



## Happy New Year

### Flu vaccination – a big thank you!

UKHSA and NHS England would like to extend our thanks to everyone involved in vaccination for all their hard work to vaccinate people against flu. Over the last 3 seasons whilst COVID-19 has also been in circulation there have been larger numbers eligible for flu vaccination, including healthy 50- to 64-year-olds and the offer being extended into secondary schools.

This winter we have seen the return of flu following little or no activity in the previous 2 winters when restrictions and reduced social mixing to lower the circulation of COVID-19 also reduced flu activity. Reduced exposure to flu led to lower natural immunity and so far during the 2022 to 2023 season the highest levels of flu for over a decade have been seen – with hospital admission rates at a very high level over the Christmas period. The highest rates were in older adults and young children (see [weblink 1](#)). Although the overall flu levels have continued to fall week-on-week throughout January, the virus continues to circulate, leading to patients still needing GP care and being admitted to hospital.

Winter isn't over yet and we need to guard against further surges, as we have seen in past seasons (with late circulation of Flu B or an increase in H1N1). The pandemic has disrupted the usual seasonal timings of many other infections, so it's possible we will also see flu activity outside the usual winter period.

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The highest flu vaccine uptake rates ever achieved have been during the COVID-19 pandemic and it is likely that this was partly driven by concerns about the pandemic. Provisional monthly data for the period of 1 September to 30 November 2022 shows that some of this momentum was maintained initially although uptake rates are slightly lower in most cohorts than the previous 2 years. However, for those aged 65 years and over, the WHO target of a 75% uptake rate has again been exceeded and for school-aged children the figures are comparable to the previous highest season on record (in 2020 to 2021) for this point in the season. See:

- school-aged children at [weblink 2](#)
- healthcare workers at [weblink 3](#)
- GP patients at [weblink 4](#)

The latest data (1 September to 31 December 2022) will be published on Thursday 26 January 2023 and will be available at the links above.

GP services and pharmacies are contracted to offer flu vaccination until 31 March 2023 so if anyone presents who is eligible but not yet had their flu vaccine there is still time to vaccinate them; it's not too late and it gives the best protection against serious illness. School aged immunisation teams will be offering flu vaccination to secondary school aged children throughout January and into February. In what has been another challenging season it is particularly important to focus a further push for vaccination efforts in both 2- to 3-year-olds and pregnant women, where uptake levels are of concern. Some women may not have been pregnant earlier in the season and may be newly eligible.

A big thank you to all the amazing NHS flu vaccinators, including staff in general practice, pharmacy, Trusts, and school age immunisation teams for all their hard work.

## **UKHSA advice for education and childcare settings amid high levels of flu, COVID-19 and scarlet fever**

As winter illnesses continue to circulate at high levels and pupils are returning to education, the UK Health Security Agency (UKHSA) has published a reminder on how to minimise the spread of illness in education and childcare settings (see [weblink 5](#)).

UKHSA advice remains clear that children can continue to attend as normal unless they are unwell and have a high temperature. Further information (see [weblink 6](#)) on when a child is too ill for school or nursery is available. There is no requirement to be absent from school on a precautionary basis. School staff should continue to maintain their high expectations for face-to-face attendance.

For further information, please also see our Education Hub post on the latest guidelines around COVID-19 (see [weblink 7](#)) and for Strep A, our separate post on the exact circumstances in which children should be kept off school (see [weblink 8](#)).

UKHSA is providing regular updates on Strep A (see [weblink 9](#)). Both UKHSA and DfE are continuing to closely monitor the situation.

To help reduce the risk of some illnesses, including flu, vaccinations are being provided in schools. UKHSA, in collaboration with NHS England and DfE, have produced a briefing for secondary schools (see [weblink 10](#)) giving details about all vaccines offered to adolescents in schools and the role that schools play. This includes information on the flu vaccination programme being offered this year to those in Years 7, 8 and 9.

## Immunisation update webinars for primary care immunisers 2022

The series of webinars to help immunisers update their knowledge has been updated with new content (see [weblink 11](#)).

## Invitation to the Vaccine Centre Annual Lecture at London School of Tropical Medicine

On **25 January 2023**: Free and open to all, **online and in person**. No registration required. A recording of this session will be available after the event (see [weblink 12](#)).

### **Vaccine mandates around the world: Do they increase vaccination rates and at what cost?**

**Venue:** London School of Tropical Medicine, Keppel Street, London, WC1E 7HT

**Room:** John Snow Lecture Theatre

**Date:** Wednesday 25 January 2023

**Time:** 17:30 – 19:00

For more information see [weblink 12](#).

Our colleague Consultant Epidemiologist Dr Vanessa Saliba will be one of the panellists alongside:

- Katie Attwell (see [weblink 13](#)), Associate Professor, University of Western Australia
- Aniqah Marshall (see [weblink 14](#)), LSHTM PhD Candidate
- Helen Bedford (see [weblink 15](#)), Professor of Children's Health, University College London
- James Wilson (see [weblink 16](#)), Professor of Philosophy, University College London

## Updated UKHSA Men B v6.00 PGD and UKHSA MenB at Risk v4.00 PGD

The PGDs are available to download at [weblink 17](#). UKHSA Men B v6.00 PGD (Gateway number GOV-13817) and UKHSA MenB at Risk v4.00 PGD (Gateway number GOV-13818).

The PGD templates require organisational authorisation in line with Human Medicines Regulations 2012 before it is a legally valid PGD. It is advised that the UKHSA PGD template is organisationally authorised in accordance with local procedures before sharing with providers.

Authorising organisations must not alter, amend or add to the clinical content of this document (sections 4, 5 and 6); such action will invalidate the clinical sign-off with which it is provided. In addition authorising organisations must not alter section 3 'Characteristics of staff'. Only sections 2 and 7 can be completed within the editable fields.

# Vaccine supply

## Routine vaccination programme

### Vaccines for the 2022 to 2023 children's flu programme supplied by UKHSA

#### Expiry dates for all batches of Fluenz® Tetra issued for the 2022 to 2023 children's flu programme

Batch numbers and associated expiry dates of all batches of Fluenz® Tetra that either have or will be issued this season are set out in the table below. Please ensure that the expiry date is always checked before use and that expired stock is disposed of in line with local policies. Any disposed stock should be recorded through the ImmForm stock incident page.

Batch number	Expiry date	Batch number	Expiry date
PH3539	28 November*	PH3537	31 January
PH2004	12 December**	PL2619	8 February
PF3032	22 December	PK3269	9 February
PF3033	23 December	PL2706	13 February
PH2003	26 December	PL3844	1 March
PJ2632	30 December	PM2408	13 March
PK2464	20 January	PM2427	14 March
PK2466	27 January		

\*printed expiry date for batch PH3539 is 3 January 2023, please see information on expiry date update below

\*\*printed expiry date for batch PH2004 is 27 December 2022, please see information on expiry date update below

#### Updated expiry dates for Fluenz® Tetra batches PH3539 and PH2004

AstraZeneca UK Limited, in agreement with the Medicines and Healthcare products Regulatory Agency (MHRA), updated the expiry dates for Fluenz® Tetra batches PH3539 and PH2004 following routine stability testing. Batch specific variations (BSVs) were granted by the MHRA and these batches are now licensed with the following updated expiry dates:

Batch number	Printed expiry date	Updated expiry date
PH3539	3 January 2023	28 November 2022
PH2004	27 December 2022	12 December 2022

AstraZeneca assure full effectiveness until the updated expiry date, and the quality, safety and efficacy of Fluenz® Tetra is not affected. Except for the updated expiry date, there are no other changes made to the product information.

All customers who received a delivery containing one or both of these batches should have been directly advised of this issue.

**Please note that GP practices in England have not been supplied with any vaccines from these batches.**

If you have any questions about this issue, please contact AstraZeneca Medical Information ([medical.informationUK@astrazeneca.com](mailto:medical.informationUK@astrazeneca.com) or call 0800 783 0033).

## Vaccines and availability

All flu vaccines for the 2022 to 2023 children's flu programme are available to order by NHS programme providers in England via UKHSA's ImmForm website.

Please note that UKHSA does not supply any flu vaccines for patients aged 18 years and over.

For arrangements in Scotland, Wales and Northern Ireland, please refer to guidance from your respective health departments.

The latest and most accurate information on availability of centrally supplied vaccines for the children's flu programme is available on the ImmForm news page at all times. It is strongly advised that all parties involved in the provision of influenza vaccines to children ensure they remain up to date with this.

The table below shows the 3 vaccines available in England, and the groups these vaccines should be ordered for:

Vaccine	Manufacturer	Available to order for
Fluenz® Tetra (LAIV)	AstraZeneca	All children aged 2 to 3 years, those in eligible school age cohorts (see <a href="#">weblink 18</a> ), and children in clinical risk groups aged 2 to less than 18 years*
Cell Based Quadrivalent Influenza Vaccine (Surface Antigen, Inactivated) (QIVc)	Seqirus	Eligible** children for whom LAIV is contraindicated or otherwise unsuitable
Quadrivalent Influenza Vaccine (split virion, inactivated) (QIVe)	Sanofi Pasteur	Children in clinical risk groups aged 6 months to less than 2 years

\*unless clinically contraindicated or otherwise unsuitable

\*\*children in clinical risk groups aged 2 to less than 18 years, healthy children aged 2 to 3 years, and those in eligible school age cohorts

## LAIV ordering information for General Practice

Please note the following if you are ordering for general practice:

- at the time of publication, each GP practice is able to order up to 2 packs (20 doses) per week
- amendments to this order cap may be made, in response to vaccine availability and demand
- requests for extra vaccine will be considered on a case-by-case basis throughout the ordering period. Requests should be sent to the helpdesk ([helpdesk@immform.org.uk](mailto:helpdesk@immform.org.uk)) and in good time before your order cut-off. Out of schedule deliveries will be by exception only

## LAIV ordering information for school-age providers

School teams are able to place 2 orders and receive 2 deliveries of LAIV per week, to assist in the management of vaccine volumes required across limited storage space at delivery points.

This will operate on a 48-hour delivery schedule requiring the order to be placed before the 11.55am cut off 2 working days before the required delivery day. The table below illustrates the respective delivery days versus ordering day.

Order day (before 11.55am cut off)	Delivery day
Monday	Wednesday
Tuesday	Thursday
Wednesday	Friday
Thursday	Monday
Friday	Tuesday

**Customers must ensure that the point of delivery will be open and staffed on the delivery day when placing orders.**

**Please note that this does not affect the ordering and delivery schedule of any other vaccines (including inactivated flu vaccines) ordered from ImmForm and is applicable to Fluenz<sup>®</sup> Tetra (LAIV) only.**

At the time of publication, default weekly ordering cap of 400 packs (4,000 doses) per week is in place for school provider accounts. This can be split as required across 2 orders or placed as one order if preferred.

Where this cap is insufficient and a provider needs a larger weekly volume of vaccine to deliver the programme (for example where a provider covers a large area using a single account), a higher weekly cap should be requested via the UKHSA Flu Vaccine Operations team by emailing [childfluvaccine@ukhsa.gov.uk](mailto:childfluvaccine@ukhsa.gov.uk). Please ensure that this request is made at least 48 hours before an order larger than 400 packs needs to be placed, to allow time for your account to be set up correctly.

For one-off larger orders during the ordering period, requests should be made via [helpdesk@immform.org.uk](mailto:helpdesk@immform.org.uk).

## Inactivated flu vaccine ordering

Two inactivated flu vaccines are also available for children for the 2022 to 2023 season:

- Quadrivalent Influenza Vaccine (split virion, inactivated) (QIVe) which should only be ordered for children in clinical risk groups aged from 6 months to less than 2 years old, with an initial order cap of 3 doses per week (supplied in a single dose pack)
- Cell Based Quadrivalent Influenza Vaccine (Surface Antigen, Inactivated) (QIVc), which is available to order for:
  - children aged 2 to less than 18 years old in clinical risk groups for whom LAIV is clinically contraindicated or otherwise unsuitable; and
  - healthy children from 2 years of age to those in school year 9, for whom LAIV is unsuitable (for example, due to objection to LAIV on the grounds of its porcine gelatine content). This vaccine is available in a single dose pack to:
    - GPs, with an initial order cap of 10 doses per week
    - school-age providers, with an order cap of 400 doses per week

For one-off larger orders of inactivated vaccines, requests should be made via [helpdesk@immform.org.uk](mailto:helpdesk@immform.org.uk) in good time before your order cut-off.

**Order and delivery days for inactivated vaccines for school providers will be made as per the routine ordering and delivery days set for other childhood vaccines, and not per the 48-hour delivery schedule available for LAIV.**

## All influenza vaccines for the 2022 to 2023 season

Information on all influenza vaccines that have been marketed in the UK for the 2022 to 2023 season are available here at [weblink 19](#).

## Gardasil®9 has replaced Gardasil® for the national HPV programmes since July 2022



Since mid July 2022, Gardasil®9 has been the HPV vaccine supplied for both the national HPV adolescent programme and the men who have sex with men (MSM) programme. To minimise wastage, please use all of your locally held stocks of Gardasil® to vaccinate eligible individuals, before switching to Gardasil®9.

As the programmes transition to Gardasil®9, some individuals will receive a mixed schedule. The 2 vaccines are interchangeable and vaccination should not be delayed due to preference for either vaccine. Please see the Green Book Chapter 18a at [weblink 20](#).

## Availability of Vaxelis® vaccine as an alternative to Infanrix hexa®



Since 31 January 2022, as part of the current vaccination programme, Vaxelis® has been available to order via ImmForm. Vaxelis® is an alternative hexavalent vaccine to Infanrix hexa® (DTaP/IPV/Hib/HepB) for routine infant primary immunisations scheduled at 8, 12 and 16 weeks of age. Vaxelis protects against the same 6 diseases as Infanrix hexa® and has been licensed in Europe for more than 5 years.

Infanrix hexa® will also continue to be available via ImmForm.

Vaxelis® and Infanrix hexa® vaccines are interchangeable, but where possible and if local stock allows, it is preferable that the same DTaP/IPV/Hib/HepB-containing vaccine be used for all 3 doses of the primary course. However, vaccination should never be delayed because the vaccine used for previous doses is not known or unavailable.

The hexavalent vaccine DTaP/IPV/Hib/HepB PGD national template (version 03.00, valid from 1 September 2021) includes use of both Infanrix hexa® and Vaxelis®.

Ordering controls for Vaxelis® will be in place to balance incoming supply with demand. Customers in England and Wales may order up to 20 packs of Vaxelis® per ImmForm account per week – this will vary for customers in the polio booster programme in London and those taking part in the Oxford Vaccine Group trial. Orders for Infanrix hexa® remain unrestricted. Customers in Scotland should refer to their local ordering restrictions. Providers should not order more than 2 weeks' worth of stock to minimise wastage due to fridge failures.

Further information, including the contact details for Sanofi Pasteur, can be found in the Vaxelis® suspension for injection in pre-filled syringe – Summary of Product Characteristics (SmPC) – (emc) (see [weblink 21](#)).

### Supply of vaccines with reduced shelf life

Vaccines supplied via ImmForm for the routine immunisation programme will usually have at least 3 months of shelf-life remaining at the time of delivery. Vaccines with reduced shelf life will occasionally be supplied. ImmForm customers will be informed of vaccines which have short shelf life via ImmForm news articles, updates on the particular ImmForm product page, or a click-thru pop-up message at the time of ordering.

ImmForm customers should order no more than 2 weeks' worth of stock to minimise wastage due to fridge failures or failure to use stock before expiry. See Chapter 3 of the 'Green Book' (Immunisation against infectious disease) for further details on the storage and supply of vaccines.

## Update to Bexsero Patient Information Leaflet

Every pack of Bexsero (Meningitis B vaccine; 10 doses) is supplied with a pad of 10 Patient Information Leaflets (PILs), as well as there being a single PIL inside each Bexsero pack. Since September 2020, an updated version of the PIL pad has been distributed with Bexsero orders. Please dispose of the single PIL from inside the pack and issue the updated PIL.

## Registering for a new or updating your existing ImmForm vaccine ordering account

When you register for or update an existing ImmForm account, UK Health Security Agency as a wholesaler of vaccines need to verify the requesting customer.

Please ensure you have your professional regulatory body registration number or Wholesaler Dealer Licence and an organisation code which can be verified when requesting updates or requesting a new vaccine ordering account.

For more information please see the ImmForm Helpsheet – How to register (see [weblink 22](#)).

## The EU Falsified Medicines Directive (FMD) and Delegated Regulation as applicable to UKHSA-supplied vaccines for the national immunisation programme

The EU Falsified Medicines Directive (see [weblink 23](#)) 2011/62/EU (FMD) and Delegated Regulation ((EU) 2016/161) (see [weblink 24](#)) (The Delegated Regulation) impose legal obligations on the EU medicines supply chain to prevent entry of falsified medicinal products into the supply chain. The Delegated Regulation was implemented in all EU Member States on 9 February 2019. Following the UK's departure from the EU, the Delegated Regulation ceased to apply in Great Britain from 31 December 2020, but continues to apply in Northern Ireland.

### Information for customers in Northern Ireland

FMD-barcode packs of routine immunisation programme vaccines that are centrally supplied by UKHSA continue to be supplied with active FMD serialisation, and should be decommissioned by end users in Northern Ireland. Customers in Northern Ireland who access centrally supplied vaccines are encouraged to review local guidance on implementation of the EU Falsified Medicines Directive.

## MMR vaccine ordering

To rebalance central supplies of both MMR vaccines please consider ordering M-M-RvaxPRO® as your first choice, which is available without restriction.

Customers in England and Wales who require Priorix®, for example because you serve communities that do not accept vaccines containing porcine gelatine, may order up to **6 packs** of Priorix® per ImmForm account per week. For assistance please contact the ImmForm Helpdesk at [helpdesk@immform.org.uk](mailto:helpdesk@immform.org.uk). Customers in Scotland should refer to their local ordering restrictions.

# Vaccine supply

## Non-routine vaccination programme

### HEPATITIS A VACCINE

#### Adult

- **GSK:** Havrix Adult PFS singles and packs of 10 are available
- **Sanofi Pasteur:** Avaxim PFS singles and packs of 10 are currently available
- **MSD:** VAQTA Adult is available

#### Paediatric

- **GSK:** supply of Havrix Paediatric singles and packs of 10 is currently limited. Expected recovery end of January
- **MSD:** VAQTA Paediatric is available

### HEPATITIS B VACCINE

#### Adult

- **GSK:** Engerix B PFS singles and packs of 10 are currently available
- **GSK:** supply of Fendrix is available
- **MSD:** HBVAXPRO 10 µg is available
- **MSD:** HBVAXPRO 40 µg is available

#### Paediatric

- **GSK:** supplies of Engerix B Paediatric singles is currently available
- **MSD:** HBVAXPRO 5µg is available

### COMBINED HEPATITIS A & B VACCINE

- **GSK:** Twinrix Adult singles and packs of 10 are available
- **GSK:** Twinrix Paediatric is available
- **GSK:** Ambirix is available

### COMBINED HEPATITIS A & TYPHOID VACCINE

- **Sanofi Pasteur:** Viatim is now a discontinued product and no longer available for sale

### TYPHOID VACCINE

- **Sanofi Pasteur:** Typhim singles and packs of 10 are available
- **Emergent:** Vivotif is available

### RABIES VACCINE

- **Valneva:** Rabipur is currently available. Expiry of current stock – 31 March 2023
- **Sanofi Pasteur:** Rabies BP is now a discontinued product and no longer available for sale

### **PNEUMOCOCCAL POLYSACCHARIDE VACCINE (PPV)**

- **MSD:** supply of Pneumovax 23 (PPV23) PFS is available

### **PNEUMOCOCCAL POLYSACCHARIDE CONJUGATE VACCINE (PCV)**

- **Pfizer:** Prevenar 13 is currently available

### **VARICELLA ZOSTER VACCINE**

- **GSK:** VARILRIX is currently available
- **MSD:** VARIVAX is available
- **MSD:** ZOSTAVAX is available

### **DIPHTHERIA, TETANUS AND POLIOMYELITIS (INACTIVATED) VACCINE**

- **Sanofi Pasteur:** Revaxis is available

### **DIPHTHERIA, TETANUS, PERTUSSIS (ACELLULAR) AND POLIOMYELITIS (INACTIVATED) VACCINE**

- **GSK:** supply of Boostrix-IPV is currently available
- **Sanofi Pasteur:** Repevax is available to order with restrictions of 10 doses per customer per month until February 2023

### **MMR**

- **MSD:** MMR Vaxpro is currently available
- **GSK:** Priorix is currently available

### **MENINGITIS ACWY VACCINE**

- **GSK:** Menveo is currently available
- **Pfizer:** Nimenrix is currently available
- **Sanofi Pasteur:** MenQuadfi is available

### **YELLOW FEVER**

- **Sanofi Pasteur:** Stamaril is available

### **HUMAN PAPILLOMAVIRUS VACCINE**

- **MSD:** GARDASIL has been discontinued (please refer to ImmForm for NIP supply status)
- **MSD:** Gardasil 9 is currently available
- **GSK:** Cervarix has been discontinued

### **CHOLERA VACCINE**

- **Valneva:** Dukoral is currently unavailable. Further inventory available in March 2023

### **JAPANESE ENCEPHALYTIS VACCINE**

- **Valneva:** Ixiaro is available

## Weblinks

- Weblink 1 [www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2022-to-2023-season](https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2022-to-2023-season)
- Weblink 2 [www.gov.uk/government/statistics/seasonal-influenza-vaccine-uptake-in-children-of-school-age-monthly-data-2022-to-2023](https://www.gov.uk/government/statistics/seasonal-influenza-vaccine-uptake-in-children-of-school-age-monthly-data-2022-to-2023)
- Weblink 3 [www.gov.uk/government/statistics/seasonal-influenza-and-covid-19-vaccine-uptake-in-frontline-healthcare-workers-monthly-data-2022-to-2023](https://www.gov.uk/government/statistics/seasonal-influenza-and-covid-19-vaccine-uptake-in-frontline-healthcare-workers-monthly-data-2022-to-2023)
- Weblink 4 [www.gov.uk/government/statistics/seasonal-influenza-vaccine-uptake-in-gp-patients-monthly-data-2022-to-2023](https://www.gov.uk/government/statistics/seasonal-influenza-vaccine-uptake-in-gp-patients-monthly-data-2022-to-2023)
- Weblink 5 [https://www.gov.uk/government/news/back-to-school-advice-issued-amid-high-levels-of-flu-covid-19-and-scarlet-fever?utm\\_source=13%20January%202023%20C19&utm\\_medium=Daily%20Email%20C19&utm\\_campaign=DfE%20C19](https://www.gov.uk/government/news/back-to-school-advice-issued-amid-high-levels-of-flu-covid-19-and-scarlet-fever?utm_source=13%20January%202023%20C19&utm_medium=Daily%20Email%20C19&utm_campaign=DfE%20C19)
- Weblink 6 <https://www.nhs.uk/live-well/is-my-child-too-ill-for-school>
- Weblink 7 [https://educationhub.blog.gov.uk/2022/12/14/what-are-the-latest-rules-around-covid-19-in-schools-colleges-nurseries-and-other-education-settings/?utm\\_source=13%20January%202023%20C19&utm\\_medium=Daily%20Email%20C19&utm\\_campaign=DfE%20C19](https://educationhub.blog.gov.uk/2022/12/14/what-are-the-latest-rules-around-covid-19-in-schools-colleges-nurseries-and-other-education-settings/?utm_source=13%20January%202023%20C19&utm_medium=Daily%20Email%20C19&utm_campaign=DfE%20C19)
- Weblink 8 [https://educationhub.blog.gov.uk/2022/12/07/strep-a-and-scarlet-fever-what-are-they-and-what-are-the-symptoms-information-for-parents-schools-colleges-and-early-years-providers/?utm\\_source=13%20January%202023%20C19&utm\\_medium=Daily%20Email%20C19&utm\\_campaign=DfE%20C19](https://educationhub.blog.gov.uk/2022/12/07/strep-a-and-scarlet-fever-what-are-they-and-what-are-the-symptoms-information-for-parents-schools-colleges-and-early-years-providers/?utm_source=13%20January%202023%20C19&utm_medium=Daily%20Email%20C19&utm_campaign=DfE%20C19)
- Weblink 9 <https://www.gov.uk/government/news/ukhsa-update-on-scarlet-fever-and-invasive-group-a-strep-1>
- Weblink 10 [https://www.gov.uk/government/publications/adolescent-vaccination-programme-in-secondary-schools?utm\\_source=13%20January%202023%20C19&utm\\_medium=Daily%20Email%20C19&utm\\_campaign=DfE%20C19](https://www.gov.uk/government/publications/adolescent-vaccination-programme-in-secondary-schools?utm_source=13%20January%202023%20C19&utm_medium=Daily%20Email%20C19&utm_campaign=DfE%20C19)
- Weblink 11 <https://www.gov.uk/government/publications/immunisation-update-webinars-for-primary-care-immunisers>
- Weblink 12 <https://www.lshtm.ac.uk/newsevents/events/vaccine-mandates-around-world-do-they-increase-vaccination-rates-and-what-cost>
- Weblink 13 <https://www.uwa.edu.au/Profile/ABLE/Katie-Attwell>
- Weblink 14 <https://www.lshtm.ac.uk/aboutus/people/marshall.anika>

## Weblinks

- Weblink 15 <https://www.ucl.ac.uk/child-health/people/bedford-helen>
- Weblink 16 <https://www.ucl.ac.uk/philosophy/people/permanent-academic-staff/james-wilson>
- Weblink 17 <https://www.gov.uk/government/collections/immunisation-patient-group-direction-pgd>
- Weblink 18 <https://www.gov.uk/government/publications/national-flu-immunisation-programme-plan/statement-of-amendments-to-annual-flu-letter-21-july-2022>
- Weblink 19 <https://www.gov.uk/government/publications/influenza-vaccines-marketed-in-the-uk>
- Weblink 20 <https://www.gov.uk/government/publications/human-papillomavirus-hpv-the-green-book-chapter-18a>
- Weblink 21 <https://www.medicines.org.uk/emc/product/12264/smpc>
- Weblink 22 <https://www.gov.uk/government/publications/how-to-register-immform-helpsheet-8>
- Weblink 23 [https://health.ec.europa.eu/system/files/2016-11/dir\\_2011\\_62\\_en\\_0.pdf](https://health.ec.europa.eu/system/files/2016-11/dir_2011_62_en_0.pdf)
- Weblink 24 [https://health.ec.europa.eu/system/files/2016-11/reg\\_2016\\_161\\_en\\_0.pdf](https://health.ec.europa.eu/system/files/2016-11/reg_2016_161_en_0.pdf)