



Public Health
England

Protecting and improving the nation's health

Seasonal influenza vaccine uptake in GP patients: winter season 2019 to 2020

Final data for 1 September 2019 to 29
February 2020

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Notes on the report

Intended audience

This report is aimed at health professionals directly involved in the delivery of the influenza vaccine or those with an interest in the influenza vaccination programme in England.

Aim of the report

This report provides an overview of the end of season data on influenza vaccination uptake in General Practice (GP) registered patients in England. Data are stratified by clinical risk groups and age to identify groups where vaccine uptake can be improved in future seasons.

Executive summary

The Public Health England (PHE) Influenza Surveillance Team has responsibility to co-ordinate and facilitate the national collection and reporting of influenza vaccine uptake data. This report describes the final data in GP registered patients in England from 1 September 2019 to 29 February 2020.

Survey response

The response rate from GP practices in England were:

- 99.3% for the Main GP survey compared to 97.2% last season.
- 99.3% for the Child GP survey compared to 96.2% last season.

For the first time, automated and manual responses were requested for the end of February 2020 survey, only automated responses were requested for the end of February 2019 survey. Only 30 and 27 practices (0.4%) entered manual data for the Main and Child GP surveys respectively.

National vaccine uptake

Cumulative influenza vaccine uptake in GP registered patients from 1 September 2019 to 29 February 2020 in England was:

- 72.4% for patients aged 65 years and over compared to 72.0% in 2018 to 2019.
- 44.9% for patients aged six months to under 65 years old in one or more clinical risk group(s) compared to 48.0% in 2018 to 2019
- 43.7% in all pregnant women compared to 45.2% in 2018 to 2019
- 43.8% for patients aged two and three years compared to 44.9% in 2018 to 2019

40/191 Clinical commissioning groups (CCGs) achieved the World Health Organization (WHO) target uptake rate of 75% or more in those aged 65 and over compared to 30/195 CCGs last season.

Vaccine uptake decreased in nearly all of the adult clinical risk target groups this season and further work is needed to identify underpinning reasons, so that uptake can be improved in the future in line with national uptake ambitions.

Uptake for the pre-school children's influenza vaccine programme decreased compared to the previous season for the first time since 2015 to 2016 season, this was likely due to vaccine supply issues.

Glossary

aTIV	Adjuvanted trivalent vaccine
At-risk	Patients with clinical risk group(s) as listed in the Green book
CBV	cell based vaccine
CCG	clinical commissioning group
Child GP survey	Name of the flu vaccine uptake survey that collects all the child cohorts
CHIS	Child Health Information Systems
dm+d	Dictionary of medicines and devices
GP	general practice
GPSS	GP System Suppliers
Green Book	The Green Book 'Immunisation against infectious disease' has the latest information on vaccines and vaccination procedures, for vaccine preventable infectious diseases in the UK. Chapter 19 refers to influenza.
IMD	Indices of Multiple Deprivation deciles
ImmForm	ImmForm is a website that provides a secure online platform for vaccine uptake data collection for several immunisation surveys, including the seasonal influenza vaccine uptake collection.
JCVI	Joint Committee on Vaccination and Immunisation
LA	Local authority
LAIV	live attenuated influenza vaccine
LT	NHS Local Team
Main GP survey	Name of the flu vaccine uptake survey that collects all the main adult and child cohorts
MiQuest	Morbidity Information Query and Export Syntax (MIQUEST) enables the collection of health data from GP computer systems in a common computer-readable format.
NHS	National Health Service
OHS	Other healthcare settings
ONS	Office for National Statistics
PHE	Public Health England
PHEC	PHE Centres
QIV	non-adjuvanted quadrivalent inactivated vaccine
Read codes	Name of a clinical terminology
School-age year	The school age year is determined by their age on the 31 August. This will be correct for the majority of children.
SNOMED CT codes	Systematized Nomenclature of Medicine Clinical Terminology. Name of a clinical terminology
TIV	TIV non-adjuvanted vaccine
WHO	World Health Organization

Background

The traditional purpose of the seasonal influenza immunisation programme in England is to offer protection to those who are most at risk of serious illness or death should they develop influenza.

In 2012, the Joint Committee on Vaccination and Immunisation (JCVI) recommended the roll-out of a universal childhood influenza vaccine programme with a newly licensed live attenuated influenza vaccine (LAIV)¹. The childhood LAIV programme, which was first implemented in 2013 to 2014, continued its roll-out in 2019 to 2020, targeting all two and three-year olds in primary care and all children of school age years' Reception to Year 6 across England i.e. all primary school aged children. The aim of this is to both directly protect the vaccinated children themselves and to reduce influenza transmission, by indirectly protecting the rest of the population, including those at elevated risk of the severe consequences of influenza infection.

National Health Service (NHS) England has responsibility for commissioning the influenza programme with general practices, midwives, and other healthcare professionals. PHE Immunisation managers and co-ordinators embedded in NHS teams play a key role in delivery within their CCG and Local Team boundaries.

The PHE Influenza Surveillance Team has responsibility for collating the data and reporting on the progress in the uptake of the seasonal influenza vaccine. We use the ImmForm website² to enable us to monitor, track and report on provisional vaccine uptake on a weekly and monthly basis during the influenza season.

The seasonal influenza vaccine uptake survey in GP registered patients was first split into the "Main GP Survey" and the "Child GP survey" in the 2017 to 2018 season. Data presented in this report and accompanying tables is for the end of season data, up to the end of February in England.

February surveys were introduced as an experimental collection in February 2018, using only automated responses. It was found that February collections improved inclusion of data returning from outside the practice and later in-practice vaccinations, presenting a more accurate national representation of uptake rates. The 2019 to 2020 season is the first to include manual responses in addition to automated responses.

¹ Joint Committee on Vaccination and Immunisation. Meeting minutes, 5 Oct 2011. London. Available from: http://webarchive.nationalarchives.gov.uk/20120907090205/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@ab/documents/digitalasset/dh_133598.pdf

² <https://portal.immform.phe.gov.uk/Logon.aspx?returnurl=%2f>

The data counts the cumulative number of GP registered patients³ who have had at least one dose of influenza vaccine from 1 September to the 29 February 2020.

This end-of-season report provides the final influenza vaccine uptake figures in GP registered patients. It should be noted that the data is collated for surveillance purposes only and is not designed to support GP payments.

The programme for 2019 to 2020 was announced in the annual flu letter jointly issued to the NHS by PHE, the Department of Health and Social Care (DHSC) and NHS England on 22 March 2019⁴. It was recommended that influenza vaccine be offered to the following eligible GP patient groups.

- all patients aged 65 years and over
- all patients aged six months to under 65 years, in a clinical at-risk group
- all patients aged two and three years
- all pregnant women
- carers (aged under 65 years, not at-risk, not pregnant and fulfils the 'carer' definition⁵)
- those in long-stay residential care homes
- social care and hospice workers that offer direct patient/client care⁶
- all patients of school age⁷ in years' Reception to Year 6 (aged 4 rising to 11 years old), delivered through school delivery models (with the exception of the Isle of Scilly who deliver the vaccine via the GP practice)

³ People who are currently registered at the GP practice on the day of data extraction. Therefore, the survey will not include vaccinations given to patients who have since moved practice or who have died, but will include those vaccinated by another healthcare provider (provided the GP patient electronic record is updated).

⁴ The annual flu letter is accessible from the following link on the GOV.UK website https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/788903/Annual_national_flu_programme_2019_to_2020_.pdf

⁵ The definition of a carer can be found in the influenza chapter of the Green Book <https://www.gov.uk/government/publications/influenza-the-green-book-chapter-19>

⁶ This scheme is intended to complement, not replace, any established occupational health schemes that employers have in place to offer the flu vaccination to their workforce. For more information please see: 'Extension of NHS seasonal influenza vaccination to social care workers and staff in the voluntary managed hospice sector' 11 September 2018. www.england.nhs.uk/publication/extension-of-nhs-seasonal-influenza-vaccination-to-social-care-workers-and-staff-in-the-voluntary-managed-hospice-sector-letter-from-professor-stephen-powis/

⁷ The National Childhood Influenza Vaccination Programme can be accessed via <https://www.gov.uk/government/collections/vaccine-uptake#seasonal-flu-vaccine-uptake-figures>

The ambition for vaccine coverage in 2019 to 2020 is to reach or exceed 75% uptake for people aged 65 years and over as recommended by the WHO.

Other national uptake ambitions were for those aged six months to under 65 years and in one or more clinical risk group(s) and for all pregnant women to achieve at least 55% and maintaining higher rates where those have already been achieved; for the pre-school aged 2 and 3 years old, it was to attain at least 50% vaccine uptake.

Methods

Prior to the start of the seasonal data collection, the Influenza Surveillance Team produce a dataset for the collection and commission PRIMIS⁸ to write an accompanying coding specification for GP System Suppliers (GPSS) to extract the data from GP practices. The PRIMIS specification provides rules for the extraction of the data from GP systems using the following clinical code terminologies; Read 2; Clinical Terminology Version 3 (CTV3) or Systematized Nomenclature of Medicine Clinical Terminology (SNOMED CT⁹) (clinical codes).

Cumulative data on seasonal influenza vaccine uptake were collected for all GP practices in England between 1 September 2019 to 29 February 2020 using the ImmForm website. ImmForm provides a secure online platform for vaccine uptake data collection for several immunisation surveys, including the seasonal influenza vaccine uptake collection.

The data collections comprise of:

- a weekly sentinel survey using an automated extraction only (XML bulk upload or a web service)
- five monthly surveys on vaccinations from the 1 September 2019 up to end of October and each month to the end of February 2020¹⁰

Data were submitted at the GP practice level across England to the ImmForm website either via an automated extraction provided by GPSS (who extract data directly from GP practice systems¹¹) or via manual upload. Automated data extraction results in an almost zero burden on GP practices in providing the data. The weekly data allows almost 'real-time' monitoring of the programme at a national level from calendar week 36 (week ending 08/09/2019) to calendar week 4 (week ending 26/01/2020)¹².

⁸ www.nottingham.ac.uk/primis/about/index.aspx

⁹Section 11. Read codes and SNOMED CT codes, Seasonal influenza vaccine uptake (GP patient survey) data collection: user guide. <https://www.gov.uk/government/publications/seasonal-influenza-vaccine-uptake-gp-patient-survey-data-collection>

¹⁰All monthly vaccine uptake data are published here: <https://www.gov.uk/government/statistics/seasonal-flu-vaccine-uptake-in-gp-patients-monthly-data-2019-to-2020>

¹¹ The source of data is from GP practice systems only. It is assumed that vaccinations given in other settings by other healthcare providers (eg pharmacies, schools, special clinics) will be recorded onto GP systems in a timely manner. However, some vaccinations may be missed by the survey when recording onto a GP system, which may be more challenging or slow (eg vaccinations of travelling communities or homeless) or where patients are not registered.

¹² Weekly vaccine uptake data are published as part of the weekly national flu report. <https://www.gov.uk/government/statistics/weekly-national-flu-reports-2019-to-2020-season>

The dataset and details of the survey can be found on the GOV.UK website via <https://www.gov.uk/government/publications/seasonal-influenza-vaccine-uptake-gp-patient-survey-data-collection>.

Extrapolated numbers are included in this report to provide an estimate of the total eligible population and the total that would have been vaccinated if there was a 100% response rate.

The extrapolated number on vaccinations is derived by multiplying the mean number of vaccinations per practice by the total number of practices. This calculation assumes that the GP practice population is the same across all practices and that the uptake rate is the same as that seen nationally.

Median calculations are based on clinical commissioning group (CCG) level data. Six CCGs in the 2018 NHS hierarchy were reconfigured and merged in to two CCGs in 2019; these were manually reconfigured into the 2019 NHS CCGs in the accompanying data tables, the reconfigurations can be found in the appendix.

All comparative data is based on data to the end of February.

February data was an experimental collection introduced in 2017 to 2018. Following evaluation, the February collection was adopted for our end of season figures. During the 2018 to 2019 season only automated extractions were expected, the 2019 to 2020 season is the first to request automated extractions and manual upload for end of February data.

The Seasonal influenza vaccine uptake GP patients (Main and Child survey) have received full approval from the Data Coordination Board for the 2019 to 2020 influenza season¹³.

¹³ DCB approval for these surveys can be found here:

<https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/assurance-certificates>

ImmForm

Influenza vaccine uptake data are submitted via the ImmForm website (www.immform.dh.gov.uk). Data are submitted at GP practice level and can then be aggregated as required to the different hierarchies such as the most recent NHS Local Teams (LTs) hierarchy; Local Authorities (LAs); and PHE Centres (PHEC).

During the season, specific functions were available weekly and monthly on ImmForm to enable local management of the vaccination programme. These functions include the ability to:

- view and evaluate influenza vaccine uptake rates by cohort and age band for their area down to GP practice level
- compare GP practice level data within the CCG and previous seasons
- validate data at point of data entry with built in validations
- download 'non-responder' reports to aid local areas following up GP practices that have yet to respond to the survey

Data validation

Data validations are built into the ImmForm website to validate at point of entry. Data is then further validated by the PHE Influenza Surveillance Team on a weekly and monthly basis. PRIMIS are commissioned by PHE to write the clinical code specification for the surveys and commissioned to conduct two data validation reports using MiQuest extracts and native GPSS extracts to check alignment with the clinical code specification.

Data limitations

Denominator data for some localities and at-risk groups should be interpreted with caution due to data validation and data quality issues. A summary of these limitations is discussed below. Further information on definitions and data limitations can be found in the user guide:

<https://www.gov.uk/government/collections/vaccine-uptake#seasonal-flu-vaccine-uptake:-data-collection-guidance>

Snapshot of influenza vaccine uptake data

It is important to note that influenza vaccine uptake data presented in this report is only a snapshot of the GP registered patients vaccinated at the time of data extraction. Patients who are vaccinated, but have not had their electronic patient record updated by the time of data extraction, will be included within the denominator, but will not be included in the count of 'number vaccinated'. This data will, therefore, not include patients who have received the vaccine but have subsequently died, changed clinical status (for example, 'joining' or 'leaving' a clinical risk group), patients changing carer status and 'temporary' patients who may have received the vaccine but were not registered on the date of data extraction. The extract will also exclude the prison population, unless the individuals were registered with a GP practice at the time of data extraction and their vaccination details were recorded on their primary care electronic record. Healthcare workers and social care workers will only be counted in the number vaccinated if they were vaccinated at the GP practice or their vaccination details were entered on their GP practice's electronic record.

Transition to SNOMED CT

For the 2019 to 2020 season all GP System Suppliers (GPSS) in England have now moved over to Systematized Nomenclature of Medicine Clinical Terminology (SNOMED CT¹⁴). This is the first year that all GPSS have provided data using SNOMED CT terms and there have been significant technical problems affecting some of the granularity of the data this year. Due to the transition, mapping errors between SNOMED CT and previous clinical terminologies are being identified and corrected across GPSS but small numbers of mapping issues remain. This has affected some of the individual at-risk groups including immunosuppression, chronic liver disease, chronic neurological disease and asplenia or dysfunction of the spleen for all GPSS as well as chronic heart disease and morbid obesity for

¹⁴Section 11. Read codes and SNOMED CT codes, Seasonal influenza vaccine uptake (GP patient survey) data collection: user guide. <https://www.gov.uk/government/publications/seasonal-influenza-vaccine-uptake-gp-patient-survey-data-collection>

some GPSS. The changes are more notable in the younger age bands where it is likely that these changes reflect better extractions of rarer conditions. However, it should be noted that the large inflation seen in those with chronic liver disease is likely due to one particular SNOMED CT term related to “Steatosis of liver” which may have included patients with milder levels of fatty liver disease. Not all patients with fatty liver would be considered to fulfil the criteria of chronic liver disease, but they are very likely to have other underlying conditions that make them eligible for a flu vaccination. Despite these data limitations, the granular data is considered valid for these cohorts, but with a degree of caution; especially when comparing them to the previous year’s data.

Pregnant women data: denominator variance

Since the introduction of the pregnant women category to the routine influenza vaccination programme, there have been difficulties in determining an accurate denominator through electronic means for this group of patients because of the complexities in the way pregnancy is recorded and coded on local clinical systems in primary care.

Consequently, monitoring vaccine uptake by pregnant women is particularly challenging and the context in which this data should be interpreted needs to consider the following conditions:

- the dynamic nature of the group with women continually entering and leaving the risk group throughout the season
- the number and variable use of Read codes that can be used to identify pregnant women
- the delay in updating the individual’s electronic GP clinical record following birth or loss of pregnancy

In relation to the last point, it is noted that there may be appreciable delays in GP practices updating records to reflect coding of pregnant women and/or changes in pregnancy outcomes following birth or loss of pregnancy. Therefore, women who were no longer pregnant by 1 September 2019 may have been included in the denominator in error, due to the inaccuracy of the electronic record. It is likely therefore, that influenza vaccine uptake by pregnant women is underestimated due to denominator inflation, although the scale of the underestimation is not clear and could vary considerably between GP practices¹⁵.

¹⁵ For further details of pregnancy data limitations, please see the GP survey user guide which can be found here: <https://www.gov.uk/government/publications/seasonal-influenza-vaccine-uptake-gp-patient-survey-data-collection>

Vaccination in other healthcare settings

The number of patients vaccinated in a school, pharmacy and other healthcare setting was recorded by the survey. It is important to note that the data captured in settings outside of the GP practice does not come under an existing information standard therefore the quality of location recording may vary among GP practices and GP System Suppliers. In 2019 to 2020 pharmacies continued to be commissioned to administer influenza vaccinations to those aged 65 and over and any patient aged 18 to under 65 in a clinical risk group as well as pregnant women; carers; household contacts of immunocompromised individuals; people living in long-stay residential care homes or other long stay care facilities; social care workers and hospice workers¹⁶.

Whilst the number of vaccinations reported as given in pharmacies can be taken as correct because there is a specific clinical code associated with this, there is likely to be a lag in data being fed back into the GP record. Other healthcare settings for the pregnant women cohort seem to be relatively high and likely to be attributed to vaccinations administered by midwifery services.

As there are no clinical codes for 'vaccinated in school',¹⁷ this was based upon an assumption that those in school years' Reception to Year 6 (aged 4 rising to 11 years old) vaccinated outside of the GP practice will have been vaccinated in a school if not otherwise coded as 'vaccinated in a pharmacy'. Due to problems with data reaching the GP record, the cohort for this survey remains experimental until data flows between the Child Health Information Systems (CHIS) and GP records¹⁸ have been improved. Improved data transfer will be important to ensure accurate and timely data is fed back into the GP record to reduce the administrative burden on GP practices.

¹⁶ More information on pharmacy flu vaccination advanced service can be found on the Pharmaceutical Services Negotiating Committee website <https://psnc.org.uk/psncs-work/our-events/register-your-interest-in-our-webinar/flu-vaccination-advanced-service-webinar/>

¹⁷ A new SNOMED CT code for "seasonal influenza vaccination given in school" was introduced into the UK SNOMED CT on the 1 April 2020, please note that this is after the reporting period in this report.

¹⁸ Results for the LAIV programme in primary school aged children will be available in a separate report based on manual returns from Local NHS Teams. The National Childhood Influenza Vaccination Programme report can be accessed via <https://www.gov.uk/government/collections/vaccine-uptake#seasonal-flu-vaccine-uptake-figures>

Vaccine type

Vaccine type was introduced to the GP survey in the 2018 to 2019 season as an experimental cohort. Vaccinations are normally recorded in the GP record using Read codes however it is not always possible to determine vaccine type from the coded data. However, vaccine type can be coded using Dictionary of medicines and devices (dm+d) codes and SNOMED CT codes. All GPSS in England have now moved over to SNOMED CT clinical terminology and we expect this cohort to become better recorded in the future.

Vaccine type does not appear to be coded frequently in GP systems; it is suspected that the information is recorded in the GP record but as free text and therefore not extractable using a clinical code specification.

Health and social care workers

Vaccine uptake in health and social care workers was included for the first time in this year's 2019 to 2020 data collection. The SNOMED CT codes for this workforce was introduced on the 1 April 2018 but appears to be a poorly recorded population in the GP record. The data is also heavily biased by those who intend on getting the vaccine, telling the GP practice that they are eligible. There are a number of options for employers to implement the vaccination programme for health and social care workers,¹⁹ which makes this cohort particularly difficult to track vaccine uptake in. Any programmes where health and social care workers are vaccinated outside of the GP practice appears to rarely be recorded in the GP record. Therefore, caution should be used when interpreting the data.

¹⁹ PHE flu immunisation social care staff leaflet 2019
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/824680/PHE_flu_immunisation_social_care_staff_leaflet.pdf

Results

Data tables showing final influenza vaccine uptake for each of the recommended target groups accompany the publication of this report and are available at NHS Region, Local Team and CCG level; as well as Local Authority and PHE Centre.

www.gov.uk/government/collections/vaccine-uptake

GP practice response rate

GP response rate for the main GP survey was 99.3% (6,678/ 6,723). The GP response rate for the Child GP survey was 99.3% (6,673/ 6,720). Manual submissions were requested for the February surveys for the first time this season, therefore data represents automated and manual uploads. One GPSS provided data in August 2019 for the 2018 to 2019 season and their data have been included in the monthly and end of season figure comparisons for this 2019 to 2020 season. This data was not available in last year's annual report and will have only affected local figures in the South West Region.

Weekly versus monthly vaccine uptake comparison (provisional data)

Weekly and monthly data were overall in good agreement, with the provisional national results from the four monthly returns closely matching their weekly equivalent, confirming that the weekly sentinel collection is an excellent indicator of uptake at a national level.

The weekly sentinel survey only used automated extracts however on average over 93.4% of GP practices submitted data, this is more than last year (92.5%). The response rate ranged between 79.5% in week 45 to 98.6% in week 52 for the GP Main survey; and from 79.4% in week 45 to 97.9% in week 52 and week 4 for the GP Child survey.

GP registered population size and number vaccination

Using extrapolated GP registered populations for those aged 65 and over and those aged six months to under 65 years of age; we compared the population increase with Office for National Statistics(ONS) mid-year estimates²⁰ to evaluate whether the population increase is in line with estimated ONS population changes.

²⁰

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestimates/mid2018>

The 65 and over GP registered population has increased by 1.2% from last season. ONS mid-year estimates for 2018 showed an 1.5% increase in people aged 65 and over.

The number of GP registered patients aged 5 years to under 65 years has increased by 1% from last season. ONS mid-year estimates for 2018 showed an 0.6% increase in the people aged 5 to under 65 years-olds.

The extrapolated number of GP registered patients that were recorded as vaccinated in 2019 to 2020 season was 14,566,163 (Table 1).

Table 1. Observed and extrapolated estimate of number of patients registered and who received influenza vaccine during the 2019 to 2020 season

Total GP registered population	2019 to 2020			2018 to 2019		
	Number of patients registered	Number of patients vaccinated	% Vaccine uptake	Number of patients registered	Number of patients vaccinated	% vaccine uptake
Aged 65 and over	10,523,854	7,621,505	72.4	10,151,849	7,304,703	72.0
Aged 65 and over extrapolated	10,594,769	7,672,863		10,445,098	7,515,708	
All patients aged 6 months to under 65 years	49,241,074	6,847,160	13.9	47,823,798	6,641,630	13.9
All patients aged 6 months to under 65 years extrapolated	49,572,887	6,893,300		49,205,248	6,833,482	
Total observed (65+ and all patients under 65)	59,764,928	14,468,665	24.2	57,975,647	13,946,333	24.0
Total extrapolated (65+ and all patients under 65)	60,167,656	14,566,163		59,650,346	14,349,190	

Patients aged 65 years and over

Vaccine uptake in patients over 65 years old was 72.4% in the 2019 to 2020 season, compared to 72.0% last season (Table 1).

The end of season uptake level once again did not reach the uptake ambition of 75% based on the WHO target for this cohort.

However, the extrapolated estimate of the number of patients aged 65 years and over registered at a GP practice who would have been vaccinated by end of February 2019, was over 7.5 million (n=7,672,863) which is an increase in number vaccinated compared to 2018 to 2019. (Table 1, Figure 1 and Figure 2).

Regional and local vaccine uptake

- Vaccine uptake in 2019 to 2020 by LT for patients aged 65 years and over ranged from 66.2% (London LT) to 75.5% (South West North LT).
- 1 LT (South West North LT) achieved the WHO target uptake rate of 75% or more and was the same LT who achieved the target last year.
- The median uptake was 72.4% at CCG level compared to 72.1% last season.
- At CCG level, vaccine uptake ranged from 58.3% (Hammersmith and Fulham) to 81.8% (Rushcliffe). A total of 40/191 CCGs achieved the WHO target uptake rate of 75% or more which is more than last season where 30/195 CCGs achieved the WHO target.

'At-risk patients' aged six months to under 65 years in one or more clinical risk groups

Vaccine uptake in patients aged six months to under 65 years in one or more clinical risk group(s) was 44.9% compared to 48.0% in 2018 to 2019 (Table 2).

The extrapolated estimate of the total number of patients aged six months to under 65 years in a clinical at-risk group who would have been vaccinated was just over 3.2 million (n=3,204,299); Table 2, Figure 1, 2 and 3). This is a small decrease compared to the total vaccinated in 2018 to 2019.

The end of season uptake level did not reach the national uptake ambition of 55% or more.

Regional and local vaccine uptake

- Vaccine uptake by LT ranged from 41.8% (London LT) to 48.6% (Greater Manchester LT).
- The median uptake was 44.9% at CCG level compared to 48.0% last season
- At CCG level, vaccine uptake ranged from 28.7% (Hammersmith and Fulham) to 58.1% (Stockport). A total of 1/191 CCGs achieved the national vaccine uptake ambition of 55% or more compared to 6/195 last season.

Table 2. Observed and extrapolated estimate of number of registered patients aged 6 months to under 65 years old and in one or more clinical risk group(s) (excluding pregnant women without other risk factors and carers), who received an influenza vaccine during the 2019 to 2020 season.

Target groups for vaccination*	2019 to 2020			2018 to 2019		
	Number of patients registered	Number of patients vaccinated	% vaccine uptake	Number of patients registered	Number of patients vaccinated	% vaccine uptake
Aged 6 months to under 65 years in a clinical risk group	7,086,331	3,182,752	44.9	6,852,719	3,290,755	48.0
Aged 6 months to under 65 years in a clinical risk group extrapolated	7,134,083	3,204,199		7,050,668	3,385,813	

Figure 1. Influenza vaccine uptake for those aged 65 and over and 65 at-risk from 2004 to 2019 to 2020 in England (data prior to 2018 to 2019 is data up to the end of January).

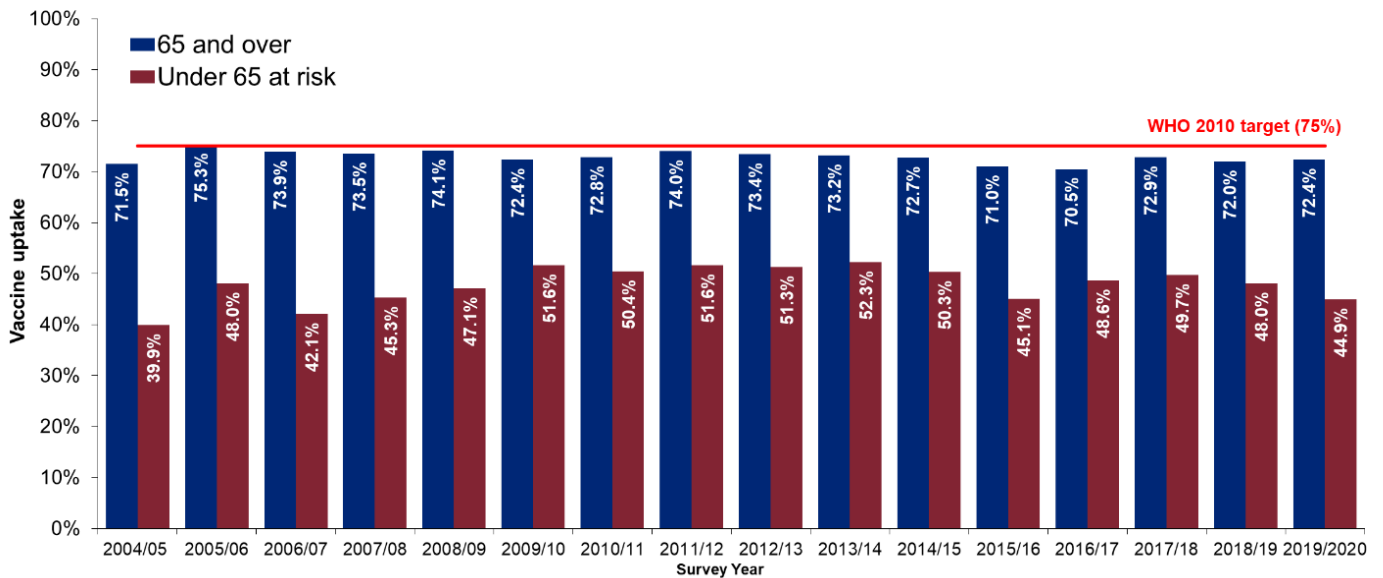
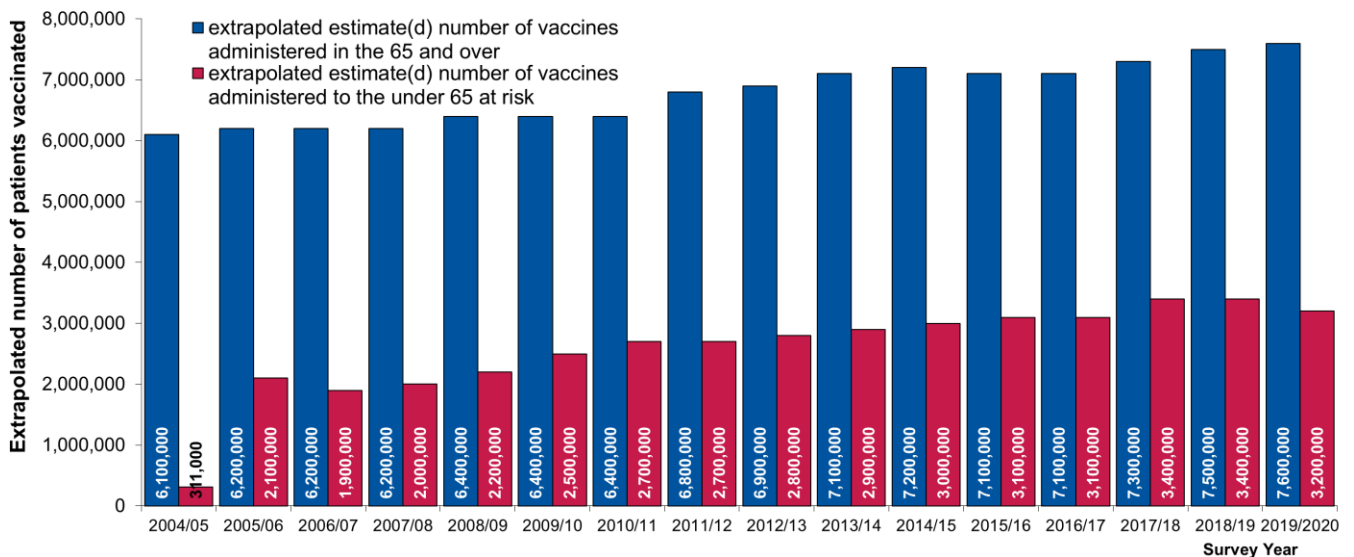


Figure 2. Extrapolated estimate(d) number of vaccines administered in the 65 and over, and under 65 at-risk from 2004 to 2005 to 2019 to 2020 in England (data prior to 2018 to 2019 is data up to the end of January)



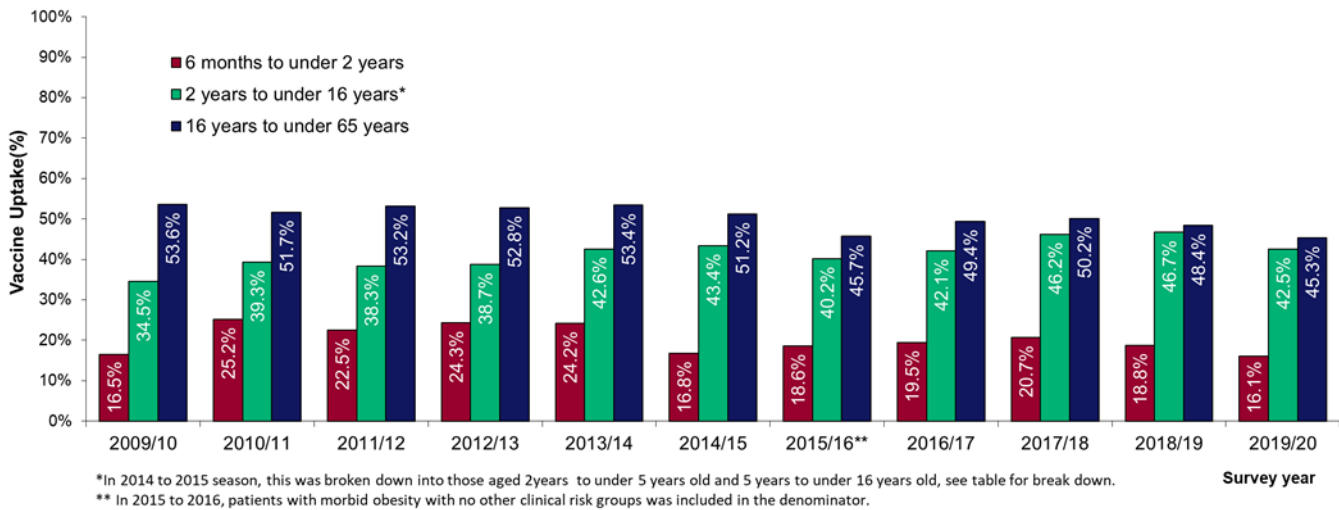
'At-risk patients' aged six months to under 65 years in one or more clinical risk groups by age band

Vaccine uptake in those aged six months to under two years (16.1% down from 18.8% in 2018 to 2019) remains the lowest in uptake by age band and those aged two years to under 5 years (49% down from 52.8% in 2018 to 2019) remains the highest (Table 3 and Figure 3). The data for those aged under five years old and in a clinical risk group should be treated with caution due to SNOMED CT transition caveats (outlined on page 10).

Table 3. Observed and extrapolated number of registered patients aged six months to under 65 years at-risk by age band who received an influenza vaccine

Target groups for vaccination in one or more clinical risk group(s)	2019 to 2020			2018 to 2019		
	Number of patients registered	Number of patients vaccinated	% vaccine uptake	Number of patients registered	Number of patients vaccinated	% vaccine uptake
Total observed 6 months under 65 years in a clinical risk group	7,086,331	3,182,752	44.9	6,852,719	3,290,755	48.0
Total extrapolated 6 months under 65 years in a clinical risk group	7,134,083	3,204,199		7,050,668	3,385,813	
6 months to under 2 years in a clinical risk group	18,523	2,978	16.1	14,103	2,648	18.8
6 months to under 2 years in a clinical risk group extrapolated	18,648	2,998		14,510	2,724	
2 years to under 5 years in a clinical risk group	72,709	35,649	49.0	62,664	33,058	52.8
2 years to under 5 years in a clinical risk group extrapolated	73,199	35,889		64,474	34,013	
5 years to under 16 years in a clinical risk group	612,982	255,649	41.7	553,586	246,215	44.5
5 years to under 16 years in a clinical risk group extrapolated	617,113	257,372		569,577	253,327	
16 to under 65 years in a clinical risk group	6,382,117	2,888,476	45.3	6,222,366	3,008,834	48.4
16 to under 65 years in a clinical risk group extrapolated	6,425,123	2,907,940		6,402,107	3,095,748	

Figure 3. Vaccine uptake in the under 65 at-risk by age group comparing recent survey years.



Individual risk groups

Vaccine uptake in the individual risk groups has decreased for all clinical risk groups compared to last season for all patients under 65 years old. The decreases range from -1% in patients with Chronic Respiratory Disease to -9.4% decrease in patients with Immunosuppression. Patients with diabetes remain the clinical risk group with the highest uptake while patients with morbid obesity remain as the clinical risk group with the lowest uptake, as highlighted in Table 4 and Figure 4. The largest decrease in uptake by age band was in those aged 16 to under 65 years old.

Table 4. Vaccine uptake by individual clinical risk groups for GP registered patients aged six months to under 65 years old who received influenza vaccine during the last two seasons. The colours compare vaccine uptake by age band to last season: red= decrease; yellow= no change; green= increase. Highest (green) and lowest (red) uptake highlighted for the total at risk patients aged 6 months to under 65 years.

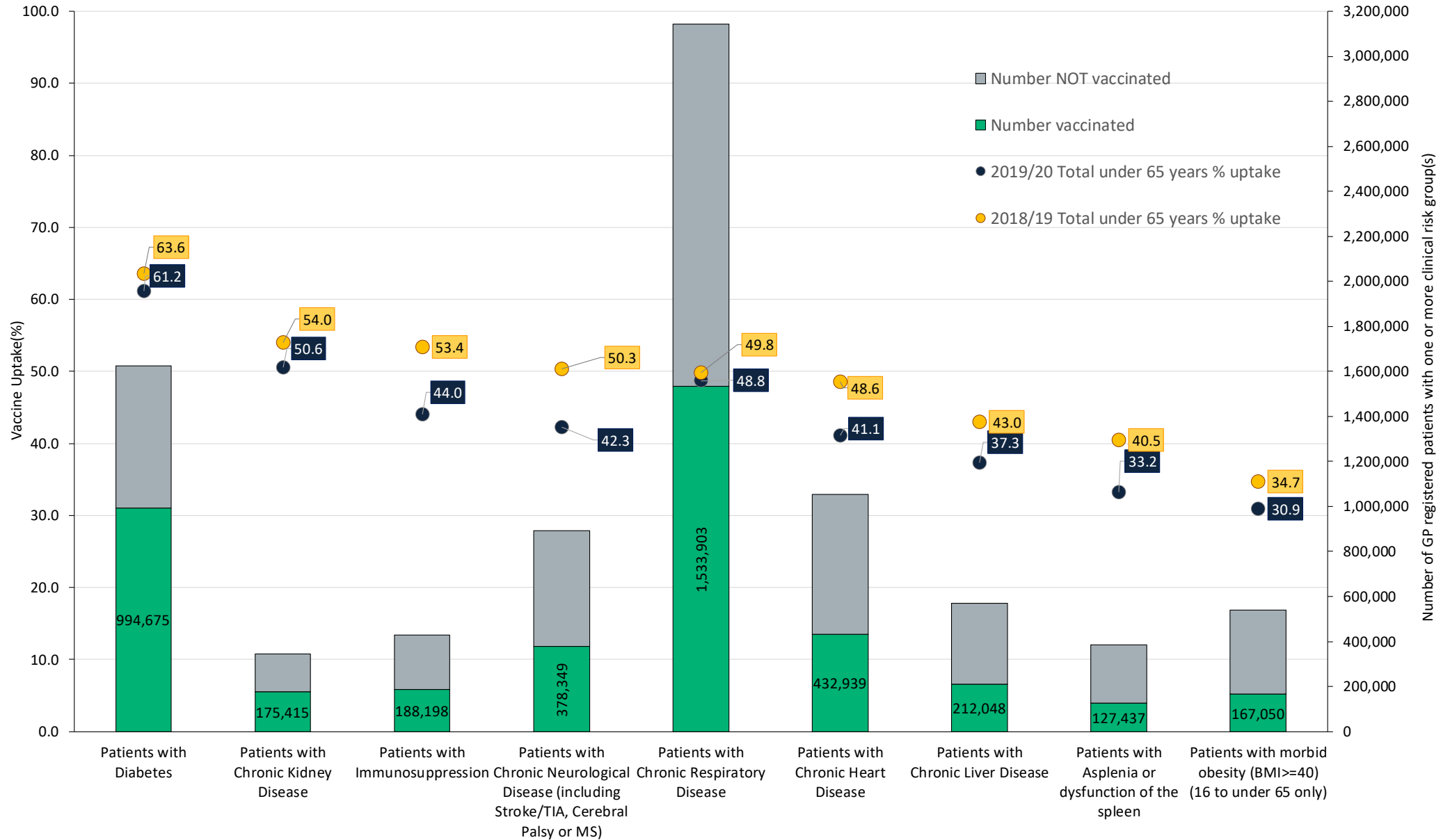
Age: Risk group: <small>* Data should be treated with caution due to knock-on effects from the SNOMED CT transition.</small>	2019 to 2020					2018 to 2019				
	6months to under 2 years	2years to under 5 years	5 years to under 16 years	16 years to under 65	Total under 65 years	6months to under 2 years	2years to under 5 years	5 years to under 16 years	16 years to under 65	Total under 65 years
Patients with Diabetes	17.4	57.7	51.9	61.3	61.2	27.3	58.3	56.2	63.7	63.6
Patients with Chronic Kidney Disease	15.1	43.9	36.7	50.9	50.6	26.9	46.7	37.9	54.3	54.0
Patients with Immunosuppression*	13.4	44.9	37.0	44.4	44.0	18.4	52.7	44.3	53.7	53.4
Patients with Chronic Neurological Disease (including Stroke/TIA, Cerebral Palsy or MS)*	12.4	43.8	34.7	43.1	42.3	19.3	47.8	39.7	51.0	50.3
Patients with Chronic Respiratory Disease	23.5	54.9	45.5	49.3	48.8	23.0	57.5	47.1	50.1	49.8
Patients with Chronic Heart Disease*	17.0	46.2	36.9	41.7	41.1	18.2	48.1	38.4	49.6	48.6
Patients with Chronic Liver Disease*	21.3	50.5	35.8	37.3	37.3	28.2	50.7	42.4	43.0	43.0
Patients with Asplenia or dysfunction of the spleen*	21.0	47.6	32.1	33.2	33.2	26.0	53.2	38.5	40.6	40.5
Patients with morbid obesity (BMI≥40)*	n/a			30.9	30.9	n/a			34.7	34.7

The prevalence of individual at risk groups can vary from year to year depending on current health policy and the quality of the data capture, see 'Transition to SNOMED CT' (page 10) for further context. See Table 5 for the changes to the prevalence of each individual at risk group in the at-risk population aged 6 months to under 65 years old.

Table 5. Prevalence of each risk group in the at-risk population compared to last season:

2019 to 2020 Feb	Prevalence in at risk pop. 2019 to 2020	Prevalence in at risk pop. 2018 to 2019	Difference
Patients with Diabetes	22.8	22.3	0.5
Patients with Chronic Kidney Disease	4.9	4.5	0.3
Patients with Immunosuppression	6.0	6.7	-0.7
Patients with Chronic Neurological Disease (including Stroke/TIA, Cerebral Palsy or MS)	12.5	9.6	2.9
Patients with Chronic Respiratory Disease	44.1	44.3	-0.2
Patients with Chronic Heart Disease	14.8	16.4	-1.7
Patients with Chronic Liver Disease	8.0	3.1	4.8
Patients with Asplenia or dysfunction of the spleen	5.4	3.5	1.9

Figure 4. Extrapolated number of registered patients who received an influenza vaccine by individual clinical risk group for all those aged six months to under 65 for 2019 to 2020 (data up to end of February 2020).



Pregnant women²¹

Vaccine uptake in all pregnant women (healthy and in at-risk groups combined) was 43.7% in the 2019 to 2020 season, decreasing from 45.2% in 2018 to 2019 (Table 6).

The end of season uptake level did not reach the national uptake ambition of 55% or more.

Table 6. Observed and extrapolated estimate number of pregnant women registered and who received an influenza vaccine during the 2019 to 2020 season.

Target groups for vaccination	2019 to 2020			2018 to 2019		
	Number of patients registered	Number of patients vaccinated	% vaccine uptake	Number of patients registered	Number of patients vaccinated	% vaccine uptake
All pregnant women (includes both healthy and at-risk women)	645,285	282,092	43.7	651,581	294,279	45.2
All pregnant women extrapolated	649,633	283,993		670,403	302,780	
Pregnant women and in a clinical risk group	70,367	40,068	56.9	59,671	35,909	60.2
Pregnant women and in a clinical risk group extrapolated	70,841	40,338		61,395	36,946	
Pregnant women not in a clinical risk group	574,918	242,024	42.1	591,910	258,370	43.7
Pregnant women not in a clinical risk group extrapolated	578,792	243,655		609,008	265,833	

Regional and local vaccine uptake

- Vaccine uptake by LT for all pregnant women ranged from 39.2% (London LT) to 50.2% (Greater Manchester).
- The median uptake for all pregnant women was 44.7% at CCG level compared to 45.9% last season
- At CCG level, vaccine uptake ranged from 28.6% (Isle of Wight) to 69.6% (Stockport).
- Vaccine uptake in pregnant women in one or more clinical risk group(s) by LT ranged from 52.4% (London LT) to 63.3% (Greater Manchester LT).

²¹ Data on the uptake of influenza vaccine by pregnant women need to be interpreted with caution, see Data Limitations: pregnant women section of the report.

- The median uptake for pregnant women in one or more clinical risk group(s) was 57.8% at CCG level compared to 60.2% last season. Vaccine uptake ranged from 39.3% (Hammersmith and Fulham) to 80.8% (Stockport).
- Vaccine uptake in pregnant women not in a clinical risk group LT ranged from 38% (London LT) to 48.5% (Greater Manchester LT).
- The median uptake for pregnant women not in a clinical risk group(s) was 43.0% at CCG level compared to 44.6% last season. Vaccine uptake ranged from 26.2% (Isle of Wight) to 68% (Stockport).
- A total of 4/191 CCGs achieved the national vaccine uptake ambition of 55% or more in all pregnant women compared to 12/195 last season.

Pre-school aged children

All GP registered patients aged two and three years old

Vaccine uptake in patients aged two and three years old was 43.8% in 2019 to 2020, a slight decrease from last season 44.9%²² (Table 7) and the national uptake ambition of 50% or more was not achieved. The data for those aged under 5 years old and in a clinical risk group should be treated with caution due to the caveats of the SNOMED CT transition (see page 10 for further details).

Table 7. Observed and extrapolated number of GP registered patients aged two and three years old who received an influenza vaccine during the 2019 to 2020 season.

Target groups for vaccination	2019 to 2020			2018 to 2019		
	Number of patients registered	Number of patients vaccinated	% vaccine uptake	Number of patients registered	Number of patients vaccinated	% vaccine uptake
All 2 and 3-year olds (includes both 'healthy' and at risk)	1,346,654	590,041	43.8	1,322,663	593,706	44.9
All 2 and 3-year olds (includes both 'healthy' and at risk) extrapolated	1,356,147	594,200		1,375,211	617,293	
All 2 and 3 and in a clinical risk group	48,250	25,886	53.6	41,583	23,237	55.9
All 2 and 3 and in a clinical risk group extrapolated	1,307,557	568,132		43,235	24,160	
All 2 and 3 and not in a clinical risk group	1,298,404	564,155	43.4	1,281,080	570,469	44.5
All 2 and 3 and not in a clinical risk group extrapolated	48,590	26,068		1,331,976	593,133	

²² Vaccine uptake for individual year groups can be found in the accompanying tables.

Regional and local vaccine uptake

- For patients aged two and three years old, uptake in 2019 to 2020 ranged from 32.4% (London LT) to 54% (South West North LT)
- The median uptake was 44.9% at CCG level compared to 45.7% last season
- At CCG level, vaccine uptake ranged from 17.9% (Yorkshire and Humber) to 61.2% (Greater Manchester)
- For patients aged two and three years old and in one or more clinical risk group(s) by LT vaccine uptake ranged from 43.2% (London LT) to 53.7% (South West North LT)
- The median uptake was 54.5% at CCG level compared to 56.3% last season
- At CCG level, vaccine uptake ranged from 29.2% (Cheshire and Merseyside) to 75.5% (Yorkshire and Humber)
- For all GP registered patients aged two and three years old and not in an at-risk group by LT vaccine uptake ranged from 43.2% (London LT) to 62.6% (South West North LT)
- The median uptake was 44.5% at CCG level compared to 45.3% last season.
- At CCG level, vaccine uptake ranged from 17.3% (Yorkshire and Humber) to 61% (Greater Manchester)
- A total of 61/191 CCGs achieved the national vaccine uptake ambition of 50% or more in preschool age children.

'All patients' aged six months to under 65 years old

Overall vaccine uptake remains the same as last season at 13.9%. However, there were decreases in uptake in those aged 2 to under 5 years old; and those aged 16 to under 65 years old (see Table 8). The 6 months to under 2 years age band remained the same for vaccine uptake. The increase in the 5 years to under 16 years age band reflects the continued extension of the childhood influenza vaccination programme. All those aged 10 rising to 11 years old became eligible for vaccination in the 2019 to 2020 season.

The extrapolated number of all registered patients aged six months to under 65 years (including those in a clinical at-risk group) who received an influenza vaccine by the end of February 2019 was over 6.8 million (n=6,893,300).

Table 8. Observed and extrapolated figures for 'All patients' aged six months to under 65 years old who received influenza vaccine by age band during the 2019 to 2020 season.

All GP registered Patient Data (includes those in a risk group and those not in a clinical risk group)	Number of patients registered	Number of patients vaccinated	2019 to 2020 % vaccine uptake	2018 to 2019 % vaccine uptake
Total observed 6 months under 65 years	49,241,074	6,847,160	13.9	13.9
Total extrapolated 6 months under 65 years	49,572,887	6,893,300		
6 months to under 2 years	932,265	5,127	0.5	0.5
6 months to under 2 years extrapolated	938,547	5,162		
2 years to under 5 years	2,013,990	733,861	36.4	37.9
2 years to under 5 years extrapolated	2,027,561	738,806		
5 years to under 16 years	7,719,210	1,876,012	24.3	23.3
5 years to under 16 years extrapolated	7,771,226	1,888,654		
16 years to under 65 years	38,575,609	4,232,160	11.0	11.1
16 years to under 65 years extrapolated	38,835,552	4,260,679		

Refused/declined²³

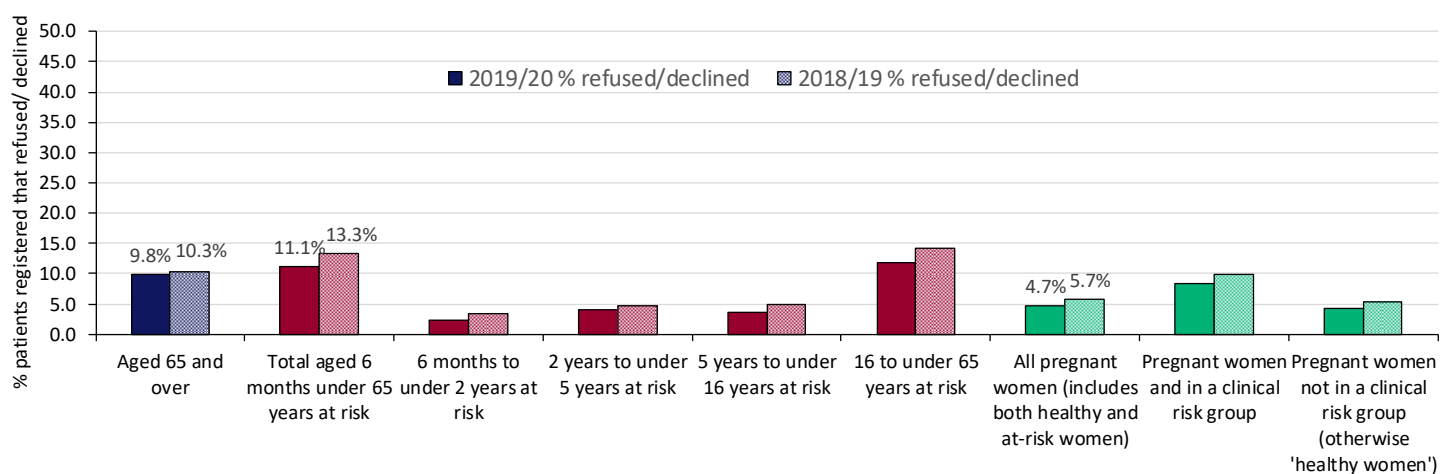
Refused/ declined vaccinations have decreased across all cohorts with those aged 16 to under 65 and in one or more clinical risk group(s) having the largest decrease (11.9% compared to 14.1% in 2018 to 2019), see Table 9 and Figure 5.

Table 9. Number of registered patients who refused or declined the influenza vaccine.

Target groups for vaccination (extrapolated)	Number of vaccinations refused/declined	2019 to 2020 % refused/declined	2018 to 2019 % refused/declined
Aged 65 and over	1,027,573	9.8	10.3
Total aged 6 months under 65 years at risk	785,940	11.1	13.3
6 months to under 2 years at risk	431	2.3	3.3
2 years to under 5 years at risk	2,900	4.0	4.8
5 years to under 16 years at risk	22,859	3.7	5.0
16 to under 65 years at risk	759,750	11.9	14.1
All pregnant women (includes both healthy and at-risk women)	30,357	4.7	5.7
Pregnant women and in a clinical risk group	5,820	8.3	9.8
Pregnant women not in a clinical risk group (otherwise 'healthy women')	24,537	4.3	5.3

These figures should not be summed for total number refused/declined as it will double count pregnant women who are in a clinical risk group.

Figure 5. Percentage of refused/ declined vaccination by target group for 2019 to 2020 compared to 2018 to 2019.



²³ Caution should be exercised when looking at these figures as different GP System suppliers use different ways of recording this and some may be collected via non-coded mechanisms.

Other healthcare settings²⁴

Most vaccinations are still delivered within the GP practices though there continues to be a gradual increase in vaccinations in pharmacies and other healthcare settings this season in the 6 months to 65 years at-risk cohort (Table 10 and Figure 6).

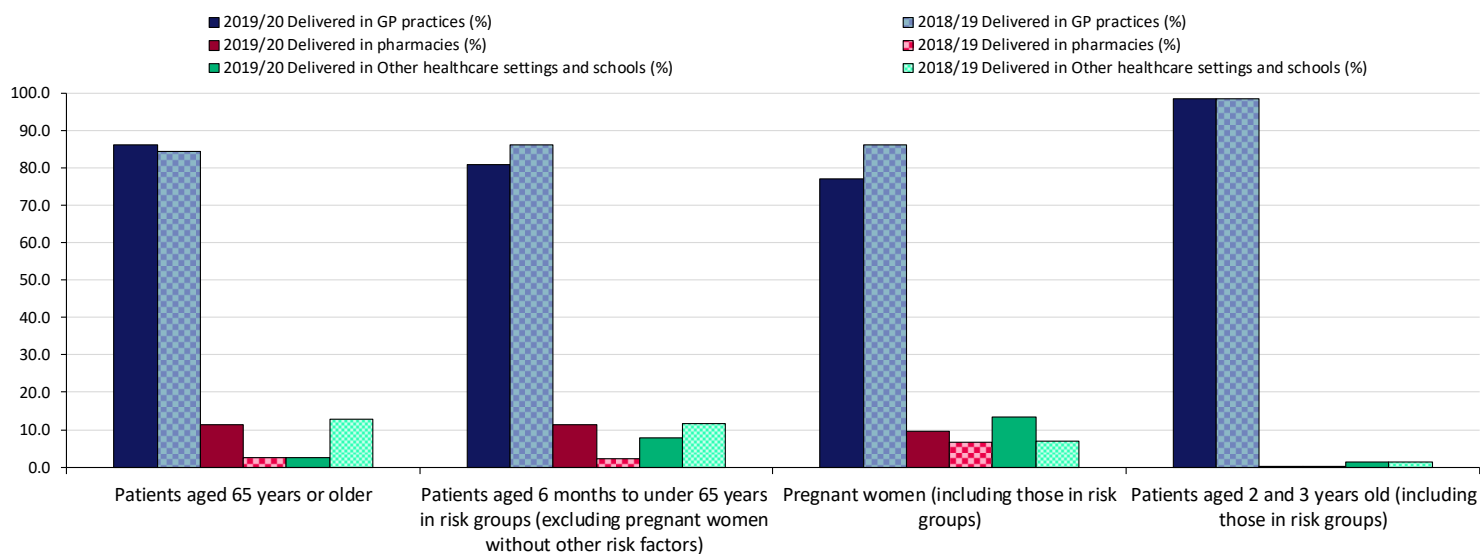
At-risk patients aged 6 months to under 65 years had the highest percentage of vaccinations given outside of the GP practice. The percentage of vaccination given outside of GP practices remained relatively stable, with the exception of pregnant women whose vaccination outside of the GP decreased by 6.1%.

Table 10. Percentage vaccine uptake by GP practices, pharmacies and other healthcare settings (OHS)

Patient Group	2019 to 2020	GP practices	Pharmacies	Other healthcare settings and schools	2018 to 2019	GP practices	Pharmacies	Other healthcare settings and schools
65 and over	72.4	89.9	8.3	1.8	71.3	88.0	9.7	2.3
Six months to under 65 years at risk	44.9	80.8	11.4	7.8	46.9	84.8	9.1	6.1
All Pregnant women	43.7	90.0	4.2	5.8	45.0	83.1	6.6	10.3
All 2 and 3 year olds	43.8	98.4	0.2	1.4	44.2	98.7	0.1	1.2

²⁴ It is important to note that recording of vaccinations given in another healthcare setting outside of the GP practice does not come under an existing information standard, therefore location recording can be varied amongst GP practices and GP System suppliers (see data limitations section of this report).

Figure 6. Percentage of vaccinations given by location for those aged 65 and over; patients aged six months to under 65 and in one or more clinical risk group(s); and pregnant women.



Carers

Vaccine uptake for carers aged 16 to under 65 years old and not in a clinical risk group was 36.6% compared to 39.0% in 2018 to 2019 season (Table 11). The median vaccine uptake at CCG level was 36.9% compared to 39.4% last season.

Table 11. Observed and extrapolated figures for ‘Carers’ who received an influenza vaccine during the 2019 to 2020 season

Target groups for vaccination	Number of patients registered	Number of patients vaccinated	2019 to 2020 % vaccine uptake	2018 to 2019 % vaccine uptake
16 years to under 65 years not at-risk who fulfil the 'Carer' definition	588,396	215,583	36.6	39.0
16 years to under 65 years not at-risk who fulfil the 'Carer' definition extrapolated	594,940	217,981		

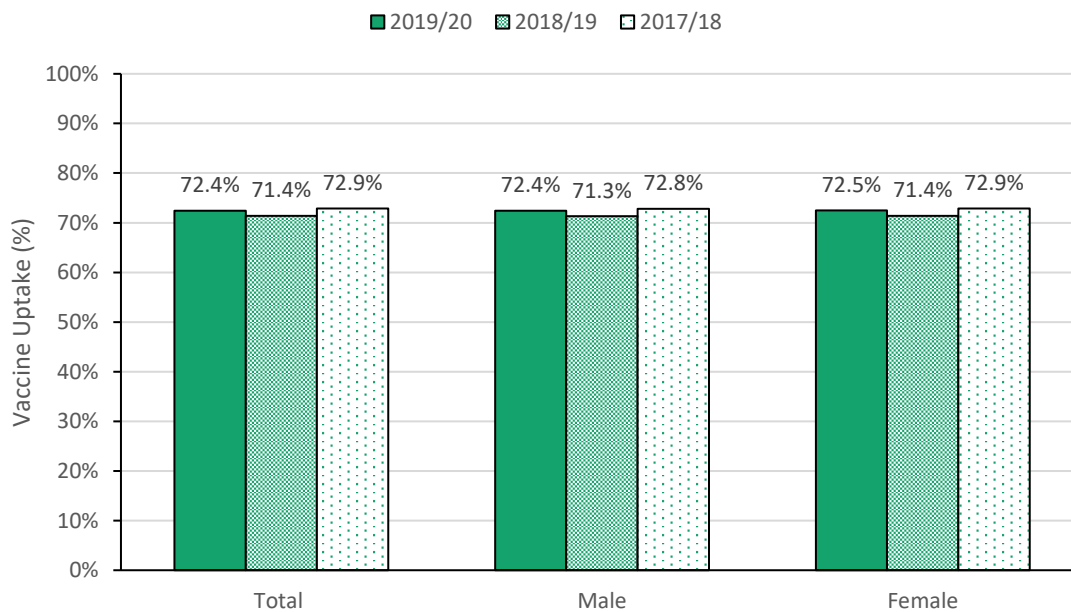
Gender

The data presented here compares the last three seasons where all data is until the end of February. Those with gender not specified or unknown were removed due to small numbers.

65 and over by gender

For those aged 65 and over, there was little or no difference in uptake between genders for the last three seasons (Figure 7.)

Figure 7. Influenza vaccine uptake in those aged 65 and over by gender for England from 2016 to 2017 season to 2019 to 2020 season.

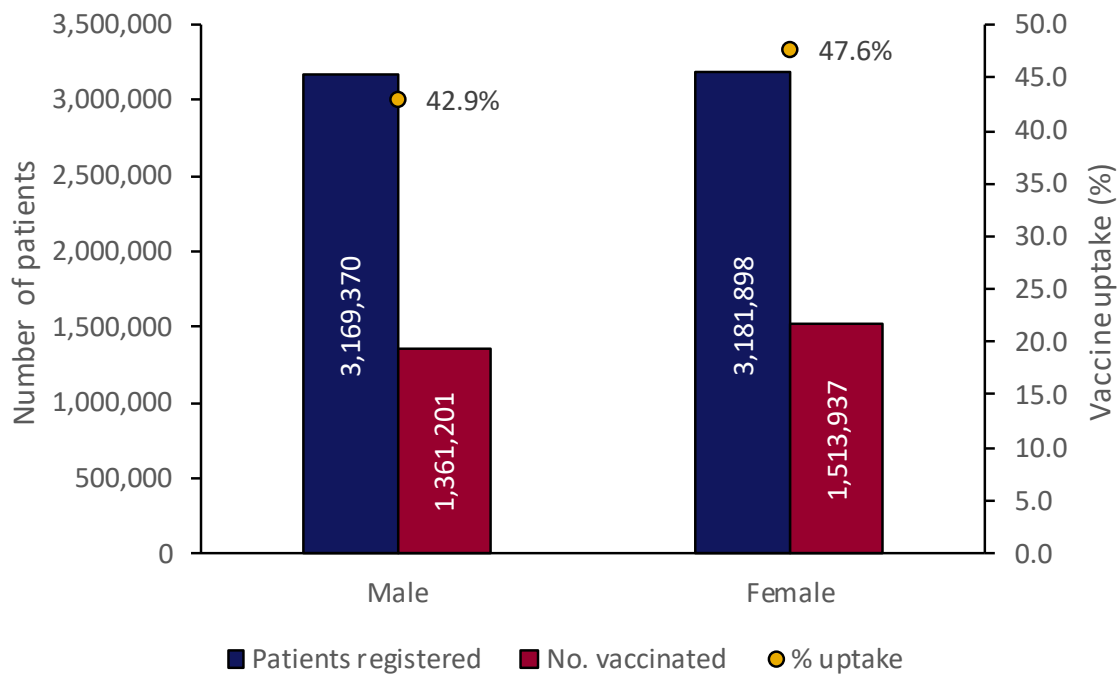


At-risk patients aged 16 to under 65 by gender

This year data was collected for at-risk patients aged 16 years to under 65 years rather than for all patients²⁵. The at-risk cohort includes pregnant women with other risk factors but excludes otherwise 'healthy' pregnant women and carers. Vaccine uptake in at-risk patients aged 16 years to under 65 years was 4.6% higher in females than males in England (see Figure 8). At LT level, the gender gap between females and males ranged from 1% to 6.5%.

LA level data was compared to the 2019 Indices of Multiple Deprivation deciles (IMD) where there was some variation across IMDs but all deciles had at least a 3% difference in uptake between males and females.

Figure 8. Influenza vaccine uptake in at risk patients aged 16 to under 65 years old by gender for England in 2019 to 2020 season.



²⁵ Last year, we reported gender for all patients aged 16 years to under 65 years old for the previous three seasons. Vaccine uptake on average was more than 2.6% higher in females than males after taking into account differences caused by pregnant women vaccinations.

<https://www.gov.uk/government/statistics/seasonal-flu-vaccine-uptake-in-gp-patients-winter-2018-to-2019>

Vaccine Type

Vaccine type was introduced to the GP survey in 2018 to 2019 as an experimental cohort. Data was available again this year for 97.3% of those vaccinated aged 65 and over compared to 69.2% last year; and 98.0% of those vaccinated aged 16 to under 65 and in a clinical risk group compared to 80.3% last year. Despite the high response, only around 19.5% of vaccinations were coded with a defined vaccine type compared with 28% last year. Therefore, caution should be used when interpreting the data.

Where vaccine type was provided; those aged 65 and over mostly received the recommended adjuvanted vaccine (aTIV); 14.3% of those vaccinated. This is less than last year (23.1%). Those aged 16 to under 65, in a clinical risk group received the recommended quadrivalent non-adjuvanted vaccine (QIV), 19.1% of those vaccinated, this is less than last year (27.5%). Please note that caution should be used when comparing to last year when the cell based vaccine (CBV) was not available. See Table 12 and Figure 9.

Figure 9. Percentage of vaccine type codes in the GP record by target cohort.

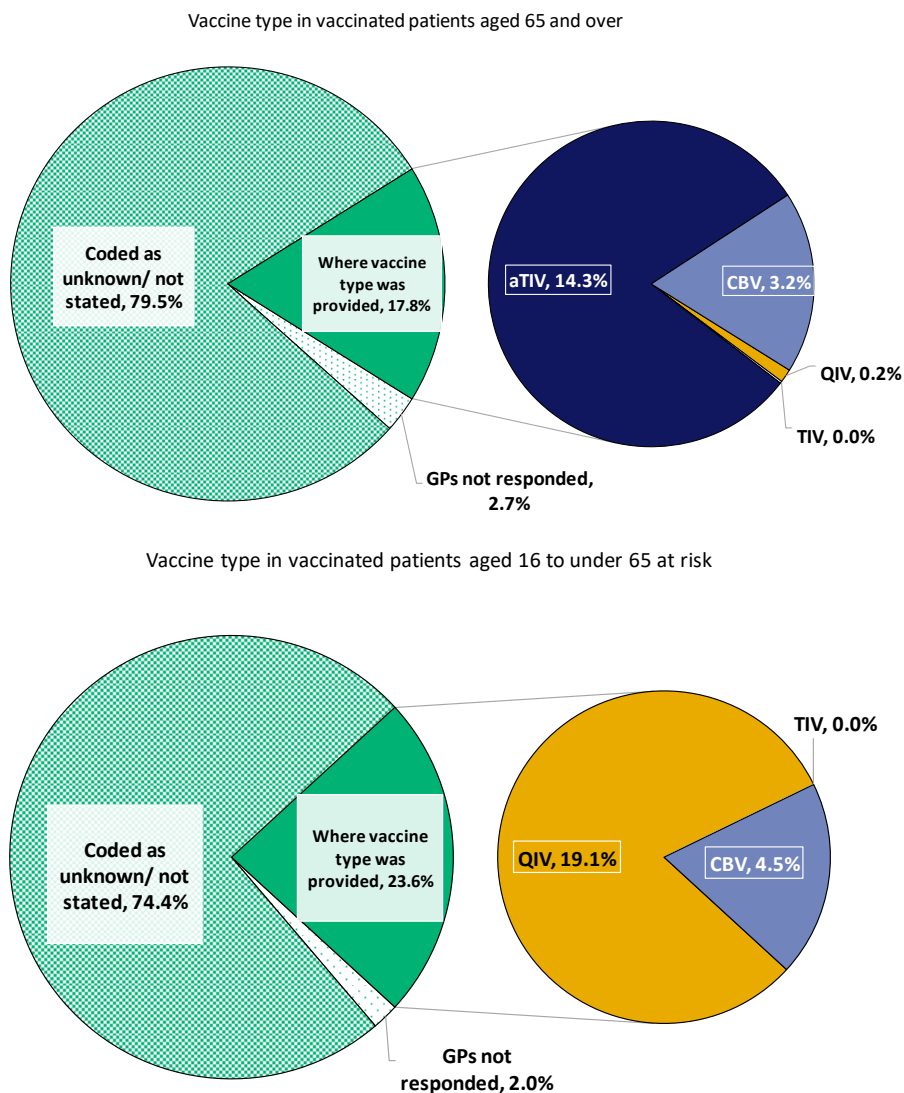


Table 12. Extrapolated number of vaccinations given by vaccine type in patients aged 65 and over; and those aged 16 to under 65 and in one or more clinical risk group(s) during the 2019 to 2020 season.

2019 to 2020	Patient Group:		Patients aged 65 years or older	Patients aged 16 to under 65 years at risk
	Vaccine uptake (%)		72.4	45.3
	Extrapolated number of people vaccinated		7.7 million	2.9 million
Vaccine type	Adjuvanted vaccine	% of those vaccinated	14.3	n/a
		Extrapolated number of people vaccinated	1.1 million	
	QIV non-adjuvanted vaccine	% of those vaccinated	0.2	19.1
		Extrapolated number of people vaccinated	19,000	564,000
	Cell based vaccine	% of those vaccinated	3.2	4.5
		Extrapolated number of people vaccinated	251,000	132,000
	TIV non-adjuvanted vaccine	% of those vaccinated	0.0	0.0
		Extrapolated number of people vaccinated	3,000	40
	GP not responded or unknown/ not stated or not responded	% of those vaccinated	82.2	76.4
		Extrapolated number of people vaccinated	6.3 million	2.2 million

The number of LAIV vaccinations recorded for patients aged 2 and 3 years old have been collected as an experimental cohort for the last three years. The vaccinations for this cohort is predominantly via the GP practice and recording of the number of LAIV vaccinations ranges from 91.3% in 2017 to 2018 season, to 96.2% this year.

Table 13. Influenza vaccine uptake in those aged 2 and 3 years old for England from 2017 to 2018 season to 2019 to 2020 season; and the proportion of LAIV vaccinations recorded for this cohort.

All 2 and 3 years old	2019/20	2018/19	2017/18
Vaccine uptake (%)	43.8	44.9	44.0
% of those vaccinated with LAIV	96.2	95.4	91.3
Extrapolated number of people vaccinated with LAIV	572,000	589,000	567,000

Health and social care workers

The collection of vaccinations in health and social care workers was introduced to the GP survey this season as an experimental cohort. Data was available for 35.0% (2337/6678) of all GP practices in England. The response rate ranged from 16.9% in London to 56.4% in the South West. Therefore, caution should be used when interpreting the data.

Only 9,738 health and social care workers were registered on their GP record and this is likely to account for around 0.7% of the adult social care workforce (1.49million²⁶). Of those registered at their GP practice, 64.0% were vaccinated (6,230). At regional level, vaccine uptake ranged from 18.9% (London) to 74.9% (East of England).

²⁶ The number of people working in adult social care including those in non-full time equivalents who would also be eligible for vaccination. The state of the adult social care sector and workforce in England, Skills for Care, September 2019. <https://www.skillsforcare.org.uk/adult-social-care-workforce-data/Workforce-intelligence/publications/national-information/The-state-of-the-adult-social-care-sector-and-workforce-in-England.aspx>

Discussion

The automated response rate for GP practices for the 2019 to 2020 end of season surveys remained high at over 99%. The increase in GP practice mergers and closures resulting in an increase in GP registered populations per GP practice have meant that automated extraction of data has become more important.

Automated responses mean that there is little or no burden on the NHS to provide data already collected in the GP records. However, more needs to be done to ensure the quality of the data inputted into the GP record as well as what is extracted by the GP System Suppliers.

The weekly sentinel surveillance has once again proved to be beneficial in providing rapid data at a national level to monitor the progress of the programme especially during the delays to the LAIV programme.

In addition, an uptake summary tool continued to be provided on the ImmForm website that allowed users to view and evaluate their uptake rates by target cohorts, comparing them against the previous season; CCG average and overall national uptake.

This year saw all GPSS providing data using SNOMED CT codes and this has impacted on the granularity of some of the at-risk data, therefore caution should be exercised when comparing the individual at-risk groups to previous years' data. Further investigation and monitoring of the transition from previous clinical terminologies will continue to ensure robust data reporting.

The uptake rate in those aged 65 years and over has remained relatively constant in the past few seasons (approximately 70%). Uptake for this season was slightly higher (72.4%) compared to 2018 to 2019 (72.0%) and the total number vaccinated was larger.

The national ambition for vaccination in those aged 65 years and over continues to be aligned with the WHO target of 75%. 40/191 CCGs achieved the WHO target uptake rate of 75% or more in those aged 65 and over which was more than last season (30/195 CCGs).

Vaccine uptake in patients aged six months to under 65 years in one or more clinical risk group(s) was 44.9% compared to 48.0% in 2018 to 2019. Also for this age group, the percentage of refused/declined vaccination have decreased slightly from 13.3% to 11.1%.

Vaccine uptake in pregnant women was 43.7% which was a decrease compared to 45.2% in 2018 to 2019. Vaccine uptake in this cohort should be treated with caution²⁷ and as more vaccines are delivered as part of routine midwifery services, it is key to ensure that the patient's GP record is updated to optimise data quality.

It is important to maintain and improve uptake in pregnant women as the vaccine protects babies who are too young to have the vaccine themselves.

Vaccine uptake in the individual risk groups has decreased for nearly all clinical risk groups compared to last season for all patients aged six months to under 65 years old.

Patients with diabetes remain the clinical risk group with the highest uptake while patients with morbid obesity remain the clinical risk group with the lowest uptake.

The childhood LAIV programme, which was first implemented in 2013 to 2014, continued its roll-out in 2019 to 2020 extending the programme to all those aged 10 years old rising to 11 years old. Vaccinations for school years' Reception to Year 6 were delivered through schools and uptake in these cohorts have all increased on last season's figures; a separate report has been published on the GOV.UK website. Uptake in those aged 2 and 3 years old decreased this season from 44.9% in 2018 to 2019 to 43.8%.

This year, data on vaccine uptake by gender for those aged 16 to under 65 and in a clinical risk group was included. For those aged 65 and over, there was little or no difference in uptake between genders. For patients aged 16 years to under 65 years old and in a clinical risk group, vaccine uptake was more than 4% higher in females than males, this is higher than seen in the all patient data last year. Further investigation is needed to understand the difference in uptake as there are some signs of regional differences.

Vaccine type was introduced in 2017/18 as an experimental cohort. Once again it does not appear to be coded frequently in GP systems possibly due to coding issues. It is suspected that the information is recorded in the GP record but as free text and therefore not extractable using a clinical code specification.

However, where vaccine type was available, it was encouraging to see that most of the vaccinations were the recommended vaccines for the 2019 to 2020 season for each cohort.

²⁷ See section on data limitations

Vaccine uptake data on health and social care workers were included this year as an experimental cohort. Despite SNOMED CT codes for health and social care occupations being added in 2018, this cohort is poorly recorded in the GP record.

Data flows from health and social care employers and pharmacies need to improve to ensure that data is recorded onto the GP record.

None of the adult target groups increased vaccine uptake this season and further work is needed to identify underpinning reasons so that uptake can be improved in the future in line with national uptake ambitions.

Uptake for the pre-school children's influenza vaccine programme decreased for the first time since 2015/16 compared to the previous season likely due to the delays in vaccine supply this season.

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- the participation of the PRIMIS team based in Nottingham, who was commissioned to provide the Read and SNOMED CT Codes specification for this collection
- the ImmForm helpdesk and development team that provided and supported the online survey

Appendix

CCG Changes for the 2019 to 2020 NHS Hierarchy				
2018 to 2019		2019 to 2020		
Old Org Code	CCG Org Name	New Org Code	CCG Org Name	LT Org Name
03X	NHS EREWASH CCG	15M	NHS DERBY AND DERBYSHIRE CCG	NHS ENGLAND MIDLANDS (NORTH MIDLANDS)
03Y	NHS HARDWICK CCG	15M	NHS DERBY AND DERBYSHIRE CCG	NHS ENGLAND MIDLANDS (NORTH MIDLANDS)
04J	NHS NORTH DERBYSHIRE CCG	15M	NHS DERBY AND DERBYSHIRE CCG	NHS ENGLAND MIDLANDS (NORTH MIDLANDS)
04R	NHS SOUTHERN DERBYSHIRE CCG	15M	NHS DERBY AND DERBYSHIRE CCG	NHS ENGLAND MIDLANDS (NORTH MIDLANDS)
15M	NHS DERBY AND DERBYSHIRE CCG			
99P	NHS NORTHERN, EASTERN AND WESTERN DEVON CCG	15N	NHS DEVON CCG	NHS ENGLAND SOUTH WEST (SOUTH WEST SOUTH)
99Q	NHS SOUTH DEVON AND TORBAY CCG	15N	NHS DEVON CCG	NHS ENGLAND SOUTH WEST (SOUTH WEST SOUTH)
15N	NHS DEVON CCG			