trusts with responsibility for the delivery of vaccine programmes need to ensure that they have appropriate policies in place to ensure cold chain compliance and that vaccine wastage is minimised. Whilst a degree of wastage is unavoidable either during transportation, storage or at the clinic, with careful planning and care, wastage can be reduced.
31. Vaccinators should carefully plan clinics and only order quantities based on the likely number of people expected to attend. GPs and community pharmacies should ensure that they have the fridge capacity to store the vaccines required. **There is no need to stockpile large quantities of flu vaccine and this is actively discouraged. As with previous years Movianto will continue to deliver by the next working day if the order is placed before 5pm.**
32. Analyses of vaccine use each year shows that in a number of instances vaccine is lost because of cold chain failures. **To prevent a recurrence it is important that practices ensure they have in place comprehensive up to date cold chain policies that will minimise the risk.**
33. The joint HSCB / PHA cold chain guidance should be consulted for more information on vaccine storage and how to manage a cold chain failure. It can be found at the following link: <https://www.publichealth.hscni.net/directorates/public-health/health-protection/vaccine-preventable-diseases-and-immunisation-0>
34. Given the procedures in place and the frequency of deliveries available, the Department would expect all practices and pharmacies to have robust arrangements in place to ensure that wastage is low. Excessive waste of vaccines

is totally unacceptable and practices will be required to account for such situations which are under the close scrutiny of the Department.

Publicity and Public Information Materials

35. The PHA is responsible for delivery of the influenza vaccination programme communication plan which is delivered in line with wider HSC communications for winter. From September 2021, publicity messages will be launched in phases for children, followed by adults and unpaid carers, and then health and social care workers to encourage those eligible to take up the offer of the vaccine.
36. As before, PHA will also produce public information leaflets which will be distributed by the PHA to all GPs, community pharmacies and Trusts before the season starts, in late August/early September, in line with normal arrangements. Leaflets can also be accessed at the PHA website at: pha.site/seasonal-influenza
37. As in previous years, funding is provided to GP practices to enable them to **actively call their patients for flu vaccine** (e.g. by letter, email, phone call, text) to ensure as high an uptake rate as possible. The benefits of flu vaccination among all eligible groups should be communicated and vaccination made as easily accessible as possible while abiding by the social distancing guidelines that apply at that point.

Training for Health Professionals

38. Since the 1990s, national surveys have been undertaken to understand the public attitudes towards immunisations. According to the most recent survey, health professionals remain the most trusted source of advice on immunisation.
39. Some of the flu vaccines available are only licensed for particular age groups, therefore it is important that everyone involved in the programme is appropriately trained. This will allow them to discuss the vaccines with patients and will minimise the likelihood of patients being given vaccines outside of their product license.
40. The PHA will produce the following professional information to support the delivery of the programme, which will be available on the PHA website pha.site/seasonal-influenza:
 - a. Seasonal flu vaccination programme training slides
 - b. Influenza factsheet
 - c. E-learning for health care
 - d. Influenza weekly surveillance bulletins
41. The Green Book chapter on influenza is available online, see attached link: <https://www.gov.uk/government/publications/influenza-the-green-book-chapter-19>

It should be noted that the chapter is updated on an ongoing basis and therefore all medical and clinical staff should ensure they refer to the latest version of the chapter as required.

Vaccine Uptake Targets

42. In light of the COVID-19 pandemic it is essential that every effort is made to maximise uptake rates and help reduce the risk of concomitant circulation of Influenza and COVID-19.

43. The ambitions we are setting for the 2021 to 2022 programme are set out below. We want to build on the momentum of last year's achievements and the successful roll-out of the COVID-19 vaccination programme, achieving even higher uptake this year.

44. The high ambitions reflect the importance of protecting against flu this winter and should be regarded as a minimum level to achieve. The different ambitions across the cohorts reflect what is regarded as achievable so, for instance, for those aged 65 and over the high ambition reflects the already high uptake levels achieved last year whereas for school-aged children the large expansion into secondary school this year will be challenging in itself.

45.

Eligible groups	Uptake ambition
Aged 65 years and over	90%
Aged under 65 years 'at clinical risk'	75%
Pregnant women	75%
Pre-school children aged two years or over	80%
All children in primary school and year 8 in secondary school	80%

46. The PHA will take the lead in monitoring vaccine uptake on behalf of DoH. There are policy plans to transition flu vaccine data collection in to the Vaccine Management System alongside COVID vaccine. This transition will be at a stage to enable PHA to be able to report data from the VMS from the start of the season. Please refer to the annual PHA guidance on data collection for updated advice.

47. GPs should note that in order to ensure accurate records of all vaccinations are recorded GPs should inform the Child Health System (CHS) of **all seasonal flu vaccinations of children**. In order to help achieve this, the CHS will provide all GP Practices with a list of their pre-school patients aged two years old or more. Practices should return lists of children vaccinated to Child Health on a regular basis, in surname order, also stating forename, H and C number, DOB,

address, date and vaccine batch number. These lists can be returned by internal mail or secure email to the Pre-school flu personnel in each Trust. Children of primary school age who for whatever reason are not vaccinated in school but are vaccinated in primary care should have a CHS7 form completed and returned to Child Health.

48. On occasions the PHA may need to contact GPs to get vaccination details of particular patients to better understand vaccine efficacy. GPs are urged to action any request received from the PHA immediately.

Annex 4

CLINICAL RISK GROUPS 2021/22

Flu vaccine should be offered to the eligible groups set out in the table below

Eligible groups	Further detail
All children aged two years of age and over, not yet at primary school	All those aged two years and over, not yet at primary school on 1 September 2020. (i.e. DOB 2 July 2017 to 1 September 2019) should be invited for vaccination by their general practice.
All children attending primary school	All children attending P1 to P7 in primary school (DOB. 2 July 2010 to 1 July 2017) will be offered the vaccine in school. Any who miss it in school should be given it <i>on request</i> by their practice.
Year 8 to year 12 in secondary schools	All Year 8 (first year) in secondary schools (DOB. 2 July 2005 to 1 July 2010) will be offered the vaccine in school. Any who miss it in school should be given it <i>on request</i> by their practice.
All patients aged 50 years or over	People aged 50 years or over (including those becoming age 50 years by 31 March 2022)
All patients aged 65 years and over	“Sixty-five and over” is defined as those 65 and over on 31 March 2022 (i.e. born on or before 31 March 1957).
Chronic respiratory disease aged six months or older	Asthma that requires continuous or repeated use of inhaled or systemic steroids or with

(See contraindications and precautions section on live attenuated influenza vaccine)	previous exacerbations requiring hospital admission. Chronic obstructive pulmonary disease (COPD) including chronic bronchitis and emphysema; bronchiectasis, cystic fibrosis, interstitial lung fibrosis, pneumoconiosis and bronchopulmonary dysplasia (BPD). Children who have previously been admitted to hospital for lower respiratory tract disease.
Chronic heart disease aged six months or older	Congenital heart disease, hypertension with cardiac complications, chronic heart failure, individuals requiring regular medication and/or follow-up for ischaemic heart disease.
Chronic kidney disease aged six months or older	Chronic kidney disease at stage 3, 4 or 5, chronic kidney failure, nephrotic syndrome, kidney transplantation.
Chronic liver disease aged six months or older	Cirrhosis, biliary atresia, chronic hepatitis
Chronic neurological disease	Stroke, transient ischaemic attack (TIA). Conditions in which respiratory function may be compromised due to neurological disease (e.g. polio syndrome sufferers). Clinicians should offer immunisation, based on individual assessment, to clinically vulnerable individuals including those with cerebral palsy, learning difficulties, multiple sclerosis and related or similar conditions; or hereditary and degenerative disease of the nervous system or muscles; or severe neurological disability
Diabetes aged six months or older	Type 1 diabetes, type 2 diabetes requiring insulin or oral hypoglycaemic drugs, diet controlled diabetes.

<p>Immunosuppression (see contraindications and precautions section on live attenuated influenza vaccine)</p>	<p>Immunosuppression due to disease or treatment. Patients undergoing chemotherapy leading to immunosuppression, bone marrow transplant, HIV infection at all stage, multiple myeloma or genetic disorders affecting the immune system (e.g. IRAK-4, NEMO, complement disorders).</p> <p>Individuals treated with or likely to be treated with systemic steroids for more than a month at a dose equivalent to prednisolone at 20mg or more per day (any age) or for children under 20kg a dose of 1mg or more per kg per day. It is difficult to define at what level of immunosuppression a patient could be considered to be at a greater risk of the serious consequences of flu and should be offered flu vaccination. This decision is best made on an individual basis and left to the patient's clinician.</p> <p>Some immunocompromised patients may have a suboptimal immunological response to the vaccine.</p>
<p>Asplenia or dysfunction of the spleen</p>	<p>This also includes conditions such as homozygous sickle cell disease and coeliac syndrome that may lead to splenic dysfunction.</p>
<p>Pregnant women (see contraindications and precautions section on live attenuated influenza vaccine)</p>	<p>Pregnant women at any stage of pregnancy (first, second or third trimesters).</p>
<p>Morbid obesity (class III obesity)*</p>	<p>Adults over 16 years of age with a Body mass Index $\geq 40\text{kg/m}^2$</p>
<p>Household contacts of immunocompromised individuals</p>	<p>Household contacts of immunocompromised individuals, specifically individuals who expect to share living accommodation on most days over the winter and, therefore, for whom continuing close contact is unavoidable</p>
<p>Residents of long-stay residential care homes or other long-stay facilities</p>	<p>People living in long-stay residential care homes or other long-stay care facilities where rapid spread is likely to follow introduction of infection and cause high morbidity and mortality. This does not include, for instance, university halls of residence, or boarding schools (except where children are of primary school age or secondary school years 8 to 12)</p>
<p>Carers</p>	<p>Those who are in receipt of a carer's allowance, or who are the main carer of an older or disabled person whose welfare may be at risk if the carer falls ill</p>

<p>Health and Social Care Workers (see also Annex 1)</p>	<ul style="list-style-type: none"> • Frontline health care workers providing health-related services in acute HSC hospitals, mental health hospitals, community-based services, ambulance care, that are in direct contact with patients. • Frontline social care workers providing social care to patients or clients through the Trust, community-based services to individuals in their own home, in care homes or other long-term care facilities that is in direct contact with patients.
---	--

* Many of this patient group will already be eligible due to complications of obesity that place them in another risk category.

* Please note that this group refers to adults over 16 years of age. Those 16-18 years of age should therefore be offered the LAIV vaccine, unless contraindicated.

The list above is not exhaustive, and the healthcare professional should apply clinical judgement to take into account the risk of influenza exacerbating any underlying disease that a patient may have, as well as the risk of serious illness from influenza itself.

Healthcare practitioners should refer to the influenza chapter in 'Immunisation against infectious disease' (the 'Green Book') for further detail about clinical risk groups advised to receive influenza immunisation and for full details on advice concerning contraindications and precautions for the influenza vaccines.

VACCINATION PROGRAMME 2021/22 FOR FRONTLINE HEALTH AND SOCIAL CARE WORKERS – including independent staff

Rationale

1. JCVI recommends that flu vaccine is offered and provided to all Health and Social Care Workers (HSCWs) who are in direct contact with patients/clients (known as frontline) to **protect their families, themselves and their patients.**

This is more important than ever following the devastating effects of the COVID-19 pandemic and it is therefore essential staff are encouraged to receive the best protection against Influenza.

2. The rationale for this is to:
 - directly protect themselves from flu infection as HSCWs with direct contact with patients have four times the likelihood of coming in contact with the flu virus than the general population.
 - reduce transmission of influenza within Health and Social Care (HSC) premises, and thus indirectly contribute to the protection of individuals who may have a suboptimal response to their own immunisations.
 - avoid disruption to HSC services that provide their care.
3. Influenza outbreaks can arise in HSC premises with both staff and their patients affected when influenza virus is circulating in the community. Vaccination of health and social care workers against influenza has been shown to significantly lower rates of influenza-like illness, hospitalisation and mortality in the elderly in health and social care settings^{14,15,16,17}. It can be assumed that social care settings may also benefit from vaccination of staff in the same way.
4. **The flu vaccine given to frontline HSCWs acts as an adjunct to good infection control procedures.** As well as reducing the risk to the patient of infection, reduction of influenza infection among staff and reduced staff absenteeism has also been documented.

5. Frontline HSCWs include:
 - **Trust employed staff;**
 - **Non Trust employed** (i.e. Independent Sector long-stay Care Homes / facilities, GP practices, community pharmacies); and
 - **Other employers** involved directly in delivering Health and Social Care (see also Annex 1).
6. GP practices can offer vaccination to their employed and associated staff (e.g. MDT staff employed by Trust or Federation but based in the practice, GP locums working in the practice) using central stock vaccines and claiming in line with other eligible groups
7. Whilst flu vaccine is recommended for all frontline HSCWs working in Northern Ireland, to date, vaccine uptake monitoring is only published for frontline HSCWs that are employed by HSC Trust organisations.
8. The 2020/21 end of season uptake rate for frontline HCWs was **52.4%**, an increase on the 2019/20 uptake of 41.2%. However, the uptake by frontline SCWs was **40.8%** (22.8% in 2019/20).
9. **This year Trusts and Independent providers should aim to maximise uptake.**
10. This year, it is particularly important that we maximise uptake within Independent sector Care Homes. Additional vaccine has been secured which will allow all staff in independent care homes to receive a free flu vaccination either via an OHS clinic, community pharmacy or through local arrangements.

Vaccine Uptake Targets

11. As with previous years, vaccine uptake targets only apply to Trust employed HSCW campaigns and a key objective of the HSCW campaign is to maximise reduction of flu transmission. **This is more important than ever.**

As a direct result of the pandemic the targets remain at the increased level as follows:

Staff Grouping	Minimum Target
Trust frontline Health Care Workers	75%
Trust frontline Social Care Workers	75%

2021/22 Influenza Vaccines recommended for HSCWs

12. This year the cell-based Quadrivalent Inactivated Vaccine (QIVc) will be available for **ALL** HSCWs including those over 65 years of age.
13. Last year, to further support frontline Health and Social Care workers to avail of vaccination, a new service was introduced that enabled HSCWs to receive their flu vaccine from participating community pharmacies. Community pharmacies also delivered a significant amount of vaccinations to care home staff.

During 2021/22 community pharmacies will continue to play an important role in the flu vaccination programme by continuing to provide the vaccine to HSCWs.

Contractual Arrangements for all employers

14. **All employers are responsible for vaccination of their staff**, and should put appropriate arrangements in place to ensure high uptake.
15. Health and social care staff should not routinely be referred to their GP for their vaccination unless they fall within one of the recommended clinical risk groups, or a local agreement is in place for this service.
16. GPs and community pharmacies can vaccinate their own staff using some of the stock supplied as part of the national flu vaccination programme.

Trust HSCW Campaigns

17. The responsibility for achieving high uptake in frontline HSCWs lies with HSC Trusts. Whilst Trusts/employers may wish to offer flu vaccine to all their employees, they should ensure that health and social care staff directly involved in patient care (frontline) are **actively encouraged** to be immunised and are fully aware of where and when they can access the vaccine. In addition to Trust occupational health services, HSC Trust staff can also access vaccination through community pharmacy services.
18. Trusts should ensure that:
 - there is an identified Flu Lead to coordinate the Trust HSCW Campaign;
 - Flu teams have a broad range of staff from all parts of the Trust, think clinical to communications;
 - Flu teams have adequate time and resources to fully engage and encourage staff to receive the flu vaccine; and

- Peer vaccinators are encouraged and trained across directorates in the Trusts, particularly in more remote community locations
 - They work in close partnership with local independent care homes
 - Flu vaccination staff clinics are widely accessible and clearly advertised
19. Trusts have a responsibility to ensure that their flu teams fully engage with the regional campaign to ensure sharing of good practice.
20. As in previous years, regional communication resources will be available, including a regional PHA video, on the PHA website at the following link: pha.site/seasonal-influenza

Consent

21. **Trusts / employers** must ensure that consent is obtained from individuals attending for administration of any vaccine although it is not a legal requirement for this to be in writing. Individuals should be given appropriate information and advice about the flu vaccine before attending. Individuals coming for vaccination should be given a reasonable opportunity to discuss any concerns before being vaccinated.
22. For further information on consent, please see Chapter 2 of the 2006 edition of *Immunisation against infectious disease* (the 'Green Book').
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/144250/Green-Book-Chapter-2-Consent-PDF-77K.pdf

Training Materials

23. The PHA has produced the following professional information to support the delivery of the programme, which will be available, in due course, on the PHA website pha.site/seasonal-influenza:
- Seasonal flu vaccination programme training slides;
 - Influenza immunisation programme 2021/22 factsheet for health professionals;
 - E-learning for Healthcare;
 - Frontline HSCW 2021/22 seasonal flu vaccine campaign- Trust guidance on data collection (includes updated detail on definitions of frontline HSCWs)
 - Peer Vaccinator Training recommendations; and
 - Influenza weekly surveillance bulletins

24. The Green Book chapter on influenza is available online, see attached link: <https://www.gov.uk/government/publications/influenza-the-green-book-chapter-19> It should be noted that the chapter is updated on an ongoing basis and therefore all medical and clinical staff should ensure they refer to the latest version of the chapter as required.

Monitoring Vaccine Uptake

25. There are policy plans to transition flu vaccine data collection in to the VMS system alongside COVID vaccine. This transition will be at a stage to enable PHA to be able to report data from the VMS from the start of the season. Please refer to the PHA “2021/22 Trust guidance on data collection of vaccine uptake in frontline HSCWs” on data collection for updated advice. It is the responsibility of Trusts to ensure that data is collected in accordance with this guidance and submitted to the PHA within the agreed time scales.

Non-Trust HSCW Flu Vaccine Programmes

Private Nursing and Residential Care Home Staff

26. RQIA should ensure that all employers of Independent Sector Care Home are aware that they have an obligation to ensure their staff working as a frontline HSCWs are offered the flu vaccine in order to protect themselves, their families and their patients / clients.
27. Additional vaccine has been secured which will allow staff in independent care homes to receive a free flu vaccination. Frontline private nursing and residential home staff can also receive the vaccine **via the Occupational Health Service** in their local Trust, participating community pharmacies or through local arrangements. PHA will provide details of the available clinics nearer the time.
28. As in previous years, RQIA will raise awareness of the PHA regional communication and training resources that are available for the public and Trust HSCW programmes. Information specific to the care home setting is also available. All PHA flu resources are available, on the PHA website at the following link: pha.site/seasonal-influenza
29. For 2021/22, RQIA will support Independent Sector Care Homes to collect and submit data on vaccine uptake of **frontline HCWs and SCWs** to the PHA.

Community Pharmacists and Staff Involved In Supplying Medication

30. Community Pharmacists and those staff involved in supplying medicines will be able to receive the vaccine from participating community pharmacies offering influenza vaccination services.

DETAILS OF HOW TO ORDER VACCINE

1. As with last year the Public Health Agency has authorised the implementation and use of the Movianto N.I. web-based Vaccine Ordering System for all GP Practices in Northern Ireland.
2. The web-based system is available to all GP Practices and community pharmacies and will facilitate simple and accurate ordering of all centrally procured seasonal influenza vaccines for the forthcoming 2021/22 immunisation campaign. As well as being the most efficient way to order vaccines, the system will increasingly be used to provide information and reports on vaccine ordering.

ONLY GP Practice or community pharmacy orders received via the web-based Movianto N.I. Vaccine Ordering System will be processed and delivered.

In the first instance until notification is received that Quadrivalent Influenza Vaccine (egg grown) (QIVe) has been added to the web based system orders for QIVe will be the exception (see para 9 below).

Please do not attempt to place orders for seasonal influenza vaccines, COVID-19 vaccines or Zostavax® in any other way.

Trust hospital pharmacies should continue to place orders via their pharmacy computer systems

3. GPs, community pharmacies and hospital pharmacies must only order sufficient vaccines to meet their weekly needs and only the quantity that they have sufficient refrigerated capacity to store (Note- Storage Conditions: 2 to 8°C refrigerated storage / Protect from light / Do not freeze).

Practices and pharmacies are reminded that it is important that orders are made in line with anticipated need and that wastage is kept to an absolute minimum.

4. Update-to-date communications about flu vaccine deliveries and stock will be placed on the web-based Movianto system, so please check the website regularly.

5. How to Order

Orders for seasonal influenza vaccines and the shingles vaccine (Zostavax®) must be placed **only** with Movianto N. Ireland.

Movianto N. Ireland
Sandyknowes Business Park
605 Antrim Road
Belfast, BT36 4RY
Tel: 028 9079 5799

Opening hours: 8.30am to 5.00pm (Monday to Friday)

6. How can I access the web-based Movianto N.I. Vaccine Ordering System?

The Movianto N.I. vaccine ordering system is a secure website. This protects the data held on it from unauthorised access.

All GP practices must confirm or update their details on the current system prior to being permitted to order vaccines for the 2021/22 campaign. GP practices must complete this before ordering. To do this they should login in the usual manner, on the link below, and follow the online instructions.

GP practices may now place their initial orders for injectable seasonal influenza vaccines if they have re-registered.

For details about how to register please go to:
<https://orders.ni.movianto.com/csp/age/Portal.GUI.Login.cls>

7. What help will be available to GP practices and pharmacies in using the Movianto N.I. web-based vaccine ordering system?

The Movianto N.I. web-based system has been designed to be user-friendly and user manuals via the website will be made available to all GP Practices and community pharmacies. Help is also available through a dedicated email address info.ni@movianto.com or by calling 028 9079 5799.

8. All GP practices and community pharmacies must ensure that **all stocks** of last year's supplies of Influenza Vaccine 2020/21 are removed and destroyed (according to disposal policy) **prior** to placing your initial order as they are now all date expired and it is essential they are not mixed with this year's vaccine supply.

GPs should check expiry date of Shingles vaccine and may continue to use shingles vaccine received during 2020/21 campaign providing it is still in date at the time of administration.

9. Initial Orders

Practice and Trust initial orders for the first delivery of aQIV and QIVc influenza vaccines 2021/22 and/or 2021/22 Zostavax[®] vaccine for all age groups may now be placed with **Movianto N. Ireland**. Community Pharmacies may place their initial orders with **Movianto N.Ireland** from **20 September 2021**.

PLEASE NOTE that Shingrix[®] must be ordered from Trusts as per the standard process for ordering childhood vaccines, rather than ordering directly from the wholesaler as is the process for Zostavax[®].

Initial orders for your first delivery of Fluenz Tetra[®] vaccines for pre-school (aged 2-4 years) children in at risk groups who will not receive the vaccine via school health teams, may also now be placed with **Movianto N. Ireland**.

Orders for QIVe (i.e. for children aged 6 months to 2 years who are too young to receive the LAIV vaccine) can **NOT** be placed on the web-based ordering system. **GPs should phone Movianto to place this order as it will require further assessment before approval.**

Practices and Trusts should receive their initial delivery by close of business on 24 September 2021. Community Pharmacies should receive their initial delivery by close of business on 1 October 2021.

10. GPs, community pharmacies and hospital pharmacies must only order sufficient to meet their weekly needs and only the quantity that they have sufficient refrigerated capacity to store. (Note – Storage Conditions: 2 to 8 °C refrigerated storage/ Protect from light/ Do not freeze).

References

- ¹ Neuzil KM, Reed GW, Mitchel EF *et al.* (1998) Impact of influenza on acute cardiopulmonary hospitalizations in pregnant women. *Am J Epidemiol.* 148: 1094-102.
- ² Pebody R *et al.* (2010) Pandemic influenza A (H1N1) 2009 and mortality in the United Kingdom: risk factors for death, April 2009 to March 2010. *Eurosurveillance* 15(20): 19571.
- ³ Pierce M, Kurinczuk JJ, Spark P *et al.* (2011) Perinatal outcomes after maternal 2009/H1N1 infection: national cohort study. *BMJ.* 342: d3214.
- ⁴ McNeil SA, Dodds LA, Fell DB *et al.* (2011) Effect of respiratory hospitalization during pregnancy on infant outcomes. *Am J Obstet Gynecol.* 204: (6 Suppl 1) S54-7.
- ⁵ Omer SB, Goodman D, Steinhoff MC *et al.* (2011) Maternal influenza immunization and reduced likelihood of prematurity and small for gestational age births: a retrospective cohort study. *PLoS Med.* 8: (5) e1000441.
- ⁶ Benowitz I, Esposito DB, Gracey KD *et al.* (2010) Influenza vaccine given to pregnant women reduces hospitalization due to influenza in their infants. *Clin Infect Dis.* 51: 1355-61.
- ⁷ Eick AA, Uyeki TM, Klimov A, *et al.* (2010) Maternal influenza vaccination and effect on influenza virus infection in young infants. *Arch Pediatr Adolesc Med.* 165: 104-11.
- ⁸ Zaman K, Roy E, Arifeen SE *et al.* (2008) Effectiveness of maternal influenza immunisation in mothers and infants. *N Engl J Med.* 359: 1555-64.
- ⁹ Poehling KA, Szilagyi PG, Staat MA *et al.* (2011) Impact of maternal immunization on influenza hospitalizations in infants. *Am J Obstet Gynecol.* 204: (6 Suppl 1) S141-8.
- ¹⁰ Tamma PD, Ault KA, del Rio C, Steinhoff MC *et al.* (2009) Safety of influenza vaccination during pregnancy. *Am. J. Obstet. Gynecol.* 201(6): 547-52.

- ¹⁴ Potter J, Stott DJ, Roberts MA, Elder AG, O'Donnell B, Knight PV and Carman WF (1997) The influenza vaccination of health care workers in long-term-care hospitals reduces the mortality of elderly patients. *Journal of Infectious Diseases* **175**: 1-6.
- ¹⁵ Carman WF, Elder AG, Wallace LA, McAulay K, Walker A, Murray GD and Stott DJ. (2000) Effects of influenza vaccination of healthcare workers on mortality of elderly people in long term care: a randomised control trial. *The Lancet* **355**: 93-7.
- ¹⁶ Hayward AC, Harling R, Wetten S, Johnson AM, Munro S, Smedley J, Murad S and Watson JM (2006) Effectiveness of an influenza vaccine programme for care home staff to prevent death, morbidity, and health service use among residents: cluster randomised controlled trial. *British Medical Journal* doi:10.1136/bmj.39010.581354.55 (published 1 December 2006).
- ¹⁷ Lemaitre M, Meret T, Rothan-Tondeur M, Belmin J, Lejonc J, Luquel L, Piette F, Salom M, Verny M, Vetel J, Veyssier P and Carrat F (2009) Effect of influenza vaccination of nursing home staff on mortality of residents: a cluster randomised trial. *Journal of American Geriatric Society* **57**: 1580-6.
- ¹⁸ www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/GreenBook/fs/en