Jersey Seasonal Influenza-like Illness Statistics 2018-2019

Statistics Jersey: www.gov.je/statistics @JsyStats

Introduction

This report presents two indicators of the relative weekly number of cases of influenza (flu) seen in Jersey:

- number of hospital patients with confirmed flu (confirmed by laboratory test)
- number of resident patients presenting to their GP with flu-like illness

Clinicians can use the numbers presenting with 'flu-like' symptoms, alongside cases of influenza confirmed amongst hospital 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.

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.

Hospital patients with confirmed influenza

Hospital patients are tested for the influenza virus according to a schedule devised by the Hospital's Consultant Microbiologist. 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).

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.

'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.

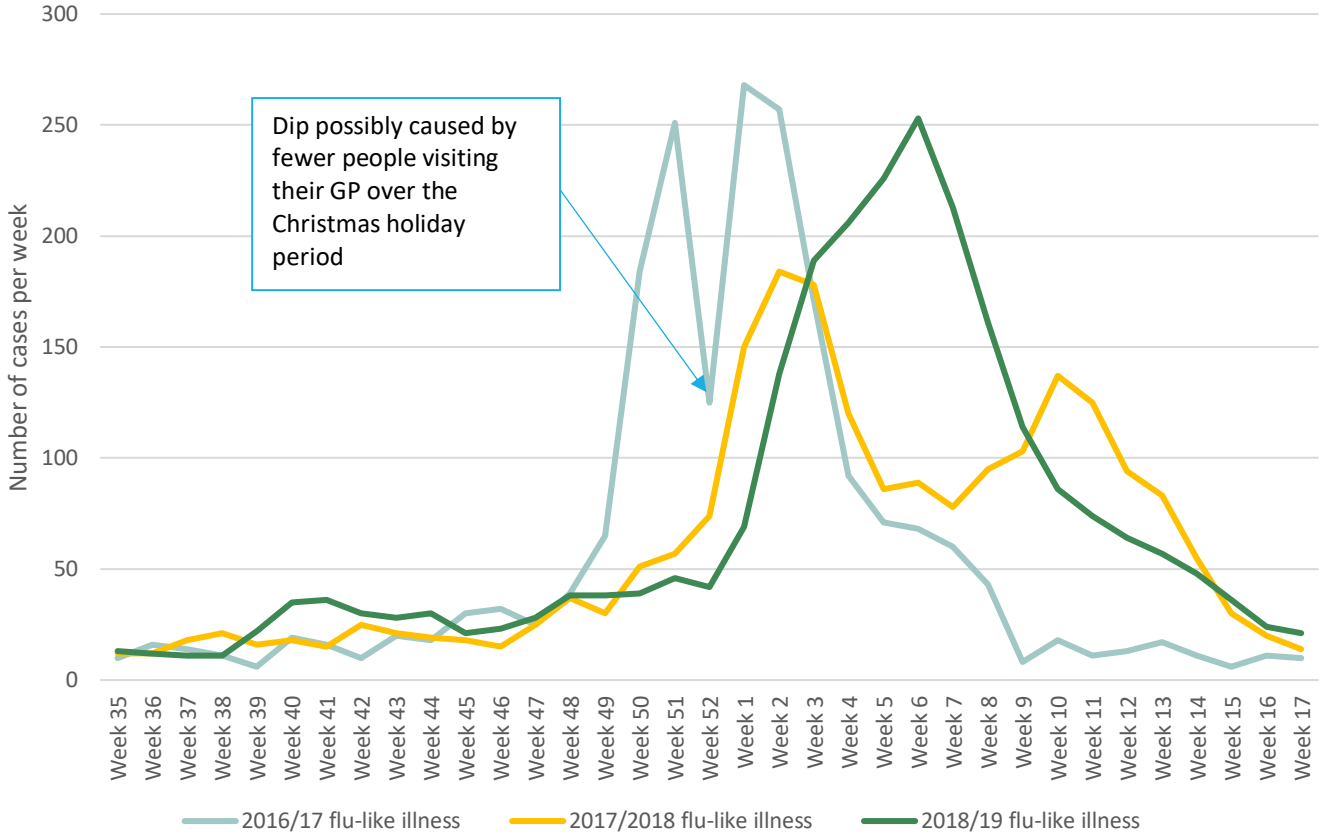
It is worth noting that not everyone with 'flu-like' illness will attend their GP.

Numbers of 'flu-like' illnesses presenting to GPs in last 3 flu seasons

Figure 1 shows the numbers recorded per week as presenting to their GP with 'flu-like' symptoms over each flu season, 2016-17, 2017-18 and 2018-19.

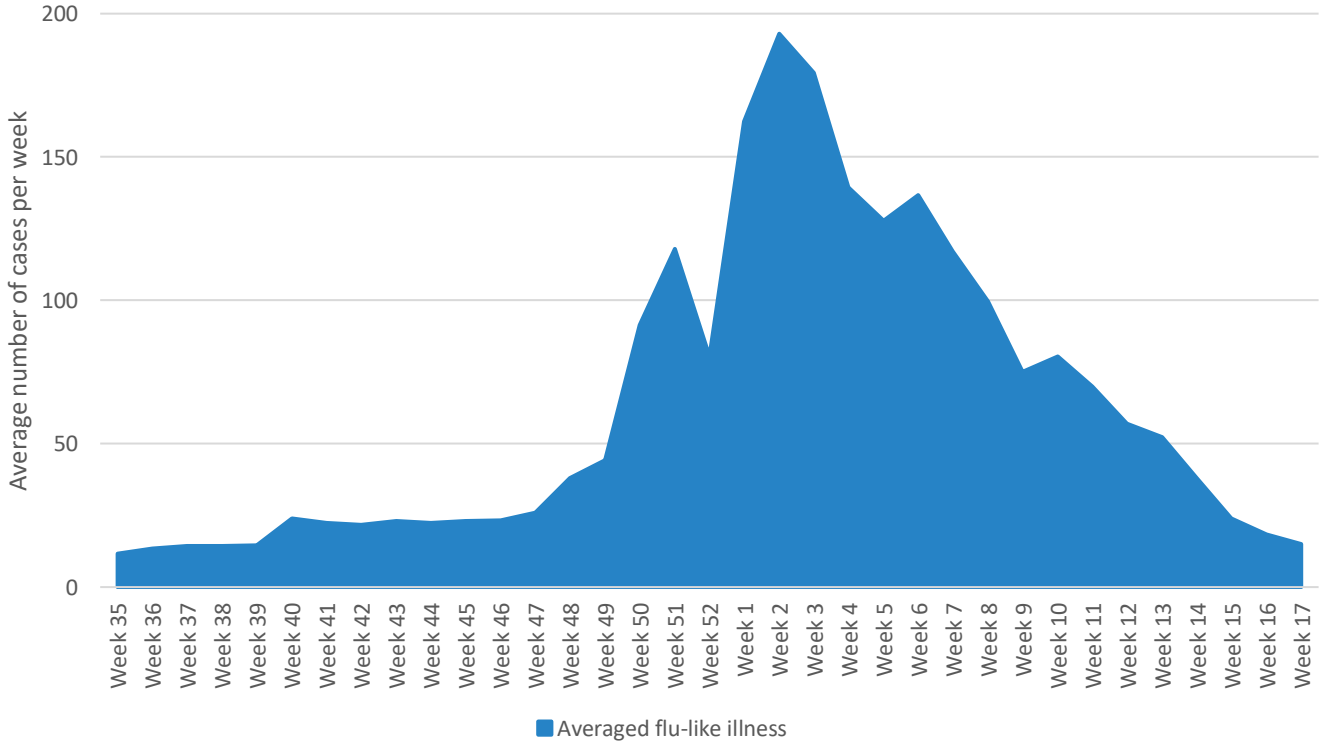
The chart shows that the individual flu-season profiles vary, in terms of the peak number of cases seen, the timing of the increase and decrease in the number of cases, and shape of profile (note the double peak of 2017/18).

Figure 1: 'Flu-like' illness profiles from 2016/17, 2017/18 and 2018/19



The curves 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 more spread out, reflecting the earliest increase and latest decrease from each of the individual profiles while flattening the maximum, or peak, number of cases.

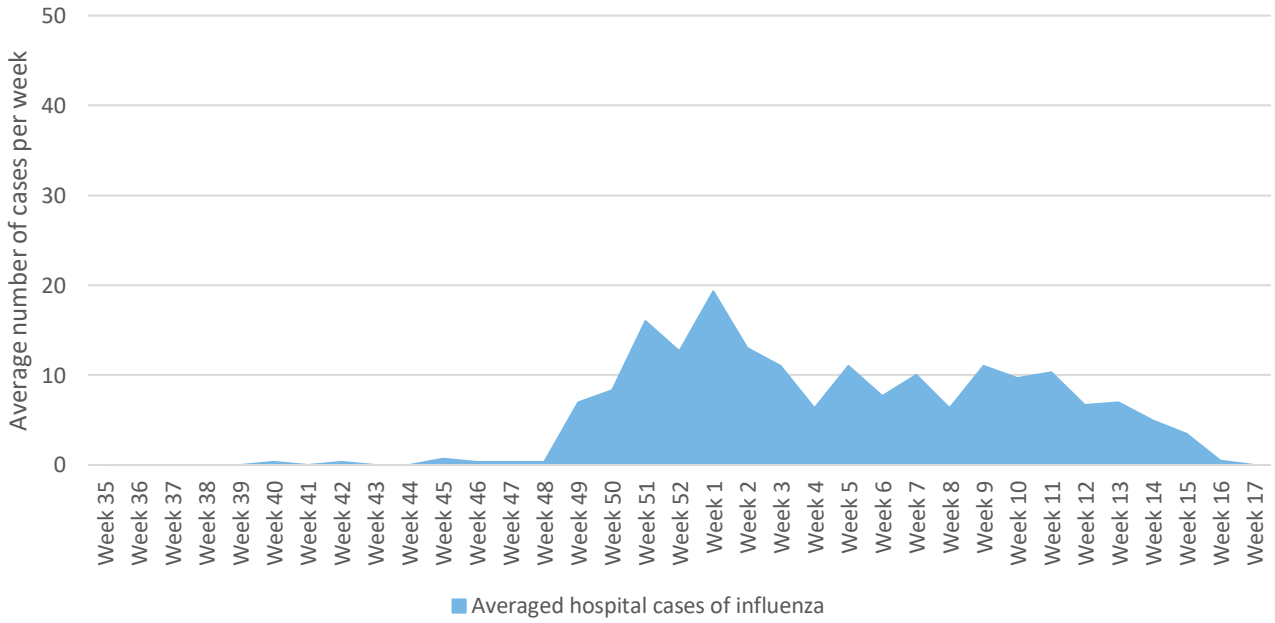
Figure 2: 'Flu-like' illness average profile based on individual profiles from 2016/17, 2017/18 and 2018/19



Numbers of hospital patients with confirmed influenza over the last three flu seasons

The same procedure could be carried out for numbers of hospital patients with confirmed influenza. However, as Jersey only carries out flu tests on a relatively small number of people, three-years of data have been combined to prevent disclosure. Figure 3 gives the averaged profile (again a mean average) of numbers of hospital patients with confirmed influenza.

Figure 3: Hospital influenza average profile based on individual profiles from 2016/17, 2017/18 and 2018/19



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

Combining the charts of average 'flu-like' illness and average number of hospital patients with confirmed influenza (see Figure 4) shows their relationship over an 'average' flu season.

Figure 4: Average 'flu-like' illness and average hospital patients with confirmed influenza

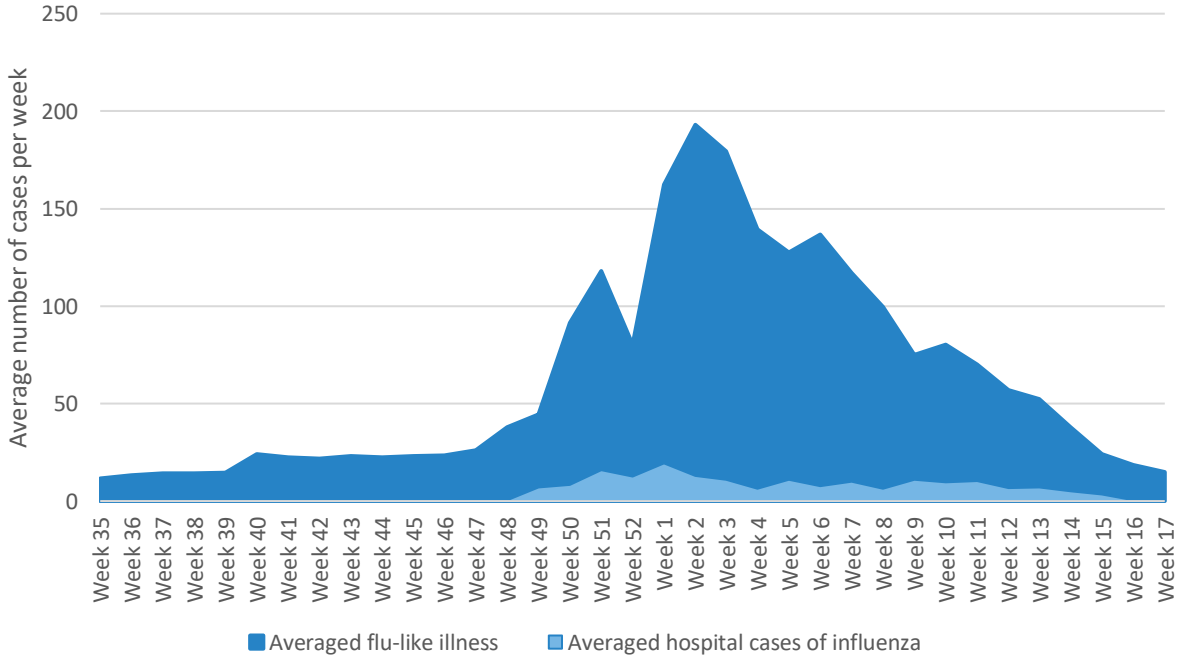


Figure 4 shows that on average, both the 'flu-like' illness in Jersey, and the instances of influenza confirmed by the hospital in the lab begin to increase from week 48 at the earliest (week 48 is around the end of November / beginning of December). Prior to that there are a 'baseline' number of flu-like illnesses presenting to GPs and only very isolated individual influenza cases seen in the hospital.

Influenza vaccination

The Health and Community Services (HCS) Department co-ordinates a seasonal flu vaccine plan every year to prevent flu amongst those who are at a higher risk of flu-associated illness and mortality. This includes older people, pregnant women and those with certain underlying medical conditions (known clinically as being 'at-risk'). In addition, children are offered the flu vaccine to provide both individual protection to the children themselves and reduce transmission across all age groups in order to protect vulnerable members of the population.

Flu vaccination programme

Ahead of the 2018/2019 winter season, HCS nurses offered the flu vaccine to schoolchildren, and GP practices and pharmacies offered the flu vaccine to people who fell into the higher risk categories (at a discounted rate or for free). The seasonal flu vaccine plan aims to protect and prevent as many people as possible within the following groups from catching flu during the winter season:

children aged 2, 3 and 4 years
school-aged children aged 4 to 16 years
at-risk[1] 16 to 64 year olds
people aged 65 and over
pregnant women

Key to the vaccination programme being successful is having a high proportion the targeted populations vaccinated before 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. Based on the averaged profiles, this is by week 46 (mid November).

Figure 5 shows the actual vaccination profiles over flu season 2018/19 compared to the average 'flu-like' illness and average confirmed influenza profiles.

[1] *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 compared to average 'flu-like' illness and hospital influenza profiles

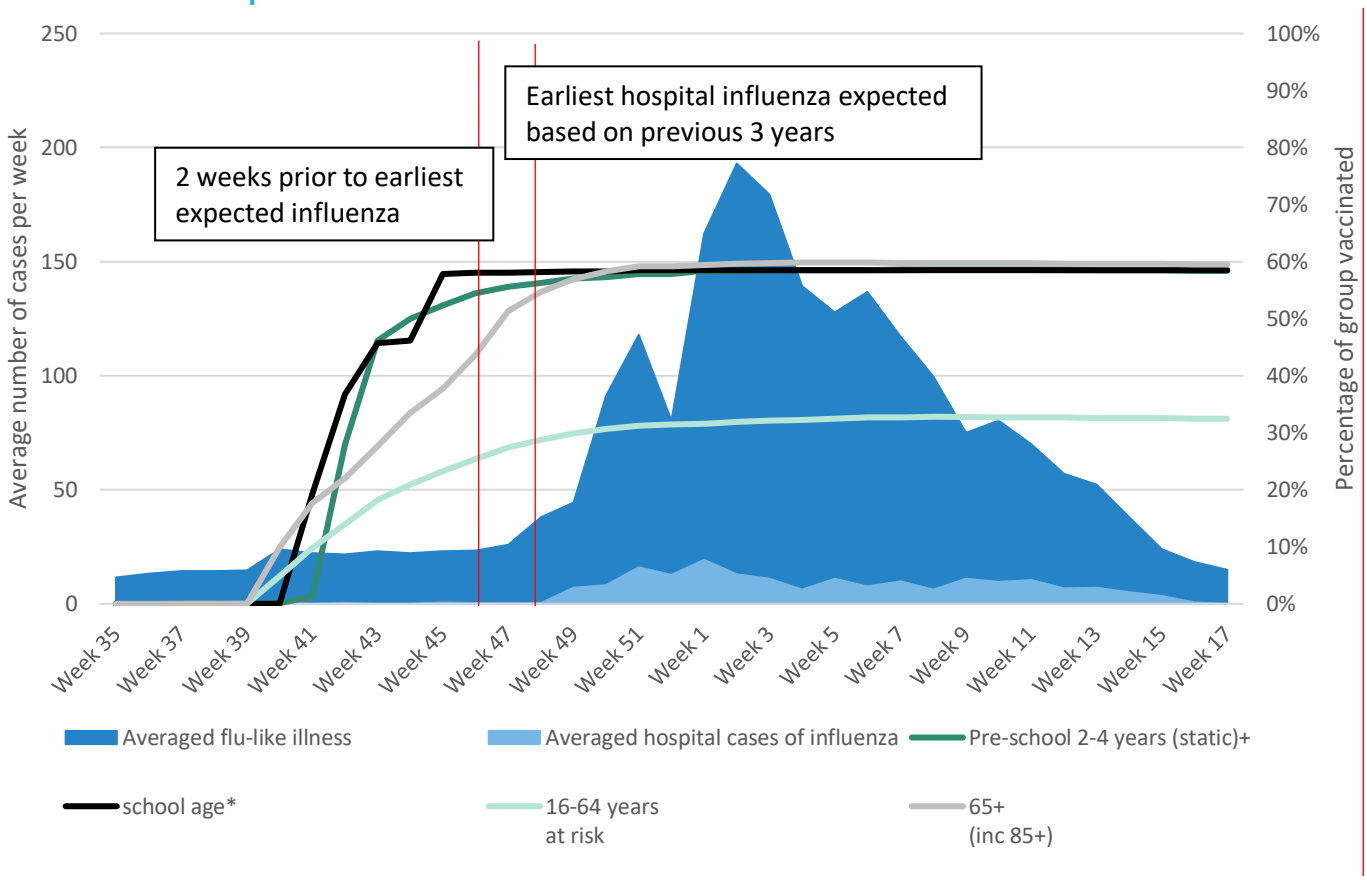


Figure 5 shows that in addition to the percentage of a target group receiving the flu vaccine by the end of the flu season, we could also consider the percentage vaccinated by week 46, i.e. two weeks prior to the expected arrival of influenza (Table 1).

Table 1: Percentage of populations given the influenza vaccine by week 46

Group	Percentage of group vaccinated by end of flu season	Percentage of group vaccinated by week 46	Percentage of the number vaccinated by the end of flu season that were vaccinated by week 46
children aged 2, 3 and 4 years	58	54	93
school-aged children aged 4 to 16 years	58	58	99
at risk 16-64 year old	32	25	78
people aged 65 and over	59	44	73