

# **VACCINE UPDATE**

Protecting and improving the nation's health

Issue 322, June 2021

ECIAL EDITION SPECIAL EDITION SPECIAL EDITION SPECIAL EDITION SPECIAL EDITION SPECIAL EDITION

## **COVID-19 vaccination programme Phase 2**

## 39,700 hospitalisations and 13,200 deaths prevented

Thank-you to all the vaccinators, vaccinees, and all of the teams working so hard to give the COVID-19 vaccinations – every one is a great step forward.



On Wednesday 8 June it was 6 months since the #COVID19 vaccination programme started across the UK. Since 8 December 2020, when Margaret Keenan became the first person in the world to receive her first vaccine there have been more than 65 million vaccinations at more than 2,000 sites.

As of 10 June 69,743,980 doses of vaccine have been given. Now COVID-19 vaccinations are being offered to people aged 25 to 30 years of age. We really want to encourage anyone eligible who has not yet come forward to have their vaccine to make an appointment. This issue of vaccine update focuses on all the new and revised resources published and the importance of the uptake of these resources to make sure everyone has their vaccination consent information, in a format which meets their needs. Thank you to everyone who has worked tirelessly around the clock to bring us this far.

#### **CONTENTS**

COVID-19 vaccine surveillance

JCVI advise on COVID-19 variant

'Glastonbury rush'

Rare syndrome related to the AstraZeneca vaccine

Reporting suspected cases

Reports of menstrual disorders and unexpected vaginal bleeding following COVID-19 vaccination

Myocarditis

A range of resources to support healthcare professionals are available

COVID-19 vaccination coverage

ONLY the record cards and PIL from the vaccine manufacturers are supplied with the vaccines

COVID-19 phase 2 versions

Guidance and training

Vaccine availability



# As of 10 June 69,743,980 COVID-19 vaccine doses have been given in UK

Visit the @PHE\_uk dashboard for more info: coronavirus. data.gov.uk/details/vaccinations

# 39,700 hospitalisations and 13,200 deaths prevented

Public Health England (PHE) has published its latest weekly COVID-19 vaccine surveillance report.<sup>1</sup>

#### **COVID-19 vaccine surveillance**

PHE estimates that 13,200 deaths have now been prevented in people aged 60 years or older in England up to 13 May 2021 (11,200 deaths in individuals aged 80 years and older, 1,700 in individuals aged 70 to 79 and 300 in individuals aged 60 to 69 years).

Estimates also indicate that the vaccination programme has prevented around 39,700 hospitalisations in those aged 65 years and over in England (approximately 4,900 admissions in those aged 65 to 74, 15,600 in those aged 75 to 84 and 19,200 in those aged 85 and over).

The method for analysing the approximate number of deaths and hospitalisations prevented by the vaccine programme now takes into account the impact of both first and second doses, due to more data being available.

However, it does not include the impact of vaccination on transmission, therefore the true impact of the vaccination programme is likely to be even greater.

An updated analysis including nearly 3,000 symptomatic cases of B.1.617.2 provides further confidence that 2 doses of either vaccine are highly effective against the Delta variant (first identified in India).

Dr Jamie Lopez Bernal, Consultant Epidemiologist at PHE, said:



This analysis gives further confidence that 2 doses of the vaccine provide vital protection against the variants in circulation in the UK, so it is important to book your second jab when invited, to gain maximum protection. The vaccines are very safe and very effective, and they will protect you and those around you from becoming seriously ill.

#### JCVI advice on COVID-19 variant

The Joint Committee on Vaccination and Immunisation has issued advice to the government on the use of COVID-19 vaccines to mitigate the impact of the B1.617.2 variant of concern.

Professor Wei Shen Lim, COVID-19 Chair for JCVI, said:



Due to the rapid rise in cases of the B1.617.2 Variant of Concern and notable transmission in parts of the country, the JCVI advises that every effort is made to promote vaccine uptake in those who remain unvaccinated in priority cohorts 1 to 9 – these people remain at highest risk of severe outcomes from COVID-19."

The full list of variants of concerns and variants under investigation are published on GOV.UK.<sup>2</sup>











# Half a million COVID-19 jabs booked in 'Glastonbury rush' in the morning of Wednesday 8 June

The NHS saw a welcome surge in demand for vaccines on Wednesday morning as half a million life-saving jabs were booked in a rush likened to the annual scramble for Glastonbury tickets.

The NHS reported: "By 12pm today, just 5 hours after eligibility widened to those aged between 25 and 29, the National Booking Service had seen 2.5 times the number of total appointments made yesterday, with 493,000 slots reserved, around 100,000 an hour on average and more than 1,600 per minute.

The rollout opened to those aged 25 to 29 today and the huge appetite saw people take to social media to compare it to the festival, with people posting about setting their alarms and being as excited as when they were booking for the music festival.

Text messages began to be sent out to people in the newly-eligible age bracket this morning, with more receiving the invite throughout the day and this week."

## Rare syndrome related to the AstraZeneca vaccine

Since March 2021 there have been reports from the UK and internationally of a very rare condition of thrombosis (blood clots) and thrombocytopenia (low platelets) following the first dose of the AstraZeneca (AZ) vaccine.

Whilst the cases to date have primarily had venous blood clots, arterial clots have also been reported. The underlying risk factors have not yet been fully established for this condition and a detailed review of suspected cases of this condition following COVID-19 vaccination is ongoing by the Medicines and Healthcare products Regulatory Agency (MHRA), supported by PHE and other professional groups. This will help us to understand the risk factors for developing this condition.

The risk of this very rare side effect is higher in younger age groups and is 1 in 50,000 for adults aged 18 to 39 years and 1 in 100,000 for adults aged 40 or older. This compares with the risks of severe outcomes following COVID-19 infection being higher in older adults and people with serious health problems.

It is important to note that this is currently only being observed following the first dose with no confirmed reports post second dose. Those who have received their first dose of AZ vaccine and have not suffered any serious side effects should continue to be offered the second dose to complete the course.

The Expert Haematology Panel advise that there is no evidence that individuals with a prior history of thrombosis or known risk factors for thrombosis are more at risk of developing this condition after the AZ vaccine. Furthermore, for the majority of individuals, the risk of recurrent thrombosis due to COVID-19 infection is far greater than the risk of this syndrome.



The current advice from the Joint Committee on Vaccination and Immunisation (JCVI), is:

- adults aged 39 or younger who do not have serious underlying medical conditions should be preferentially offered an alternative to the AZ vaccine, where possible, and only where no substantial delay or barrier in access to vaccination would arise
- healthy individuals aged 40 years or older should continue to be offered any of the available vaccines
- those who have received their first dose of AZ vaccine without suffering this
  rare side effect should continue to be offered the second dose to complete the
  course. This includes individuals who are aged 39 years or younger

Dr Mary Ramsay, Head of Immunisation at PHE, said:



We know that 2 doses of the COVID-19 vaccines are required for the best protection and that side effects from AstraZeneca are generally very mild after the second dose. The evidence shows that mixing vaccine brands is more likely to cause more common side effects. So even if you felt unwell after your first dose of AstraZeneca vaccine, you are best to complete with this vaccine for your second dose. Every effort should be made to give people the same vaccine, but in exceptional circumstances where this is not possible it is better to give a second dose of another vaccine than not at all."

## **Reporting suspected cases**

It is very important that all suspected cases are reported to both the MHRA on the COVID-19 Yellow Card scheme<sup>3</sup> and to PHE's clinical reporting scheme at https://cutt.ly/haem\_AE.

In order to minimise burden on reporters, for cases reported on the PHE clinical reporting scheme first, the last page of the survey allows all the inputted answers to be copied, and relevant information can then be directly pasted into the COVID-19 Yellow Card form.

# Reports of menstrual disorders and unexpected vaginal bleeding following COVID-19 vaccination

The MHRA has reviewed reports of menstrual disorders and unexpected vaginal bleeding received following vaccination with the three COVID-19 vaccines currently being used in the UK: Pfizer/BioNTech, AstraZeneca and Moderna.

These reports have also been reviewed by independent experts of the Commission on Human Medicines' COVID-19 Vaccines Benefit Risk Expert Working Group and members of Medicines for Women's Health Expert Advisory Group.











The number of reports of menstrual disorders and vaginal bleeding is low in relation to both the number of females who have received COVID-19 vaccines to date and the background rate of menstrual disorders generally. The current evidence does not suggest an increased risk of either menstrual disorders or unexpected vaginal bleeding following vaccination with the vaccines. The MHRA will continue to closely monitor reports of menstrual disorders and vaginal bleeding with COVID-19 vaccines.

Healthcare professionals are advised that anyone presenting with menstrual disorders and/or unexpected vaginal bleeding following COVID-19 vaccination should be treated according to clinical guidelines for these conditions as usual.

## **Myocarditis**

Worldwide, there have also been recent, rare cases of inflammation of the heart called myocarditis or pericarditis reported after COVID-19 vaccines, although it is not yet clear that these are caused by the vaccine. This has been seen mostly in younger men within several days of vaccination. Most of these people recovered and felt better following rest and simple treatments.

#### You should seek medical advice urgently if you experience:

- chest pain
- shortness of breath
- feelings of having a fast-beating, fluttering or pounding heart

# A range of resources to support healthcare professionals are available including:

FAQs have been developed for healthcare professionals: COVID-19 vaccination: blood clotting information for healthcare professionals<sup>4</sup>

The Green Book has been updated with the latest guidance and evidence: https://www.gov.uk/government/publications/covid-19-the-green-book-chapter-14a

Guidance has been developed for secondary care<sup>6</sup>, primary care<sup>7</sup> and Emergency departments and Acute Medical Units.<sup>8</sup>

Further information and patient leaflets can be found on GOV.UK: COVID-19 vaccination and blood clotting<sup>9</sup>

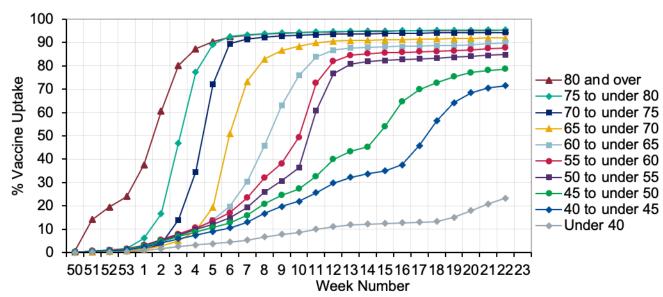


### COVID-19 vaccination coverage

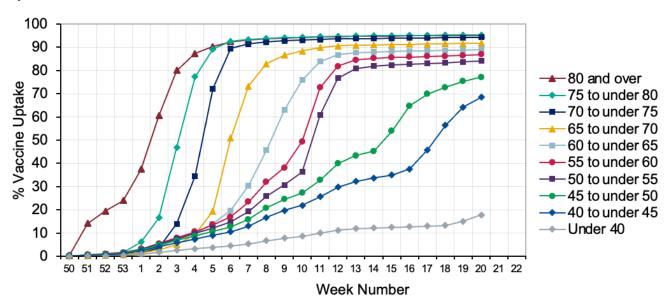
The National Coverage team are working hard to produce vaccine uptake data to support wider public health action and surveillance work. As of 23 May 2021, the National Programme in England has vaccinated over 65% of adults (18 and over) with dose 1 of the COVID-19 vaccine and nearly 40% with dose 2. We have a regular feature in the weekly national flu and COVID-19 surveillance reports<sup>10</sup> showcasing the roll out of the programme by week, age and sex; as well as ethnicity, with additional data in the backing tables that accompany the report. We continue to work with other organisations such as NHS England and NHS Improvement (NHSEI<sup>11</sup>) and Office for National Statistics (ONS<sup>12</sup>)to produce more statistics that can be used to inform important local public health actions. Do please let us know what additional data would be helpful in the pandemic response by emailing us at COVIDvacc@phe.gov.uk

Figure 1: Cumulative weekly COVID-19 vaccine uptake by age in England









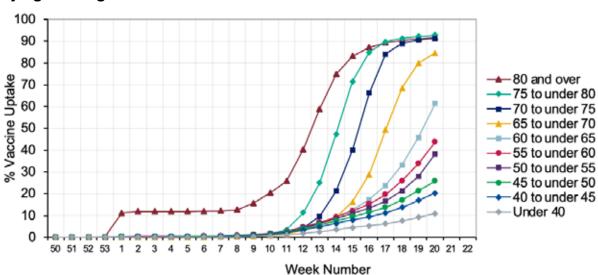
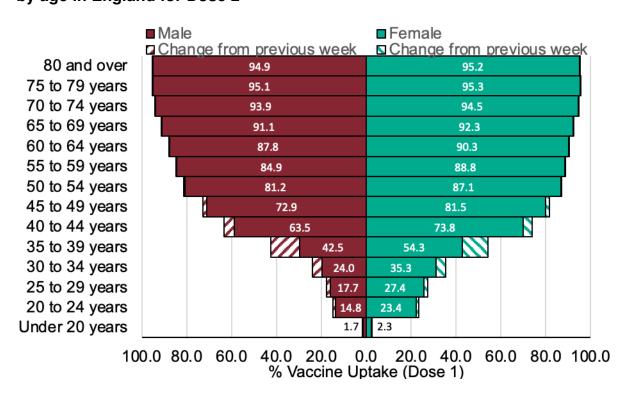


Figure 2: Age/Sex pyramid for COVID-19 vaccine uptake by age in England for Dose 1

Figure 3: Age/Sex pyramid for COVID-19 vaccine uptake by age in England for Dose 2



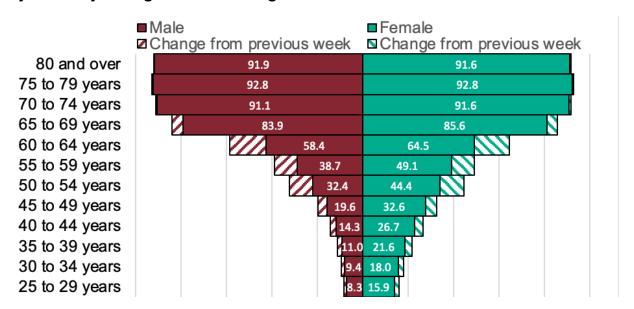


Figure 4: Cumulative weekly COVID-19 vaccine uptake by ethnicity in England in those aged 50 and over

From 6 January 2021 (week 1 2021), the JCVI advises<sup>13</sup> initially prioritising delivery of the first vaccine dose to maximise the public health impact in the short term and reduce the number of preventable deaths from COVID-19.

The UK Coronavirus Dashboard<sup>14</sup> presents daily counts of people vaccinated aged 18 and over, split by dose, for local authorities in England and Scotland, and regions in England. Cumulative percentage uptake is also presented for these areas (using National Immunisation Management System (NIMS) populations as denominators for English areas, and National Records of Scotland (NRS) mid-year estimates for Scotlish local authorities).

Uptake by 5 year age groups, initially for English regions and local authorities, now available.



# COVID-19 vaccination programme publications available to order now!

ONLY the record cards and Patient Information Leaflet (PIL) from the vaccine manufacturers are supplied with the vaccines.

Pfizer PIL<sup>15</sup>

AstraZeneca PIL<sup>16</sup>

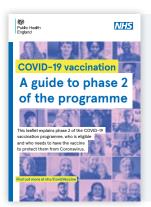
Moderna PIL<sup>17</sup>

People being offered a COVID-19 vaccination should be offered the adult Phase 2 leaflet in a format or language of their choice (English, translated Easy Read, British Sign Language (BSL), braille or large print). Women should be given the COVID-19 vaccination guide for women (see below).

Anyone being offered a first or second dose of AZ vaccine should be given the COVID-19 guide to blood clotting and vaccination (currently version 2).

At vaccination patients should be given the What to expect after your COVID-19 vaccination leaflet as well as the PIL and record card and they should be offered a COVID-19 vaccination sticker. It is so important to make sure that everyone is offered these essential consent resources to have the best vaccination experience.

## **COVID-19 phase 2 versions**



### COVID-19 vaccination – a guide for adults version 5

COV2020351V5EN www.gov.uk/government/ publications/covid-19vaccination-guide-forolder-adults



### COVID-19 vaccination guide for women of childbearing age, pregnant or breastfeeding leaflet – version 4

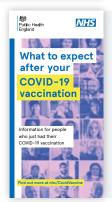
COV2020374V4

www.gov.uk/government/publications/ covid-19-vaccination-women-ofchildbearing-age-currently-pregnantplanning-a-pregnancy-or-breastfeeding



# COVID-19 guide to blood clotting and vaccination – version 2

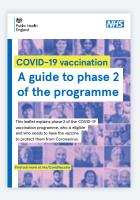
COV2021700V2 www.gov.uk/government/ publications/covid-19vaccination-and-blood-clotting



# What to expect after your COVID-19 vaccination leaflet – version 4

COV202307V4EN

www.gov.uk/government/publications/covid-19-vaccination-what-to-expect-after-vaccination



### COVID-19 Vaccination guide to phase 2 version 5

Available in the following languages:

English: COV2020351V5EN

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Slcovid19vaccinationaguidetophase2leafletversion5

Albanian: COV2020351V5AL

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationaguidetophase2leafletversion5albanian

Arabic: COV2020351V5AR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5arabic

Bengali: COV2020351V5BEN

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5bengali

Brazilian Portuguese: COV2020351V5POR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5brport

Bulgarian: COV2020351V5BUL

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationguidetophase2version5bulgarian

Chinese: COV2020351V5CH

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5chinese

Estonian: COV2020351V5EST

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5estonian

Farsi: COV2020351V5FA

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5farsi

Greek: COV2020351V5GR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5greek

Gujarati: COV2020351V5GU

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5gujarati

Hindi: COV2020351V5HI

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5hindi

Latvian: COV2020351V5LAV

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5latvian

Lithuanian: COV2020351V5LI

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5lithuanian

Panjabi: COV2020351V5PA

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5panjabi

Polish: COV2020351V5POL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5polish

Romanian: COV2020351V5RO

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5romanian

Russian: COV2020351V5RU

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5russian

Spanish: COV2020351V5ES

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationguidetophase2version5spanish

Somali: COV2020351V5SO

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5somali

Turkish: COV2020351V5TR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5turkish

**Twi:** COV2020351V5TW

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5twi

Ukrainian: COV2020351V5UK

 $\label{lem:https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationguidetophase2version5ukrainian$ 

Urdu: COV2020351V5UR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidetophase2version5urdu

Also available in BSL, large print and braille:

BSL: COV2020351V4ENBSL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationaguideforadultsv4bslvideo

Large print: COV2020351V4ENLP

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationphase2guideforadultsv4lp

Braille: COV2020351V4ENBR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationaguideforadultsv4braille



#### COVID-19 Easy Read vaccination guide for adults

Available in the following languages:

English: COV2020344

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccination

Albanian: COV2020344AL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationalbanian

Arabic: COV2020344AR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationarabic-1838

Bengali: COV2020344BE

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationbengali

Bulgarian: COV2020344BG

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationbulgarian

Chinese: COV2020344ZHOCN

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationchinese

French: COV2020344FR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationfrench

Gujarati: COV2020344GU

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationgujarati

Hindi: COV2020344HI

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationhindi

Lithuanian: COV2020344LT

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationlithuanian

Pashto: COV2020344PAS

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationpashto

Polish: COV2020344PL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationpolish

Portuguese: COV2020344PT

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationportuguese

Panjabi: COV2020344PAN

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationpanjabi

Romanian: COV2020344RO

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationromanian

Russian: COV2020344RU

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationrussian

Somali: COV2020344SOM

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationsomali

Tagalog: COV2020344TGL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationtagalog

Ukrainian: COV2020344UA

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationukrainian

**Urdu:** COV2020344UR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationurdu

Vietnamese: COV2020344VIE

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidetothecovid19vaccinationvietnamese

Please place your orders today.



#### COVID-19 vaccination and blood clotting guide version 2

Available in the following languages:

**English:** COV2021700V2

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguideversion2

Albanian: COV2021700V2AL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2albanian

Arabic: COV2021700V2AR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2arabic

Bengali: COV2021700V2BEN

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2bengali

Brazilian Portuguese: COV2021700V2POR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2brport

Bulgarian: COV2021700V2BUL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2bulgarian

Chinese: COV2021700V2CH

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2chinese

Estonian: COV2021700V2EST

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2estonian

Farsi: COV2021700V2FA

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2farsi

Greek: COV2021700V2GR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2greek

Gujarati: COV2021700V2GU

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2gujarati

Hindi: COV2021700V2HI

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2hindi

Latvian: COV2021700V2LAV

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2latvian

Lithuanian: COV2021700V2LI

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2lithuanian

Panjabi: COV2021700V2PA

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationandbloodclottingguidev2panjabi

Polish: COV2021700V2POL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2polish

Romanian: COV2021700V2RO

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2romanian

Russian: COV2021700V2RU

Spanish: COV2021700V2ES

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2spanish

Somali: COV2021700V2SO

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2somali

Turkish: COV2021700V2TR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2turkish

**Twi:** COV2021700V2TW

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2twi

Ukrainian: COV2021700V2UK

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2ukrainian

Urdu: COV2021700V2UR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2urdu

Also available in BSL, large print and braille:

BSL: COV2021700V2ENBSL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguideversion2bsl

Large print: COV2021700V2ENLP

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationandbloodclottingguidev2largeprint

Braille: COV2021700V2ENBR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationandbloodclottingguidev2braille



#### What to expect after your COVID-19 vaccination version 4

Paper copies, alternate versions and translations of version 5 will be available soon

Available in the following languages:

English: COV202307V4EN

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovidvaccinationleaflet-1667

Albanian: COV2020307V4AL

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Swhattoexpectafteryourcovid19vaccinationalbanian-1723

Amharic: COV2020307V4AM

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationamharic

Arabic: COV2020307V4AR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationarabic-1734

Bengali: COV2020307V4BEN

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationbengali-1730

Brazilian Portuguese: COV2020307V4POR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationportugueseb

Bulgarian: COV2020307V4BUL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationbulgarian

Chinese: COV2020307V4CH

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationchinese-1726

Estonian: COV2020307V4ES

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationestonian

Greek: COV2020307V4GR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationgreek

Gujarati: COV2020307V4GU

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationgujarati-1724

Hindi: COV2020307V4HI

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationhindi-1731

Kurdish: COV2020307V4KU

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationkurdish-1718

Latvian: COV2020307V4LAV

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationlatvian

Lithuanian: COV2020307V4LI

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Swhattoexpectafteryourcovid19vaccinationlithuanian

Panjabi: COV2020307V4PA

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationpanjabi-1727

Polish: COV2020307V4POL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationpolish

Russian: COV2020307V4RU

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationrussian

Spanish: COV2020307V4ESP

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationspanishversion

Somali: COV2020307V4SO

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Slwhattoexpectafteryourcovid19vaccinationsomali

Turkish: COV2020307V4TR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationturkish

**Twi:** COV2020307V4TW

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationtwi

Ukrainian: COV2020307V4UK

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationukrainian-1721

Urdu: COV2020307V4UR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovid19vaccinationurdu-1720

Also available in BSL, large print and braille:

BSL: COV2020307V4ENBSL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovidvaccinationleafletversion4bsl

Large print: COV2020307V4ENLP

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Swhattoexpectafteryourcovidvaccinationleafletlp

Braille: COV2020307V4ENBR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Swhattoexpectafteryourcovidvaccinationleafletbraille



#### Easy Read what to expect after vaccination

Available in the following languages:

#### English: COV2020307V2ER

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadwhattoexpectaftercovid19vaccination

#### Albanian: COV2020307V2ERAL

https://www.healthpublications.gov.uk/ViewArticle.html? sp=Seasyreadguidewhattoexpectafteryourcovid19vaccina tionalbanian

#### Arabic: COV2020307V2ERAR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidewhattoexpectafteryourcovid19vaccinationarabic

#### Bengali: COV2020307V2ERBE

https://www.healthpublications.gov.uk/ViewArticle. html?sp=Seasyreadguidewhattoexpectafteryourcovid19vaccinationbengali

#### Bulgarian: COV2020307V2ERBG

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidewhattoexpectafteryourcovid19vaccinationbulgarian

#### Chinese: COV2020307V2ERZHOCN

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidewhattoexpectafteryourcovid19vaccinationchinese

#### French: COV2020307V2ERFR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidewhattoexpectafteryourcovid19vaccinationfrench

#### Gujarati: COV2020307V2ERGU

https://www.healthpublications.gov.uk/ViewArticle.html? sp=Seasyreadguidewhattoexpectafteryourcovid19vaccina tiongujarati

#### Hindi: COV2020307V2ERHI

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidewhattoexpectafteryourcovid19vaccinationhindi

#### Lithuanian: COV2020307V2ERLT

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Seasyreadguidewhattoexpectafteryourcovid19vaccinationlithuanian

#### Pashto: COV2020307V2ERPAS

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidewhattoexpectafteryourcovid19vaccinationpashto

#### Polish: COV2020307V2ERPL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidewhattoexpectafteryourcovid19vaccinationpolish

#### Portuguese: COV2020307V2ERPT

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Seasyreadguidewhattoexpectafteryourcovid19vaccinationportuguese

#### Panjabi: COV2020307V2ERPAN

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Seasyreadguidewhattoexpectafteryourcovid19vaccinationpanjabi

#### Romanian: COV2020307V2ERRO

https://www.healthpublications.gov.uk/ViewArticle.html? sp=Seasyreadguidewhattoexpectafteryourcovid19vaccina tionromanian

#### Russian: COV2020307V2ERRU

https://www.healthpublications.gov.uk/ViewArticle.html?sp = Seasyreadguidewhattoexpectafteryourcovid19vaccinatio

#### Somali: COV2020307V2ERSOM

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidewhattoexpectafteryourcovid19vaccinationsomali

#### Tagalog: COV2020307V2ERTGL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidewhattoexpectafteryourcovid19vaccinationtagalog

#### Ukrainian: COV2020307V2ERUA

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidewhattoexpectafteryourcovid19vaccinationukrainian

#### Urdu: COV2020307V2ERUR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguidewhattoexpectafteryourcovid19vaccinatio nurdu

#### Vietnamese: COV2020307V2ERVIE

https://www.healthpublications.gov.uk/ViewArticle.html? sp=Seasyreadguidewhattoexpectafteryourcovid19vaccinat ionvietnamese



# COVID-19 vaccination guide for childbearing, pregnant or breastfeeding women version 4

Available in the following languages:

English: COV2020374V4

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4

Albanian: COV2020374V4AL

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationguidechildbearingpregnantv4albanian

Arabic: COV2020374V4AR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4arabic

Bengali: COV2020374V4BEN

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4bengali

Brazilian Portuguese: COV2020374V4POR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4portbr

Bulgarian: COV2020374V4BUL

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationguidechildbearingpregnantv4bulgarian

Chinese: COV2020374V4CH

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4chinese

Estonian: COV2020374V4EST

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationguidechildbearingpregnantv4estonian

Farsi: COV2020374V4FA

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4farsi

Greek: COV2020374V4GR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4greek

Gujarati: COV2020374V4GU

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4gujarati

Hindi: COV2020374V4HI

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4hindi

Latvian: COV2020374V4LAV

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationguidechildbearingpregnantv4latvian

Lithuanian: COV2020374V4LI

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationguidechildbearingpregnantv4lithuanian

Panjabi: COV2020374V4PA

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4panjabi

Polish: COV2020374V4POL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4polish

Romanian: COV2020374V4RO

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationguidechildbearingpregnantv4romanian

Russian: COV2020374V4RU

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4russian

Spanish: COV2020374V4ES

https://www.healthpublications.gov.uk/ViewArticle.html?sp = Scovid19vaccinationguidechildbearingpregnantv4spanish

Somali: COV2020374V4SO

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4somali

Turkish: COV2020374V4TR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4turkish

**Twi:** COV2020374V4TW

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4twi

Ukrainian: COV2020374V4UK

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationguidechildbearingpregnantv4ukrainian

**Urdu:** COV2020374V4UR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4urdu

Also available in BSL, large print and braille:

BSL: COV2020374V4ENBSL

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4bsl

Large print: COV2020374V4ENLP

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Scovid19vaccinationguidechildbearingpregnantv4lp

Braille: COV2020374V4ENBR

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Scovid19vaccinationguidechildbearingpregnantv4braille



#### Easy Read vaccination guide for pregnant women

Available in the following languages:

#### English: COV2020374V3ER

https://www.healthpublications.gov.uk/ViewArticle.html?sp =Seasyreadguideforchildbearingpregnantwomen

#### Albanian: COV2020374V3ERAL

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Seasyreadguidetothecovid19vaccinationforchildbearingpregnantwomenalbanian

#### Arabic: COV2020374V3ERAR

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomenarabic

#### Bengali: COV2020374V3ERBE

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomenbengali

#### Bulgarian: COV2020374V3ERBG

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomenbulgarian

#### Chinese: COV2020374V3ERZHOCN

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin apregnantwomenchinese

#### French: COV2020374V3ERFR

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomenfrench

#### Gujarati: COV2020374V3ERGU

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomengujarati

#### Hindi: COV2020374V3ERHI

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomenhindi

#### Lithuanian: COV2020374V3ERLT

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomenlithuanian

#### Pashto: COV2020374V3ERPAS

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomenpashto

#### Polish: COV2020374V3ERPL

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomenpolish

#### Portuguese: COV2020374V3ERPT

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomenportuguese

#### Panjabi: COV2020374V3ERPAN

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomenpanjabi

#### Romanian: COV2020374V3ERRO

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomenromanian

#### Russian: COV2020374V3ERRU

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Seasyreadguidetothecovid19vaccinationforchildbearingpregnantwomenrussian

#### Somali: COV2020374V3ERSOM

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomensomali

#### Tagalog: COV2020374V3ERTGL

https://www.healthpublications.gov.uk/ViewArticle.html ?sp=Seasyreadguidetothecovid19vaccinationforchildbearin gpregnantwomentagalog

#### Ukrainian: COV2020374V3ERUA

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Seasyreadguidetothecovid19vaccinationforchildbearingpregnantwomenukrainian

#### Urdu: COV2020374V3ERUR

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Seasyreadguidetothecovid19vaccinationforchildbearingpregnantwomenurdu

#### Vietnamese: COV2020374V3ERVIE

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Seasyreadguidetothecovid19vaccinationforchildbearingpregnantwomenvietnamese

## Which COVID-19 vaccine poster – new version D includes Janssen COVID-19 vaccine.

The guidance for Pfizer BioNTech vaccine Routine storage section, previously 'Thawed and undiluted. 5 days (120 hours) at +2°C to +8°C' has been changed to 'Thawed and undiluted: up to 1 month (31 days) at +2°C to +8°C' and this has been updated on posters A, B and C.

The set of posters contain information on the presentation, doses and storage of COVID-19 vaccines. Suitable for all healthcare and vaccination settings.



# Poster A is available to download and copies are available to order, using product code:

COV2020520

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Swhichcovid19vaccinepresentationposter



Poster B includes the new AstraZeneca vial, which could be supplied with a green cap and the blue syringes that accompany it for a short period of time. Poster B is available for download only.

https://www.gov.uk/government/publications/covid-19-vaccination-vaccine-product-information-poster



Poster C includes the Moderna vaccine and is available to download and copies are available to order, using product code:

COV2020520C

https://www.healthpublications.gov.uk/ViewArticle.html?sp=Swhichcovid19vaccinetouseversionc



Poster D includes the Janssen vaccine and will be available soon to order using product code:

COV2020520D

https://www.gov.uk/government/publications/covid-19-vaccination-vaccine-product-information-poster

## **Guidance and training**

The training advice and guidance is subject to continual revision. Here is a summary of the latest changes and revised editions with the links.

- **3.5** Pregnancy section updated and new contraindications for AZ vaccine added. Advice about which vaccines to give those vaccinated abroad added 28 April 2021
- **3.6** Added information about the exceptional circumstances in which a different second vaccine to the first can be given added 11 May 2021
- **3.7** Updated vaccine schedule section and added section about administering second dose beyond recommended interval added 20 May 2021
- **3.8** Pfizer/BioNTech vaccine storage conditions updated from 5 days to 31 days added 9 June 2021

#### COVID-19: the green book, chapter 14a

Published 7 May 2021

https://www.gov.uk/government/publications/covid-19-the-green-book-chapter-14a

#### **COVID-19 vaccination: information for healthcare practitioners**

Published 9 June 2021

https://www.gov.uk/government/publications/covid-19-vaccination-programme-guidance-for-healthcare-practitioners

#### COVID-19 vaccination training slide set

https://khub.net/documents/135939561/338928724/COVID-19+Vaccination +programme+core+training+slide+set+v11.pptx/9fa7323f-53e5-3d9c-315d-0aaf266cbb8f?t=1623233638318

#### COVID-19 vaccination e-learning programme

https://www.e-lfh.org.uk/programmes/covid-19-vaccination

#### **COVID-19: vaccinator training recommendations**

https://www.gov.uk/government/publications/covid-19-vaccinator-training-recommendations

#### COVID-19: vaccinator competency assessment tool

https://www.gov.uk/government/publications/covid-19-vaccinator-competency-assessment-tool

# Vaccines for the national COVID-19 programme supplied by PHE

## Vaccine availability

The vaccines currently available to order by the pre-agreed providers are in the table below.

Latest information for each vaccine can be found on ImmForm.

Manufacturer	Vaccine Name	Presentation	Storage
Pfizer/BioNTech	BNT162b2	Each pack of vaccine contains 195 vials with 6 doses per vial (1170 doses per pack).	This vaccine requires ultra-low temperature storage (-80°C to -60°C)
AstraZeneca	ChAdOx1-S	Each pack of vaccine contains 10 vials with 8 doses per vial (80 doses per pack).	2°C to 8°C
Moderna	Moderna COVID-19 vaccine	Each pack of vaccine contains 10 vials with 10 doses per vial (100 doses per pack).	This vaccine requires freezer (-25°C to -15°C)

The delivery schedule for ordering Moderna vaccine via ImmForm changed from next day delivery to 48 hour delivery. The existing next day delivery schedule for AZ and Pfizer vaccines remains unchanged: orders placed before 11:55 AM each day, will be delivered next day.

If you have a query in respect of access to COVID-19 vaccines, please contact your SVOC and RVOC teams.

If you have any queries about ImmForm ordering, please email Helpdesk@immform.org.uk.

If you have any queries about deliveries, please call 01234 587199 or email NHS.VaccineSupport@movianto.com.

If you have any queries about the vaccine or associated products, please email COVID19PHEsupplies@phe.gov.uk.

Colleagues from Devolved Administrations please refer to guidance from your respective health departments for arrangements in Scotland, Wales and Northern Ireland.

Further information on other COVID-19 vaccines, including vaccine availability, associated products, vaccine ordering and delivery schedule, will be communicated as soon as it is available.

## Weblinks

- 1 https://www.gov.uk/government/publications/covid-19-vaccine-surveillance-report
- 2 https://www.gov.uk/government/publications/covid-19-variants-genomically-confirmed-case-numbers/variants-distribution-of-cases-data
- 3 https://coronavirus-yellowcard.mhra.gov.uk/
- 4 https://www.gov.uk/government/publications/covid-19-vaccination-blood-clotting-information-for-healthcare-professionals
- 5 https://www.gov.uk/government/publications/covid-19-the-green-book-chapter-14a
- 6 https://b-s-h.org.uk/about-us/news/guidance-produced-by-the-expert-haematology-panel-ehp-focussed-on-vaccine-induced-thrombosis-and-thrombocytopenia-vitt/
- 7 https://elearning.rcgp.org.uk/pluginfile.php/166267/mod\_resource/content/5/ Headaches after AZ\_April 2021\_V2.pdf
- 8 https://www.rcem.ac.uk/docs/Policy/ED-AM Vaccine pathway concerns RCP SAM RCEM.pdf
- 9 https://www.gov.uk/government/collections/covid-19-vaccination-and-blood-clotting
- 10 https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports
- 11 https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-vaccinations/
- 12 https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/articles/coronaviruscovid19/latestinsights
- 13 https://www.gov.uk/government/publications/prioritising-the-first-covid-19-vaccine-dose-jcvi-statement/optimising-the-covid-19-vaccination-programme-for-maximum-short-term-impact
- 14 https://coronavirus.data.gov.uk/
- 15 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/987587/Temporary\_Authorisation\_Patient\_Information\_BNT162\_9\_0\_UK\_Clean.pdf
- 16 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/978195/uk\_-recipients-covid-19-vaccine-astrazeneca-reg174 proposed 14 April 2021.pdf
- 17 https://www.gov.uk/government/publications/regulatory-approval-of-covid-19-vaccine-moderna/information-for-uk-recipients-on-covid-19-vaccine-moderna