

Subject:	Seasonal Influenza-like Illness and Vaccinations Statistics 2023-2024
Date of report:	05 September 2024

Introduction

This report summarises influenza statistics over the 2023-2024 winter period, including

- A) Influenza illness activity (number of patients with confirmed flu, and number of resident patients presenting to their GP with flu-like illness)
- B) annual uptake of the seasonal influenza vaccination

Clinicians can use the numbers presenting with 'flu-like' symptoms, alongside cases of influenza confirmed amongst patients to assess the extent of influenza on the Island.

The report also shows to what extent the previous year's flu vaccines were delivered in advance of the winter flu season.

Also presented are data regarding deaths from influenza and pneumonia for the period 2015-2023.

Summary

In 2023-2024:

- registered flu-like illness peaked around the end of January 2024, and a rise in confirmed influenza was also registered for the same period
- Jersey experienced a period of influenza activity that was more comparable to pre-pandemic pattern than the previous season (2022-2023), this pattern was similarly observed across the UK¹
- Jersey succeeded in delivering influenza (flu) vaccinations to nearly 33,000 individuals
- the proportion of patients aged 65 years and over who were vaccinated was 74%. This coverage is just below the World Health Organization (WHO) vaccine uptake ambition of 75%
- the proportion of pre-school children aged 2-4 years who were vaccinated in Nurseries or at GP surgeries (60%) was higher than in the previous season 2022-2023 (52%)
- vaccine uptake in the school-aged children programme (4-16 years) was 58%, slightly lower when compared to the previous seasons programme (60%)
- over a quarter of individuals aged 50-64 years (29%) were vaccinated in 2023-2024, lower than the proportion vaccinated in the previous season (47%)
- in 2023, there were around 30 deaths due to Influenza and Pneumonia, similar to the numbers seen in some previous years

¹ Surveillance of influenza and other seasonal respiratory viruses in the UK, winter 2023 to 2024 - GOV.UK (www.gov.uk)

Background

Flu is caused by the influenza virus, and for some groups of people can be serious (e.g., they can develop a serious complication such as pneumonia). However, there are other viruses (i.e., not the influenza virus) that can cause similar symptoms. These other 'flu-like' viruses are often mistaken for influenza and could be referred to as "the flu" but are in fact a different illness. The only way to confirm that a 'flu-like' illness is caused by the influenza virus is to conduct a laboratory test, which in many cases is not necessary.

It is important to note that interpretation of influenza surveillance data over the last few years should consider the impact of the COVID-19 pandemic; data reported from the various influenza surveillance systems was affected by changing social and behavioural factors during the pandemic, as well as in testing regimes. The data presented should only be used as a guide, especially when compared to earlier influenza seasons.

What is the data telling us?

The 2023-2024 season saw influenza activity that was more typical of pre-pandemic years, after two seasons of less severe influenza activity during the height of the COVID-19 pandemic period (the 2020-2021 and 2021-2022 seasons). Influenza activity in 2022-2023 saw an early autumn peak, which was unusual, before a larger mid-winter peak. In comparison, the 2023-2024 season saw just a singular peak in mid-winter following more typically the pre-pandemic trends.

The Government of Jersey works each year to maximise the number of people who benefit from the protection offered by a flu vaccine and to eliminate barriers to vaccination. The 2023-2024 season's immunisation programme saw the WHO coverage target for those aged 65 and over (75%) slightly missed in Jersey (74%).

'Flu-like' illness

The number of resident patients presenting to their GP with 'flu-like' illness is taken from the Primary Care database (EMIS). These people are not tested for influenza, so it is not known what proportion of them have actual influenza, and what proportion have a 'flu-like' illness. Also note that not everyone with 'flu-like' illness will attend their GP. This metric is intended as an indicator of the relative amount of flu-like illness circulating in the community and is useful for comparing patterns year on year.

Numbers of 'flu-like' illnesses presenting to GPs in last 6 flu seasons

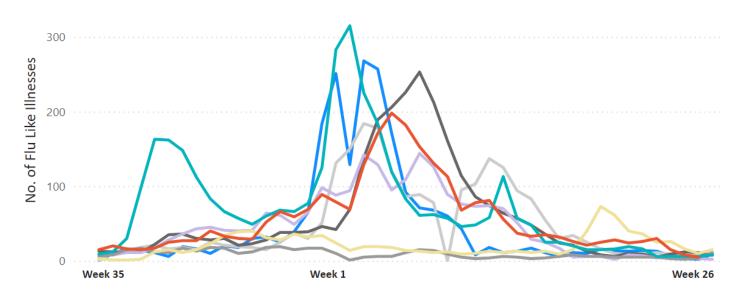
Figure 1 shows the numbers recorded per week as presenting to their GP with 'flu-like' symptoms over each flu season between the 2017-2018 winter and the 2023-2024 winter. The individual flu-season profiles vary, in terms of the peak number of cases seen, the timing of the increase and decrease in the number of cases, and shape of profile.

- the 2023-2024 season saw a continued return of flu-like illness activity to levels seen prior to the COVID-19 pandemic.
- Jersey experienced one peak of influenza; this differs from the 2022-23 season that saw increased activity in the autumn. This pattern was similarly observed across the UK²
- notably, the 2023-2024 season had a slightly later onset than the previous season and reached a peak comparable to the pre-pandemic 2018-19 season (Figure 1)

² Surveillance of influenza and other seasonal respiratory viruses in the UK, winter 2023 to 2024 - GOV.UK (www.gov.uk)

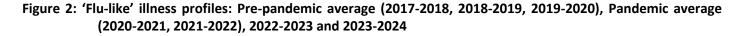
Figure 1: 'Flu-like' illness profiles from 2016-17 to 2023-24, by week

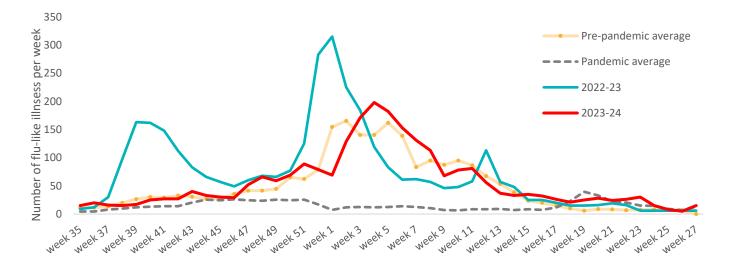
● Winter 16/17 ● Winter 17/18 ● Winter 18/19 ● Winter 19/20 ● Winter 20/21 ● Winter 21/22 ● Winter 22/23 ● Winter 23/24



Data from these individual seasons can be combined to produce an 'average' (calculated as a mean average) profile (see Figure 2). The average profile tends to be smoothed out, with the shape reflecting the earliest increase and latest decrease from each of the individual profiles while flattening the maximum, or peak, number of cases.

As flu was unusually low in the 2020-2021 and 2021-2022³ winters, an average of the three years prior to the onset of the COVID-19 pandemic ("Pre-pandemic average") is shown in yellow in Figure 2, to show the typical seasonal pattern of flu. The most recent year (2023-2024 winter) is shown in red as well as the previous year (2022-2023 winter) shown in blue; comparing these lines with the pre-pandemic average demonstrates a return to patterns more in line with pre-pandemic levels than shown in the previous year (2022-2023).





³ Surveillance of influenza and other seasonal respiratory viruses in winter 2021 to 2022 - GOV.UK (www.gov.uk)

Patients with confirmed influenza

Circulating influenza is declared by the Hospital's Consultant Microbiologist based on the influenza situation in the UK and Europe, as well as the local laboratory tests. Hospital patients are tested for the influenza virus according to a schedule devised by the Hospital's Consultant Microbiologist. Typically, in years prior to the COVID-19 pandemic, during the 'surveillance' stage of flu-season (i.e., before the declaration of circulating influenza has been made), hospital patients (whether admitted or not) are tested for influenza if they display 'flu-like' symptoms or are in another 'at risk' group. Once circulating influenza has been declared, only admitted patients are considered for testing (based on the same symptom or risk criteria).

The onset of the COVID-19 pandemic affected influenza testing protocols, due to the need to clinically distinguish between the different respiratory illnesses, and ensure patients get treated appropriately. In the 2023-2024 and 2022-2023 seasons, combined testing (to distinguish between different respiratory illnesses including influenza and COVID-19) was used <u>throughout the season</u>. This resulted in a higher number of confirmed flu cases being detected in these seasons, as there were patients tested for flu who may not have received a diagnostic test in previous years, as their symptoms alone would have been sufficient for diagnosis.

Numbers of patients with confirmed influenza over the 2023-2024 season

The 2023-2024 season saw a singular peak around the end of January 2024, this differs from the dual peaks in the 2022-2023 season, with one peak seen around autumn time and the other slightly earlier in the winter than that of the latest season, and from the unusually low confirmed influenza during the COVID-19 pandemic (Figure 3). An average of the three years prior to the onset of the COVID-19 pandemic ("Pre-pandemic") is shown in purple in Figure 3, to show the typical seasonal pattern of confirmed influenza, whilst the peak COVID-19 pandemic years (2020-2021 and 2021-2022) are shown as a grey dotted line. The previous season (2022-2023) is shown in blue, and the most recent season (2023-2024) is shown in red.

There was an average of 166 confirmed cases per season between week 35 and week 17 in pre-pandemic years (2017-2018 to 2019-2020). This compares to 256 laboratory-confirmed cases reported during a similar period in 2023-2024 which is a significant drop from the 593 of the 2022-2023 season. The change in testing protocol necessitated by the arrival of COVID-19 accounts for the higher peaks in confirmed influenza numbers in the 2023-2024 and the 2022-2023 seasons when compared to pre-pandemic seasons (Figure 3). It is likely that in future seasons, combined testing will continue to be used, due to the ongoing need to clinically distinguish between respiratory illnesses throughout the season.

In the 2023-2024 season, 95% of the notifications of laboratory-confirmed influenza reported were Influenza A, this is very similar to the 2022-2023 season which was 96%.

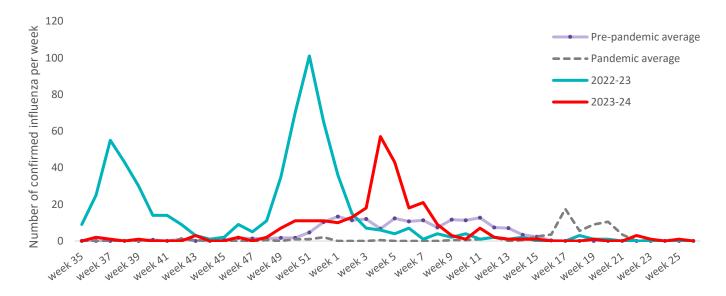
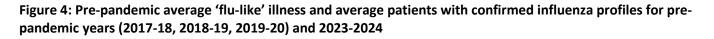


Figure 3: Confirmed influenza average profiles: Pre-pandemic average (2017-18, 2018-19, 2019-20), Pandemic average (2020-21, 2021-22), 2022-2023 and 2023-2024

Combined profiles of 'Flu-like' illness and patients with confirmed influenza

Combining the charts of average 'flu-like' illness and average number of patients with confirmed influenza (see Figure 4) shows their relationship over a flu season. Figure 4 shows the pattern of flu-like illness and confirmed influenza in the three years prior to the COVID-19 pandemic, and in the 2023-24 season.



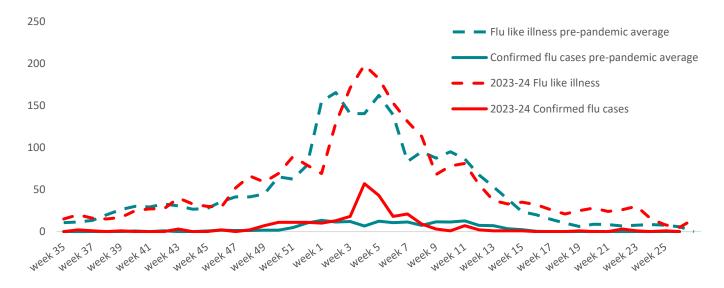


Figure 4 demonstrates that cases of influenza confirmed by the pathology lab at Jersey General Hospital started to rise around week 48 of 2023 (end of November 2023), similar to pre-pandemic winter seasons.

The 2023-24 season saw a peak in confirmed flu cases around week 4 2024, this peak in confirmed cases is not seen in the pre-pandemic average and can be attributed to the combined testing approach taken in both the current season and the previous season (2022-2023). See page 4: "Patients with confirmed influenza" for details on the combined testing approach.

The end of January 2024 showed the highest peak in flu-like illness registrations compared to data from the 3 prepandemic winter seasons. A rise in confirmed influenza was also registered for the same period. See page 11 for details of deaths from influenza and pneumonia for the period.

Influenza vaccination

Annual vaccination is the best protection against the flu. The most common strains of the virus that cause influenza change every year, and the vaccine also changes every year to match these strains. A seasonal flu vaccine plan is coordinated every year In Jersey to prevent flu amongst those who are at a higher risk of flu-associated illness and mortality.

Flu vaccination programme

The programme provides direct protection to those at higher risk of flu associated morbidity and mortality, including older people, pregnant women, and those in clinical risk groups. The Jersey programme is guided by advice from the Joint Committee on Vaccination and Immunisation (JCVI)⁴.

During the 2023-2024 flu seasons, an expanded offer was continued which enabled all those aged 50 to 64 years to receive the flu vaccine as part of the funded programme (flu vaccine offered free of charge).

The below groups were eligible for a flu vaccine from September 2023:

- infants 6 months to 2 years of age in a clinical risk group⁵
- pre-school children aged 2, 3 and 4 years
- school-aged children reception up to year 11
- at-risk 16 to 49-year-olds
- people aged 50 to 64, and those over 65
- pregnant women
- households of those on the shielded patient list or of immunocompromised individuals
- home carers
- care home and domiciliary staff
- frontline health and community services staff

Additionally, there was an offer for the flu and COVID-19 autumn booster vaccines to be administered together, to those who were eligible. Mobile vaccination units were also used for visits to care homes and private houses to improve the vaccination rate for older Islanders.

• during the Winter Vaccination Programme, Jersey succeeded in delivering influenza (flu) vaccinations to nearly 33,000 individuals.

Key to the vaccination programme being successful is having a high proportion of the targeted populations vaccinated <u>before</u> influenza starts circulating. The vaccine takes approximately **two weeks** to become fully effective after being administered. Therefore, to achieve the best protection for the at-risk population, most of those eligible for flu vaccination should be vaccinated at least two weeks prior to the expected onset of influenza (i.e. by week 48 as onset is typically December onwards, Figure 1).

Figure 5 shows the actual vaccination profiles over flu season 2023-2024 compared to the 2023-2024 'flu-like' illness and 2023-24 confirmed influenza profiles. The majority of flu vaccinations had been delivered by week 48 (Table 1); for example, of those aged 65+ vaccinated, 93% had received their vaccination by week 48, ahead of the onset of peak flu-like illness circulation.

⁴ Joint Committee on Vaccination and Immunisation - GOV.UK (www.gov.uk)

⁵ At-risk group – includes patients with a long-term medical condition including chronic respiratory disease or asthma; chronic heart disease; chronic kidney disease; chronic liver disease; chronic neurological disease; diabetes type 1 or type 2; a suppressed immune system; asplenia or spleen dysfunction or a BMI of more than 40.

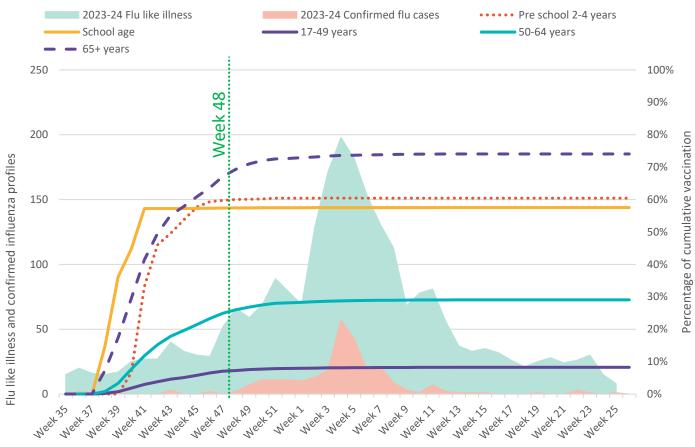


Figure 5: Percentage of target groups vaccinated with profiles (2023-2024) 'flu-like' illness and influenza profiles plotted for context

Table 1: Percentage of priority groups given the influenza vaccine by the end of the 2023-2024 flu season, by week48, and percentage of the total number of those vaccinated that were vaccinated by week 48 (i.e. % ofvaccinations that were administered at least two weeks before the expected arrival of flu season)

Age Group	% of group vaccinated by end of flu season	% of group vaccinated by week 48	Of those vaccinated by the end of flu season, % vaccinated by week 48
children aged 2, 3 and 4 years^	60	60	99
child-aged children aged 4 to 16 years^	58	57	99
people aged 17-49-years-old*	8	7	88
people aged 50-64-year-old*	29	26	90
people aged 65 and over*	74	69	94

^ Denominator from 2023 Education Data

*Denominator estimated from 2021 Jersey Census

The ambition for flu vaccine coverage is to reach or exceed 75% uptake for people aged 65 years and over, as recommended by the World Health Organization (WHO). Public Health England suggested that flu vaccination coverage in the season achieve a minimum 75% uptake across all eligible groups.

Although all countries of the UK use standardised specifications to extract uptake data from IT information systems in primary care, there are some differences in extraction specifications, so comparisons between Jersey and the four constituent countries of the United Kingdom should be made cautiously.

Flu vaccine for pre-school children aged 2, 3 and 4 years⁶

Pre-school children are offered vaccination to help protect them and to reduce flu transmission in the community to other vulnerable groups. The vaccine programme for 2023-2024 was the seventh year of the nursery-based immunisation programme, where GPs and Practice Nurses went into nurseries to offer the nasal flu vaccine. The vaccine was also available to children of this age-group through GP surgeries.

- The number of vaccines given to pre-school aged children in 2023-2024 (1,042) was higher than the previous season (960)⁷
- Table 2 shows a decline in flu vaccination rates among pre-schoolers for the years 2020-2021 (69%), 2021-2022 (57%) and 2022-2023 (52%). In 2023-2024 it has seen an increase (60%); this group's vaccination rate has overtaken that of school-age children where in previous seasons it had lagged behind.
- in England, 44% of children aged 2-3 years received a flu vaccination during the 2023-2024 winter season

Table 2. Percentage of pre-school 2-4-year-olds vaccinated in Nursery Programme or in GP surgery againstinfluenza; over the last 8 winter periods.

	2016- 17 winter %	2017- 18 winter %	2018- 19 winter %	2019- 20 winter %	2020- 21 winter %	2021- 22 winter %	2022- 23 winter %	2023- 24 winter %
% of children aged 2-4 years vaccinated in nursery	-	41	39	47	55	48	43	51
% of children aged 2-4 years vaccinated in GP surgery	34	16	18	17	12	10	9	9
% of children aged 2-4 years vaccinated in other healthcare setting	-	-	-	-	3	-	-	-
Total % uptake for children aged 2-4 years	34	58	58	64	69	57	52	60

Please note that percentages have been rounded to nearest integer.

Flu vaccine for compulsory school-aged children (Reception to Year 11)

The children's nasal flu vaccination programme was introduced in 2014-2015 with children in Reception classes (aged 4 to 5 years) being offered the vaccine via a school-based programme. Since 2018-2019 the nasal flu vaccine has been offered to all compulsory school-aged children (Reception to Year 11 inclusive). A breakdown of the children immunised at school against flu, by year group, is given in Table 3.

⁶ Pre-school children (2-, 3- and 4-year-olds) whose date of birth was between 01/09/2019 and 31/08/2021.

⁷ Numbers rounded to nearest 10.

Around 7,098 school-aged children had the flu vaccine in the 2023-2024 winter:

- 7,049 influenza vaccines were given in primary and secondary schools, whilst 49 were given at GP surgeries
- the number of vaccines given to school-aged children in 2023-2024 (7,098) was lower than the previous season (7,520)
- uptake for school-aged pupils fell in 2023-24 compared to 2022-2023; a lower proportion of those children who were eligible were vaccinated (58%) when compared to the previous year's programme (60%)
- in England 55%, of all school aged children (4-16 years) were vaccinated in 2023-2024⁸

	2015- 16 winter %	2016- 17 winter %	2017- 18 winter %	2018- 19 winter %	2019- 20 winter %	2020- 21 winter %	2021- 22 winter %	2022- 23 winter %	2023- 24 winter %
Reception	61	59	62	66	66	78	76	69	65
Year 1	58	57	60	63	66	73	75	63	68
Year 2	53	62	59	60	64	77	69	73	68
Year 3	-	54	60	61	62	71	73	60	64
Year 4	-	-	56	62	62	71	69	64	60
Year 5	-	-	56	57	61	70	71	55	63
Year 6	-	-	55	57	57	72	69	66	59
Year 7	-	-	-	55	54	63	62	58	51
Year 8	-	-	-	51	53	62	57	56	48
Year 9	-	-	-	48	50	58	59	48	52
Year 10	-	-	-	52	49	63	59	57	47
Year 11	-	-	-	57	49	56	54	48	47

Table 3. Percentage of school-aged children receiving flu vaccination in school by year group⁹

Flu vaccine for adults

 around 1,017 influenza vaccines were given to individuals aged 16-49 years who identified that their primary reason for a flu vaccination being because they had certain chronic health conditions (e.g., a long-term heart condition, diabetes) or were immunosuppressed¹⁰

⁸ Seasonal flu vaccine uptake in children (publishing.service.gov.uk)

⁹ Table does not include the children immunised at GP practices, or home-schooled children.

¹⁰ The accuracy of the data relies primarily on the reliability of the data sources. As individuals are eligible by age group etc, they may not identify the primary reason for vaccination as being due to a certain clinical condition. The numbers are therefore an underestimate.

 around 190 influenza vaccines were given to pregnant women¹¹ from 1 September 2023 to 31 March 2024, this was a lower number than the previous seven winter seasons (see Table 4)

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
	winter							
Pregnant women	410	550	500	510	550	340	240	190

Table 4. Number of patients in the pregnant women category who were immunised at Vaccination centre, GP surgeries and pharmacies against influenza; over the last 8 winter periods.

In 2023-2024:

- around 74% of people aged 65 and over received a seasonal flu vaccination in Jersey; the World Health Organisation (WHO) uptake recommendation was that vaccine uptake for people aged 65 years and over should reach or exceed 75%¹²
- the uptake ambition for Public Health England (PHE) for those aged 65 and over was 85%¹³; in the past season England saw a vaccine uptake of 78% in those aged 65 and over, Scotland (90%), Northern Ireland (78%) and Wales (73%)¹⁴
- uptake in Jersey for 50- to 64-year-olds was 29%, a significant decrease on 2022-2023 uptake (47%). Note that in England those aged 50-64 years old were no longer eligible if they were not in clinical risk groups¹⁵

Table 5. Percentage of Census population aged 50-64 years and 65 and over who were immunised at theVaccination Centre, GP surgeries and pharmaciesagainst flu; over the last 8 winter periods.

	2016- 17 winter %	2017- 18 winter %	2018- 19 winter %	2019- 20 winter %	2020- 21 winter %	2021- 22 winter %	2022- 23 winter %	2023- 24 winter %
Adults aged 50-64 years	-	-	-	-	45	51	47	29
Adults aged 65 and over	55	63	60	55	78	84	80	74

¹¹ Pregnant women are not obliged to disclose their pregnancy at time of vaccination

¹² WHO/Europe | Influenza vaccination coverage and effectiveness World Health Organisation Europe

¹³ National flu immunisation programme 2023 to 2024 letter - GOV.UK

¹⁴ Surveillance of influenza and other seasonal respiratory viruses in the UK, winter 2023 to 2024 - GOV.UK (www.gov.uk)

¹⁵ Seasonal influenza vaccine uptake in GP patients in England: winter season 2023 to 2024 - GOV.UK

Influenza and pneumonia deaths

It is possible to provide an estimate of deaths due to influenza by reporting on the underlying cause of death (see Notes section for details). The underlying cause of death is defined by the WHO as "the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury"¹⁶.

The number of deaths for Jersey with an underlying cause of Influenza and Pneumonia (ICD-10 code J09-J18) which is used as a proxy for flu deaths, for the most recent calendar years (2015-2023) where data is available are shown in Table 6.

In 2023, there were around 30 deaths due to Influenza and Pneumonia, similar to the numbers seen in some previous years such as 2015, 2016, 2017, 2022 and 2023.

Number, rounded to nearest 5
30
30
30
20
20
15
25
30
30

Table 6: Annual Influenza and Pneumonia deaths *(ICD-10 code J09-J18, 2015-2023)

* Counts are rounded to the nearest multiple of 5

Please note that it still may not be possible to know exactly how many people die from seasonal flu each year, as Influenza may not always be listed on death certificates of people who die from flu-related complications. There are several reasons for this:

- serious complications can be triggered by flu; flu can make chronic medical problems worse
- many flu-related deaths can also occur one or two weeks after a person's initial infection, either because the person may develop a secondary bacterial co-infection or because influenza can aggravate an existing chronic illness
- most people who die from flu-related complications are not tested for flu or may not have sought medical care until later in their illness when influenza can no longer be detected from respiratory samples

¹⁶ WHO Medical Certification Cause of Death - <u>Medical certification of cause of death</u>: instructions for physicians on use of international form of medical certificate of cause of death (who.int)

Notes

Flu Vaccination Programme

Data Sources

- The vaccination data for this report are derived from GP Central Server (EMIS), Community Pharmacy server (PharmOutcomes) and records kept by those administering the school and nursery programmes.
- uptake in each of the priority groups were calculated using denominators (total in group) from the following sources:
 - percentage uptake in pre-school aged children, and compulsory school aged children: Data from Health and Community Services, Child Health system (CarePlus), and Children, Young People, Education and Skills (CYPES) School audit 2023
 - percentage uptake in adults aged 17 and over: Data estimated from 2021 Statistics Jersey census results¹⁷

Data quality and completeness

The data quality and completeness of data extracted from the GP central server cannot be assured, however where variation between GP practices is identified, this is fed back to individual surgeries for further checks. Figures pulled are also compared to previous year figures to see where large changes have occurred, these can then be further investigated.

There are limitations to the data reported for vaccinations of pregnant women in this report. The completeness of the data depends on the recording of pregnancy as the main reason for vaccination, which may not necessarily happen for all pregnant women receiving a vaccine.

This report has important limitations related to vaccine data for individuals at clinical risk (see list below). The completeness of the data depends on the recording of the risk situation that vaccinators consider as the main reason for vaccination, for example, some of those who may be eligible due to certain health conditions may also be eligible as they are an employee (e.g., health worker) or if aged between 50 and 64 years of age. Therefore, coverage of the clinically at-risk group is an estimate only.

The following provides a summary of the groups eligible for flu vaccination in 2023-2024 including individuals (children and adults) with a long-term health condition:

- Chronic respiratory disease such as asthma requiring regular inhaled steroids, or chronic obstructive pulmonary disease (COPD)
- Chronic heart disease
- Chronic kidney disease at stage 3, 4 or 5
- Chronic liver disease
- Chronic neurological disease such as Parkinson's disease, motor neurone disease
- Learning disability
- Severe mental illness
- Diabetes
- Epilepsy

• Immunosuppression due to disease such as HIV/AIDS or treatment such as cancer treatment (and household contacts of at-risk individuals)

• Asplenia or dysfunction of the spleen

¹⁷ 2021 census results (gov.je)

• Morbidly obese (class III obesity). This is defined as those with a Body Mass Index (BMI) of 40 or above, aged 16 or over.

Influenza and Pneumonia deaths

- the registration of deaths occurring in Jersey is carried out by the office of the Superintendent Registrar Information collected at death registration is recorded on the Registration Online (RON) system by registrars
- cause of death data comes from the information collected at death registration. All the conditions
 mentioned on the death certificate are coded using the International Classification of Diseases, Tenth
 Revision (ICD-10). From all of these causes an underlying cause of death is selected using ICD-10 coding rules.
 The underlying cause of death is defined by WHO as:
 - a) the disease or injury that initiated the train of events directly leading to death, or
 - b) the circumstances of the accident or violence that produced the fatal injury
- in the ICD-10 revision, Influenza is coded J09-J11; Pneumonia is coded J12-J18