



Immunisation Statistics 2016

States 
of Jersey

Statistics Unit

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Introduction

Children and adults in Jersey are protected through immunisation against many serious infectious diseases. Immunisation through vaccination programmes aims both to protect the individual and to prevent the spread of such diseases in the wider population.

Immunisation uptake (sometimes referred to as coverage) refers to the proportion of the eligible population who have received the recommended doses of the relevant vaccines. Monitoring the proportion of the eligible population vaccinated is a key measure of the immunisation programme.

Jersey follows recommendations from the UK Joint Committee on Vaccinations and Immunisations (JCVI), making advised changes to the immunisation schedule based on the latest scientific evidence to ensure residents are protected from any current or emerging infectious diseases.

The European Region of the World Health Organization (WHO) recommends that on a national basis at least 95 per cent of children are immunised against diseases preventable by immunisation and targeted for elimination or control.¹ Such diseases specifically include diphtheria, tetanus, pertussis, polio, Hib, measles, mumps and rubella.

This report provides a yearly update of immunisation uptake rates for children and adults in Jersey. This release presents data for:

- childhood immunisations for children up to five years of age, up to 31 December 2016
- teenage immunisations for the academic year running from September 2016 to August 2017
- seasonal flu vaccinations covering the winter period 2016-2017

Also presented in this report are figures for adult immunisations given in GP surgeries in Jersey, including:

- pertussis for pregnant women
- shingles for those aged 70 (plus a catch-up for those aged 79)
- protection against pneumococcal infections for adults aged 65 or over

The data for adult immunisations is extracted from the GP central server (GPCS)² that was introduced in Jersey in 2013 and are presented as experimental statistics only.

¹ World Health Organisation Regional Office for Europe, *Health21: the health for all policy framework for the WHO European Region*, European Health for All Series No. 6, Denmark 1999, available from http://www.euro.who.int/__data/assets/pdf_file/0010/98398/wa540ga199heeng.pdf

² All GP surgeries in Jersey implemented the same computer system in 2013 with data stored on one central server, for more information see background notes

Jersey childhood immunisation schedule

Routine childhood immunisation schedule (as at year-end 2016)

Age to immunise	What vaccine is given
2 months	Diphtheria, tetanus, pertussis (whooping cough), polio, and <i>Haemophilus influenzae</i> type b (Hib)
	Pneumococcal
	Meningitis B*
	Rotavirus
3 months	Diphtheria, tetanus, pertussis (whooping cough), polio, and <i>Haemophilus influenzae</i> type b (Hib)
	Rotavirus
	Meningitis C (MenC) – Removed from schedule July 2016
4 months	Diphtheria, tetanus, pertussis (whooping cough), polio, and <i>Haemophilus influenzae</i> type b (Hib)
	Pneumococcal
	Meningitis B*
12 months	Measles, mumps and rubella (1st dose)
	Meningitis B**
13 months	<i>Haemophilus influenzae</i> type b (Hib) and Meningitis C
	Pneumococcal
2 years to 4 years (annually)	Influenza (flu)
3 years 4 months	Diphtheria, tetanus, pertussis (whooping cough) and polio (booster)
	Measles, mumps and rubella (2nd dose)
4 to 8 years at school***	Influenza (flu)
Girls 12 to 13 years	Cervical cancer caused by human papillomavirus (HPV) types 16 and 18 (two separate injections given six months apart)
	Tetanus, diphtheria, and polio
13 to 14 years	Tetanus, diphtheria, and polio
	Meningitis ACWY

* Introduced in 2015

** Available at age 12 months for the first time from 1 May 2016

***For academic year 2016-2017 this is extended to primary school children up to, and including, Year 3

Non-routine immunisations for at-risk babies

Age to immunise	What vaccine is given
At birth	BCG (against Tuberculosis)
At birth, 1, 2 and 12 months of age	Hepatitis B

Jersey adult immunisation schedule

Routine adult immunisation schedule

When to immunise	What vaccine is given
Pregnant women of any gestation	Influenza (flu)
Pregnant women, 20 weeks gestation or more	Pertussis containing vaccine
65 years or over - annually	Influenza (flu)
65 years or over	Pneumococcal polysaccharide vaccine (PPV)
70 years	Shingles
79 years of age*	Shingles (once only catch-up programme)

* For 2017 this is extended to those aged 71-79 years of age

Definitions for childhood immunisation statistics

Immunisation: The process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine. Vaccines stimulate the immune system to protect a person against subsequent infection or disease.

Immunised: To be fully immunised against a particular disease an individual must have received all required doses of the relevant vaccine. Detailed information about the current immunisation programmes in Jersey, the vaccines available, and the diseases they protect against, can be found via the States of Jersey website (www.gov.je).

Uptake rates: Uptake rates, sometimes referred to as coverage, relate to the number of people immunised against a particular disease as a proportion of the people in the population eligible to have received the appropriate vaccine.

Uptake is calculated as follows:

$$\frac{\text{Total number of eligible people immunised}}{\text{Total number of eligible people in the population}} \times 100 \%$$

Definitions for adult immunisation statistics

Standard definitions used for adult immunisation statistics differ slightly from those used for childhood immunisations, specifically using a different definition for coverage and uptake:

- **Vaccine coverage:** The proportion of those eligible who have ever received the vaccine
- **Vaccine uptake:** The proportion of those eligible who received their vaccine during the specified period (for instance in calendar year 2016).

Main points

Immunisations of children, calendar year 2016:

- uptake rates for all complete primary courses of immunisations by 12 months of age remained high, at 96 per cent or above
- by 12 months of age uptake of the rotavirus vaccine was 94 per cent
- overall uptake rates by 24 months of age remained high; only the uptake rate for the 5-in-1 vaccine exceeded 95 per cent
- uptake rates of one dose of MMR by five years of age was 97 per cent. Rates for the second dose of MMR vaccine by five years of age and the DTaP/IPV booster remained at rates similar to the previous year, 2015, while the rate for the Hib/MenC booster returned to levels seen two years previously, in 2014, following a decrease in 2015

Immunisations of teenagers, academic year 2016-2017:

- 88 per cent of females in school Year 8 received two doses of the HPV vaccine, thereby completing the course. This latest uptake rate was similar to that for the previous academic year 2015-2016
- the uptake rate for the Td/IPV booster was 93 per cent for pupils in school Year 9
- uptake of the MenACWY vaccine was 94 per cent, a similar level to the previous academic year, 2015-2016

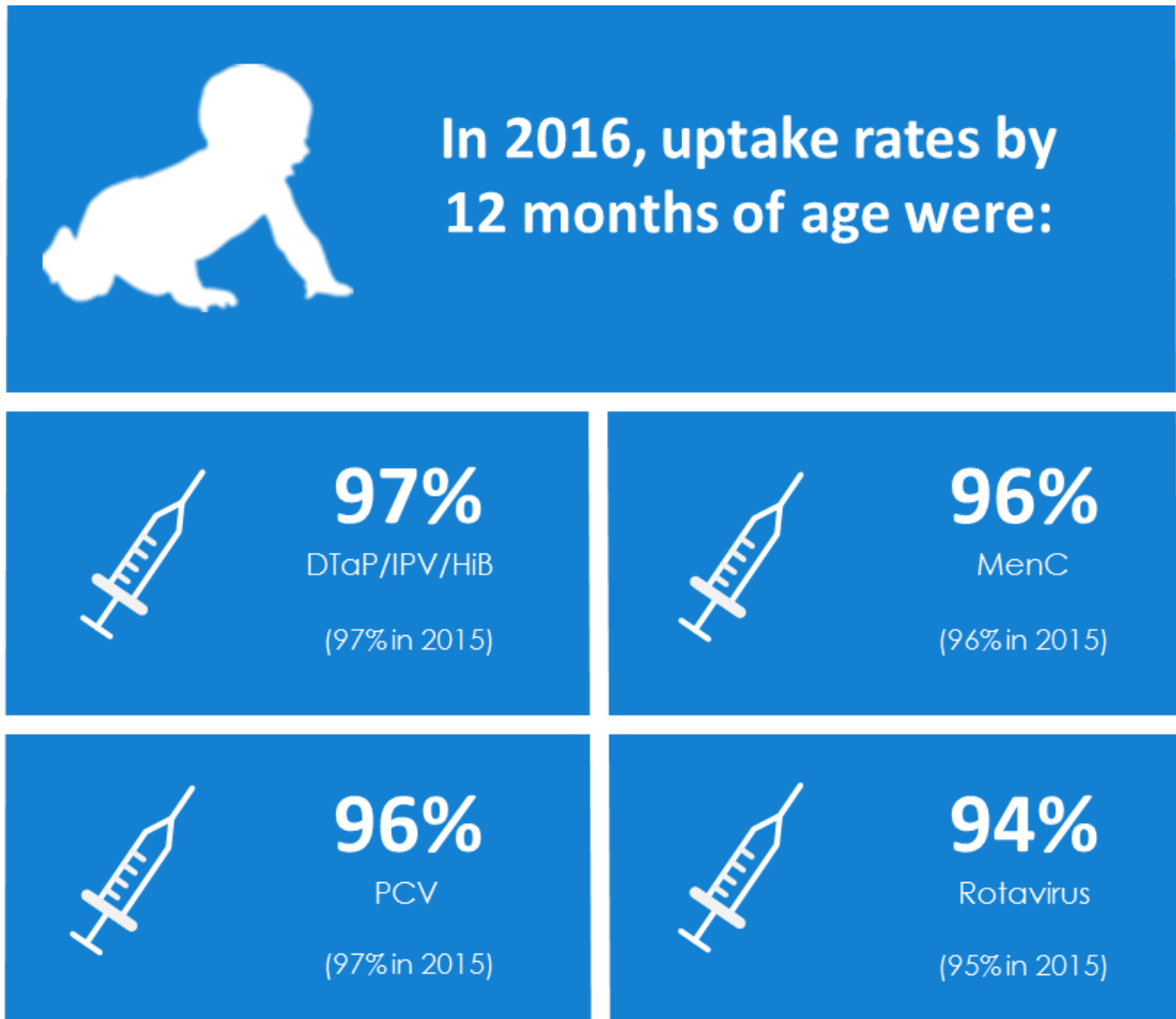
Seasonal influenza immunisations, winter 2016-2017:

- 59 per cent of school children in Reception, Year 1, Year 2 and Year 3 were vaccinated against seasonal flu
- half of people aged 65 or over who were registered with a GP received a seasonal flu vaccination
- around 1 in 3 pre-school children aged 2 to 4 years (32 per cent), 1 in 4 pregnant women (28 per cent) and 1 in 4 of those deemed at clinical risk aged 16 to 64 (24 per cent) also received a vaccination

Immunisations of adults, calendar year 2016 (immunised up to 31 December 2016):

- pneumococcal vaccine (PPV) coverage was 47 per cent amongst registered patients aged 65 years or over and was 59 per cent for those aged 75 or over
- shingles vaccine coverage was 70 per cent of registered patients turning 70 years of age in 2016

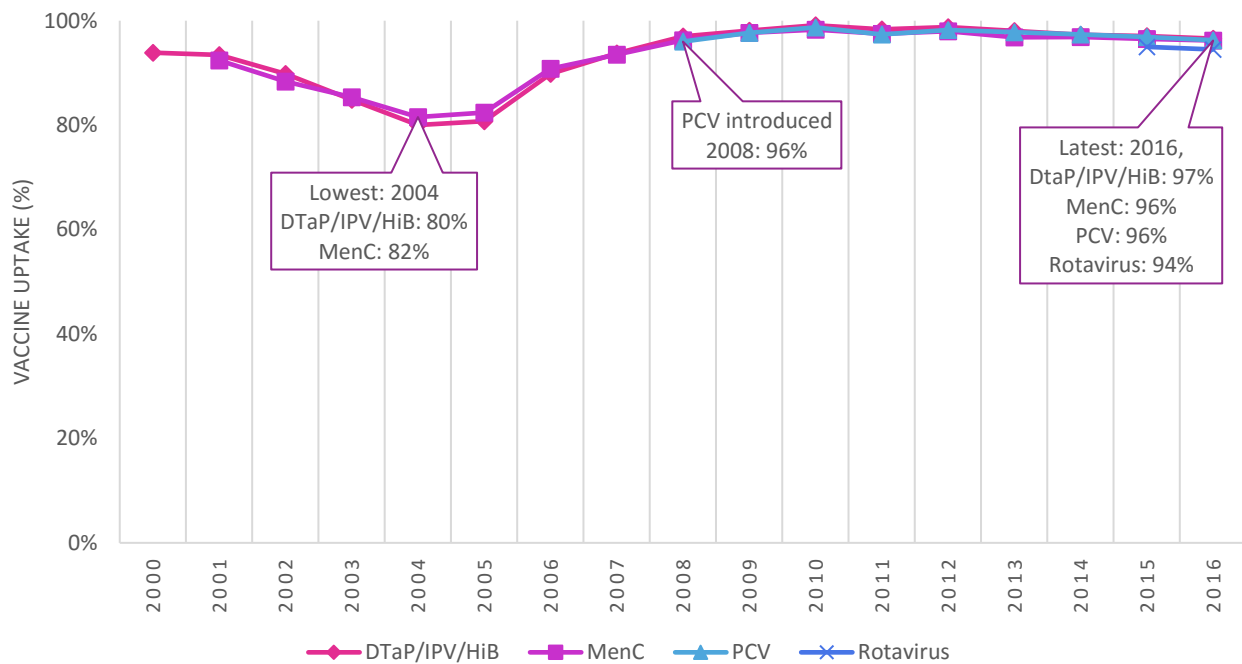
Annual uptake rates by 12 months of age



In Jersey, in 2016, uptake rates by 12 months of age for complete primary courses of immunisations against diphtheria, tetanus, pertussis, polio and *Haemophilus influenzae* type b (Hib) (the five-in-one vaccine), MenC and PCV remained high, with rates of 96 per cent or above.

A vaccine to protect babies against rotavirus was introduced to the childhood immunisation schedule in Jersey in January 2014. Uptake of the completed course of rotavirus vaccine was 94 per cent in 2016. This was the second full calendar year cohort eligible for the vaccine. Rotavirus vaccination is unique in the routine childhood immunisation schedule in that administration of the vaccine is bound by strict age limits. Children require two doses of vaccine, given at four weeks apart. Opportunities for children to catch-up missed doses are limited as the first and second doses of rotavirus vaccine must be completed before 15 weeks of age and 24 weeks of age, respectively.

Figure 1: Primary immunisation uptake rates by 12 months of age, by calendar year



Source: Jersey Child Health Information (CHIS)

Note: the fall in uptake rates in the early 2000s was driven by a dip in public confidence associated with the MMR vaccine, as well as operational factors impacting on the recording of immunisations. A single recording system was introduced in 2007/2008 together with efforts to improve confidence in immunisations.

Table 1 shows uptake rates for Jersey in 2016 compared with England, Wales and Scotland.

Table 1: Primary immunisation uptake rates by 12 months of age, by jurisdiction, percentage completed

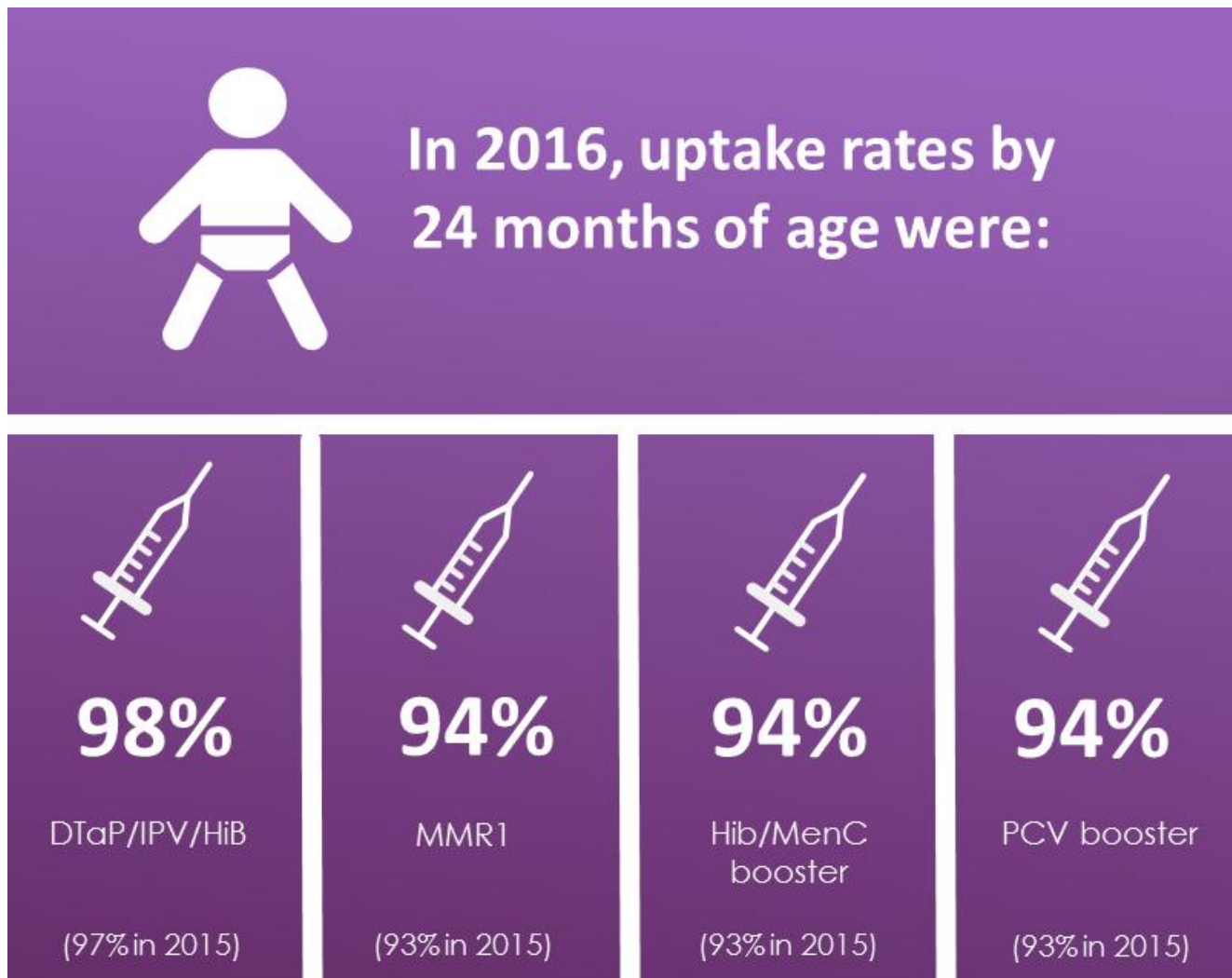
	DTaP/IPV/Hib	MenC	PCV	Rotavirus
Jersey (2016)	97	96	96	94
England (2016/17)	93	-	94	90
Wales (2016/17)	96	94	96	94
Scotland (2016)	97	97	97	93

Source: Statistics Unit, Public Health England (PHE), Public Health Wales, ISD Scotland
- data for England not published at national level for 2016/17

Key

- DTaP/IPV/Hib The 5-in-1 vaccine (3 doses) which protects children against diphtheria, tetanus, pertussis, polio and Haemophilus influenza type B (Hib)
- MenC Meningococcal serogroup C conjugate vaccine (1 dose)
- PCV Pneumococcal conjugate vaccine (2 doses)
- Rotavirus Rotavirus vaccine (2 doses under 24 weeks)

Annual uptake rates by 24 months of age



Overall uptake rates by 24 months of age remained high but only the uptake rate for the 5-in-1 vaccine exceeded 95 per cent in 2016. The pattern in the previous year (2015) was similar.

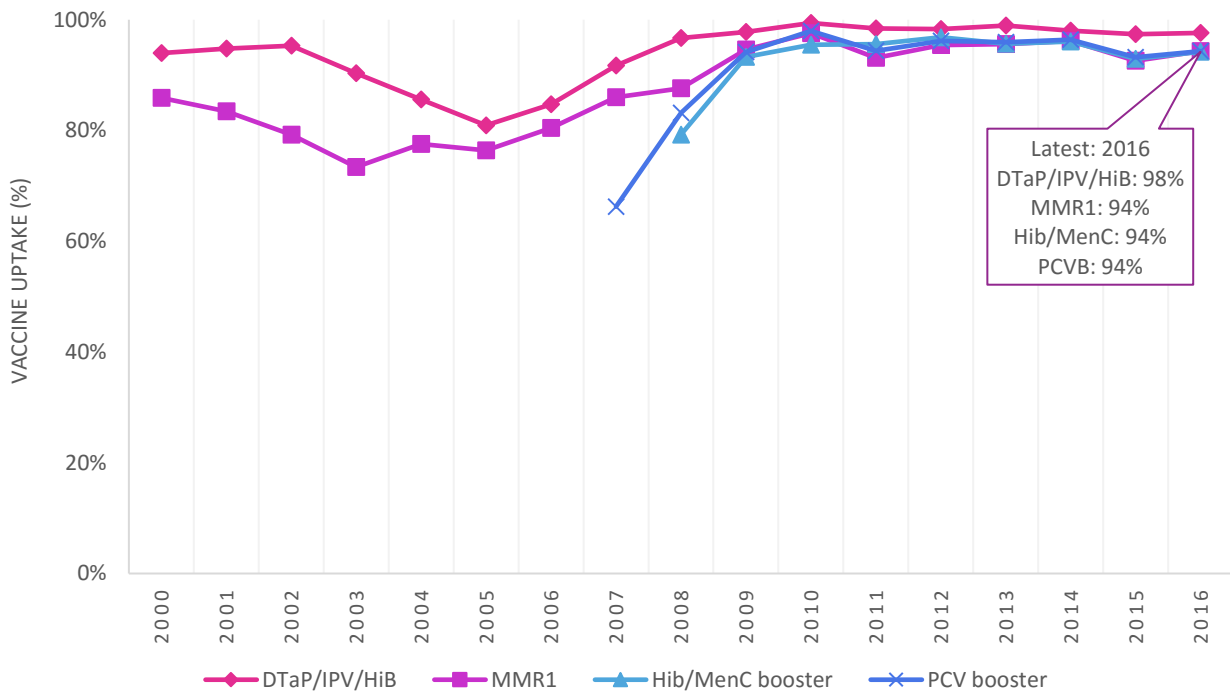
Figure 2 shows immunisation uptake rates by 24 months of age in Jersey since 2000.

As in England and Scotland, uptake rates of the first dose of MMR in Jersey fell in the late 1990s and early 2000s to a low of 73 per cent in 2003.³ Uptake rates have since been increasing and have exceeded 90 per cent in every year since 2009.

The Hib/MenC booster and PCV booster vaccines were introduced to the routine childhood immunisation schedule in 2006. Figure 2 shows that the uptake rates for Hib/MenC and PCV booster vaccines were lower when first introduced to the schedule and have since increased to over 90 per cent. A similar pattern was noted in England, Wales and Scotland.

³ Largely the result of issues of public confidence

Figure 2: Primary and booster immunisation uptake rates by 24 months of age, by calendar year



Source: Jersey CHIS

Table 2: Primary immunisation uptake rates by 24 months of age, by jurisdiction, percentage completed

	DTaP/IPV/Hib	MMR1	Hib/MenC	PCVB
Jersey (2016)	98	94	94	94
England (2016/17)	95	92	92	92
Wales (2016/2017)	97	95	95	95
Scotland (2016)	98	95	95	95

Source: Statistics Unit, PHE, Public Health Wales, ISD Scotland

- Key**
- DTaP/IPV/Hib The 5-in-1 vaccine (3 doses) which protects children against diphtheria, tetanus, pertussis, polio and Hib
 - MMR1 Measles, mumps and rubella vaccine (1 dose at 12 months of age)
 - Hib/MenC Hib/MenC booster (1 dose around 12 months of age)
 - PCVB Pneumococcal conjugate vaccine booster (1 dose around 12 months of age)

Annual uptake rates by five years of age

In 2016, uptake rates by 5 years of age for vaccines normally given around 3 years 4 months of age were:



89%
DTaP/IPV booster
(89% in 2015)



92%
MMR2
(91% in 2015)

Uptake rates by 5 years of age for vaccines normally given around 12 to 13 months of age were:



97%
MMR1
(97% in 2015)



94%
Hib/MenC booster*

**data for 2015 not directly comparable due to changes in the recording parameters in the CHIS*

From the age of 3 years 4 months, children are eligible to receive a booster dose of diphtheria, tetanus, pertussis and polio (given as one injection and sometimes referred to as the 4-in-1 booster) and a second dose of the MMR vaccine.

The uptake rate of one dose of MMR by five years of age remained at 97 per cent in 2016 and was above the target of 95 per cent. The latest uptake rates for the DTaP/IPV booster and the second dose of MMR vaccine remained at similar levels to the previous year, 2015. The uptake of the Hib/MenC booster by five years of age was 94 per cent, similar to the uptake rates in England and Wales (93 per cent) for the same period.

Table 3 shows the uptake rates by five years of age in Jersey since 2012. Prior to this date, those children whose parents had declined a vaccination had been excluded from the statistics, affecting the comparability of data.

Table 3: MMR1 and booster immunisation uptake rates by five years of age, by calendar year

	2012	2013	2014	2015	2016
MMR1	96	95	97	97	97
Hib/MenC	91	91	95	-	94
DTaP/IPV	93	93	93	89*	89*
MMR2	91	92	92	91	92

Source: Jersey CHIS

- 2015 data for Hib/MenC not directly comparable due to changes in recording parameters in the CHIS

* The decrease in DTaP/IPV was due to a processing change, which led to a number of children being immunised early and not counted in the numerator figures.

Comparison to the rates in England, Wales and Scotland are shown in Table 4.

Table 4: MMR1 and booster immunisation uptake rates by five years of age, by jurisdiction, percentage completed

	MMR1	Hib/MenC	DTaP/IPV	MMR2
Jersey (2016)	97	94	89	92
England (2016/17)	95	93	86	88
Wales (2016/17)	97	93	93	90
Scotland (2016)	97	96	93	93

Source: Statistics Unit, PHE, Public Health Wales, ISD Scotland

Key

MMR1 Measles, mumps and rubella vaccine (1 dose over 12 months)

DTaP/IPV Diphtheria, tetanus, acellular pertussis, polio vaccine (4th dose). In the UK this is given as a single injection (the 4-in-1 vaccine)

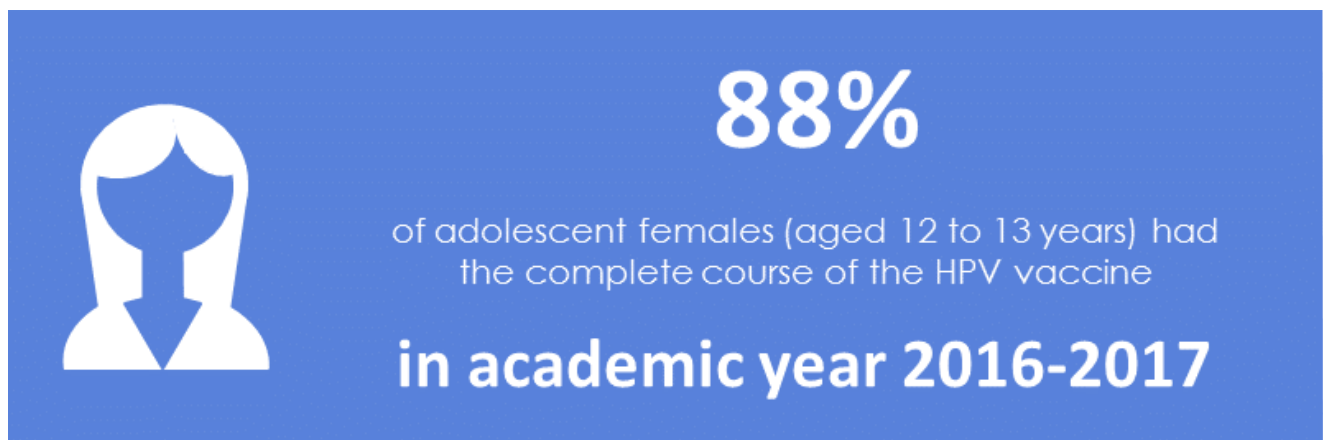
Hib/MenC Hib/MenC booster (1 dose around 12 months of age)

MMR2 Measles, mumps and rubella vaccine (2nd dose given at 3 years 4 months of age)

Teenage immunisations

Immunisations to teenagers are delivered in schools by school nurses. For this reason, data provided is for academic school years (1 September to 31 August).

Human Papillomavirus (HPV) vaccination for adolescent females

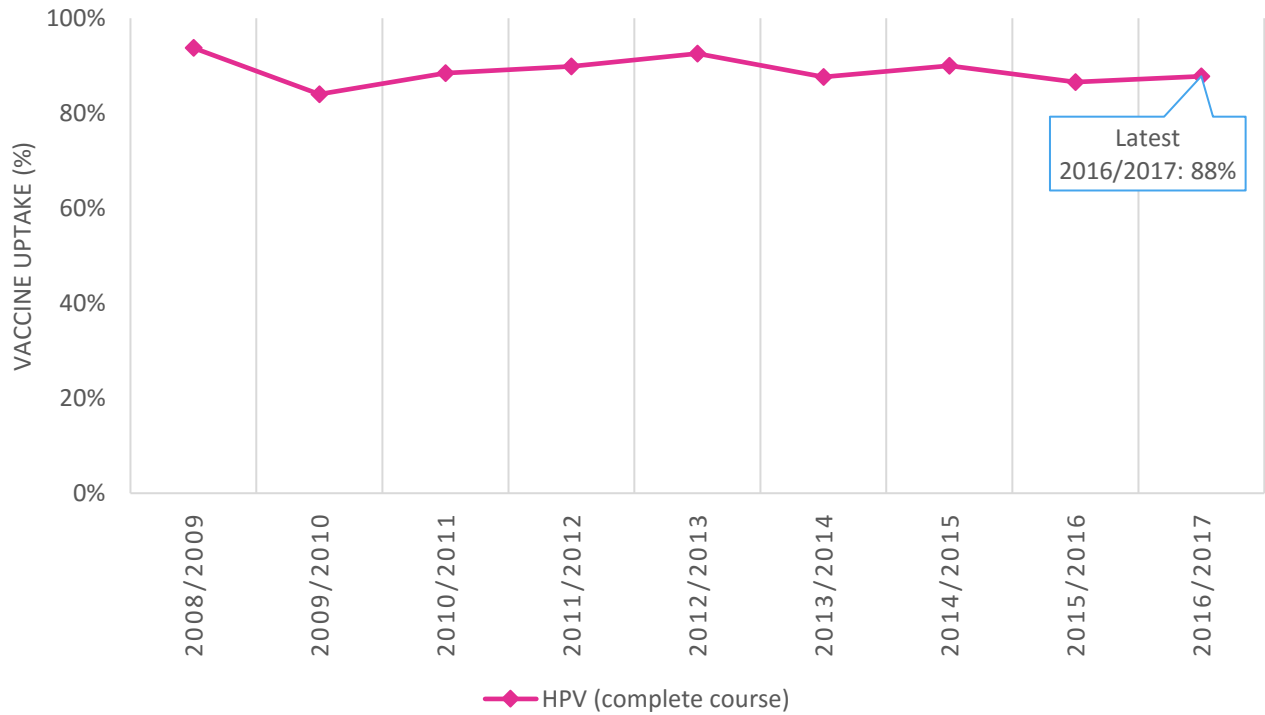


The Jersey human papillomavirus (HPV) immunisation programme was introduced in September 2008 as a school-delivered programme targeting school Year 8 females (aged 12 to 13 years) using a three-dose schedule. In March 2014, the JCVI advised changing the routine programme from a three to two-dose schedule; this was implemented in September 2014. In Jersey, Year 8 girls receive both doses in the same academic year.

In the academic year 2016-2017, 88 per cent of females in Year 8 received two doses of the HPV vaccine, completing the course. This latest figure is similar to the average uptake rate since the programme began in 2008 (89 per cent).

Figure 3 shows uptake rates for the complete course of the HPV vaccination since the vaccine was introduced into the Jersey immunisation schedule in 2008.

Figure 3: Annual HPV vaccine uptake rates, percentage completing course by academic year



Source: Jersey CHIS

Table 5: Annual HPV vaccine coverage for latest year published, by jurisdiction, percentage completed

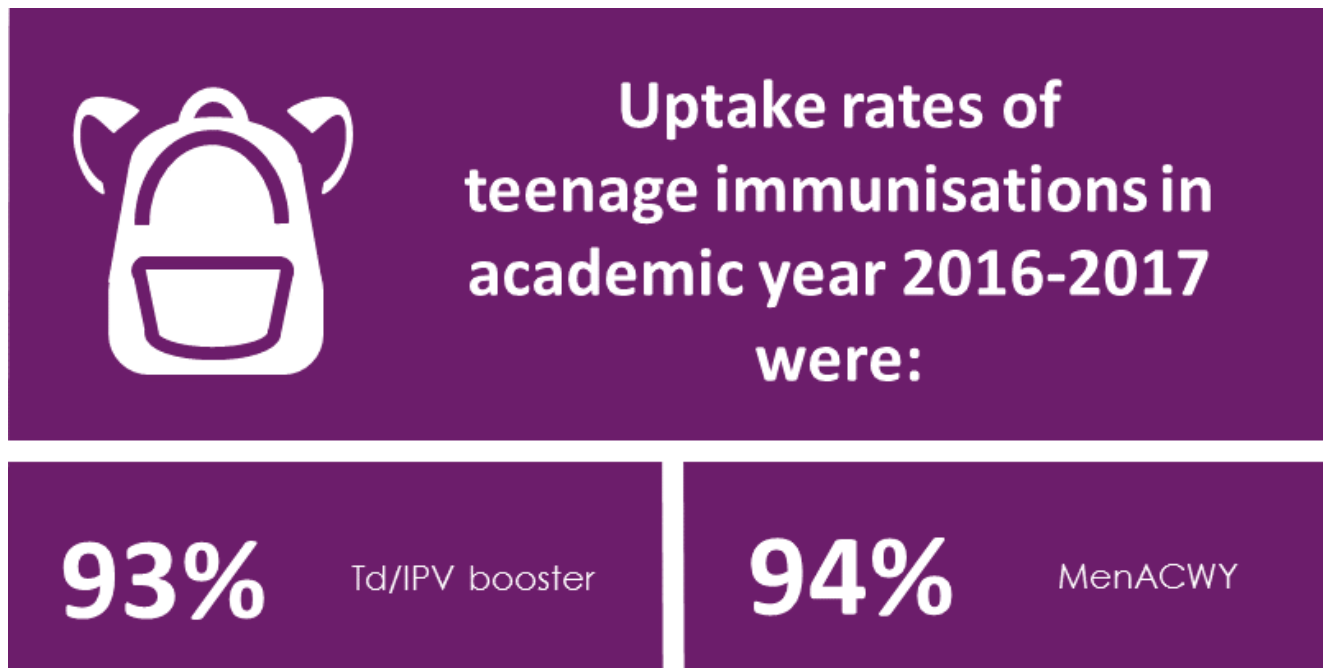
	HPV1	HPV2
Jersey (2016/17)	90	88
England (2015/16)*	87	85
Wales (2016/17)	87	86
Scotland (2015/16)**	93	83

* Figures for school year 2016/2017 not available at time of publication

**Scotland rates are for those delivered in S2 (12 to 13 years of age); however, since some areas administer vaccines in S1 or S3, this rate does not cover all areas of Scotland

Source: Statistics Unit, PHE, Public Health Wales, ISD Scotland

Teenage boosters

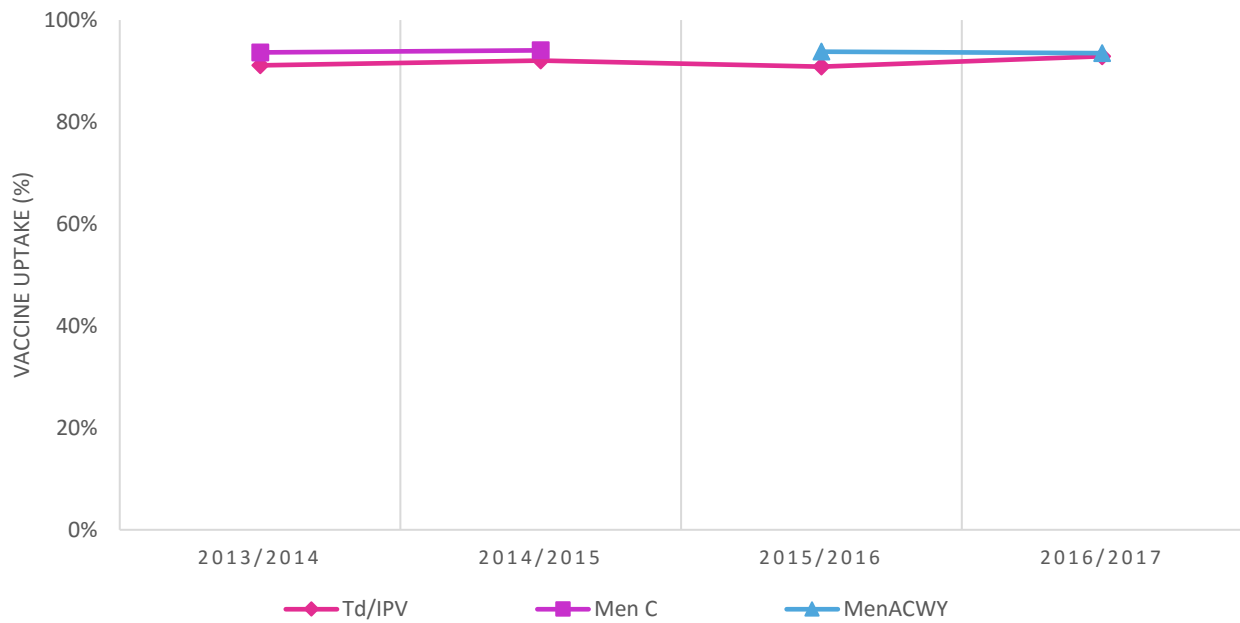


The Td/IPV booster immunisation completes the course of childhood vaccines, providing protection against tetanus, diphtheria and polio. In academic year 2016-2017, uptake rates for this vaccination were 93 per cent, and were higher than the latest figures published for England, Scotland and Wales (Table 6).

The teenage MenACWY vaccine provides protection against meningitis and septicaemia (blood poisoning) caused by four strains of meningococcal bacteria – meningococcal (Men) groups A, C, W and Y. The MenACWY vaccine replaced the MenC vaccine in the routine teenage booster immunisation programme from August 2015. For children in school Year 9 in 2016-2017, uptake of the MenACWY vaccine was at a similar level to the year before, school year 2015-2016, at 94 per cent, as shown in Table 6.⁴

⁴ The Td/IPV booster is administered at the same time as the MenACWY vaccination, and the number of individuals being vaccinated with each vaccine is usually the same. However, those individuals who missed having their pre-school booster dose of MenACWY are not included in the final numbers for the teenage booster. This is because this first dose is counted as their pre-school booster dose and these individuals will then need to have the equivalent of the teenage booster dose five years later (when they have left school) in order to be fully immunised.

Figure 4: Td/IPV, MenC and MenACWY uptake rates in Year 9 pupils, by academic year



Source: Jersey CHIS

Table 6: Td/IPV and MenACWY vaccine uptake rates by the end of the school year 2016-2017 or for latest year published, by jurisdiction, percentage completed

	Teenage Td/IPV booster	MenACWY
Jersey (2016-2017)	93	94
England (2015-2016)*	84	84
Wales (2016-2017)	83	80
Scotland (2015-2016)*	82	82

* Figures for school year 2016-2017 not available at time of publication

Source: Statistics Unit, PHE, Public Health Wales, ISD Scotland

Key

Td/IPV booster Tetanus, diphtheria and polio vaccine

MenACWY Meningococcal groups A, C, W and Y vaccine. This replaced the MenC vaccine from August 2015

Unscheduled childhood immunisations

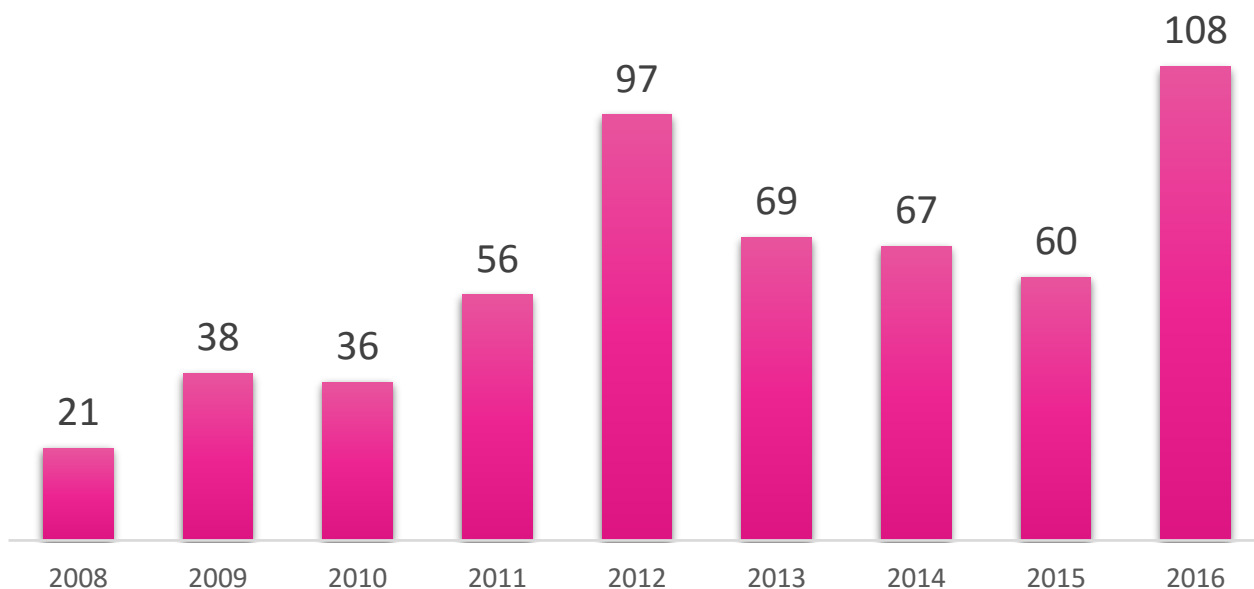
In addition to the routine immunisations shown in the immunisation schedule, there are two selective vaccination programmes which run in Jersey for those aged five or under, as shown in Table 7.

Table 7: Non-routine immunisations as of 2016

When to immunise	What vaccine is given
Shortly after birth	BCG (against tuberculosis)
At birth, 1, 2 and 12 months of age	Hepatitis B

The aim of the neonatal Bacillus Calmette-Guerin (BCG) vaccination programme is to protect babies who are deemed most at risk of exposure to Tuberculosis (TB) and help prevent the more serious childhood forms of the disease. Figure 5 shows the number of vaccines administered each year by the Immunisation Nurse Specialist.

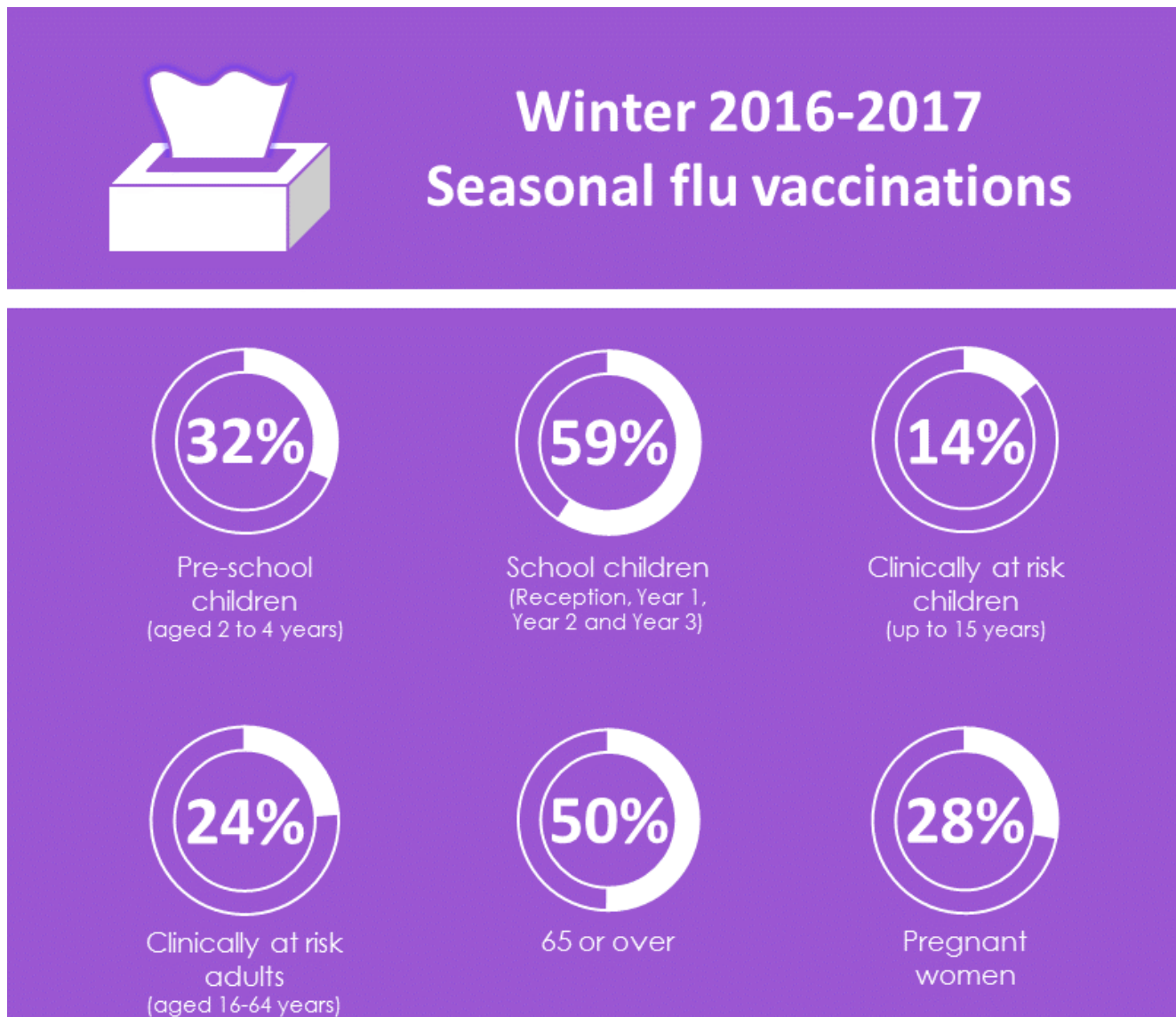
Figure 5: Annual number of BCG vaccinations administered to at risk babies, 2008-2016



Source: Health & Social Services Department Immunisation Nurse

In 2016, there were fewer than 10 infants born to Hepatitis B positive mothers who required vaccination.

Seasonal influenza vaccinations



During the 2016-2017 winter season, all GP practices in Jersey were asked to offer the influenza (seasonal flu) vaccine to all registered patients who fell into the following categories:

- all children aged 2, 3 and 4 years
- at risk school children not immunised at school, up to and including 15 years
- at risk 16 to 64 year olds
- all patients aged 65 or over
- all pregnant women

Coverage rates for the latest winter period are shown in Table 8 with comparison to the previous winter period, 2015-2016. Half of patients aged 65 or over registered with a GP received a seasonal flu vaccination, while around 1 in 3 pre-school children aged 2 to 4 years, 1 in 4 pregnant women and 1 in 4 of those deemed at clinical risk aged 16 to 64 also received a vaccination.

Table 8: Percentage of GP practice patients immunised against influenza, 2015-2016 and 2016-2017 winter periods

	2015-2016 Winter	2016-2017 Winter
<i>Children aged 2-4 years</i>	25	32
<i>At risk school children (up to & including 15 years)</i>	16	14
<i>At risk working age (16-64 years)</i>	26	24
<i>Adults aged 65 or over</i>	50	50
<i>Pregnant women</i>	28	28

Source: Statistics Unit

A nasal flu vaccine programme has been offered in schools since 2014-2015, when only Reception children were offered the vaccine. The programme extended the following year, 2015-2016, to include all children in Reception, Year 1 and Year 2, as part of a rolling programme aiming to gradually extend the offer of flu vaccination to all primary school children. The latest winter season, 2016-2017, saw the programme extended to all Year 3 children (Table 9). Comparable data for England published by PHE showed that 58 per cent of Year 1, 55 per cent of Year 2 and 53 per cent of Year 3 children were immunised in 2016-2017.

Table 9: Percentage of school children immunised against influenza, 2015-2016 and 2016-2017 winter periods

<i>School year group</i>	<i>2015-2016 Winter</i>	<i>2016-2017 Winter</i>
<i>Reception</i>	61	59
<i>Year 1</i>	57	57
<i>Year 2</i>	53	62
<i>Year 3</i>	-	54
<i>All</i>	57	59

Source: HSSD

- Seasonal flu vaccines not offered to these cohorts in 2015-2016; the programme was expanded the following year

Pertussis vaccinations for pregnant women



The prenatal pertussis vaccination programme aims to minimise disease, hospitalisation and deaths in young infants who are susceptible to pertussis (whooping cough) in the weeks and months before they have completed their own vaccinations (see Jersey Childhood Immunisation Schedule at the front of this report). The prenatal programme enables intra-uterine transfer of protective antibodies from mothers-to-be to baby.

The maternal programme was introduced in Jersey in 2015 and was offered to all pregnant women from 28 weeks of gestation in GP surgeries and in the Maternity Unit of the Hospital. The programme's eligibility criteria were further extended in April 2016 to include women from 16 weeks of gestation, following a recommendation by the JCVI in February 2016. The JCVI advised that vaccination could be offered from gestational week 16. For operational reasons the vaccination is offered from around 20 weeks, usually at or after the foetal anomaly scan.

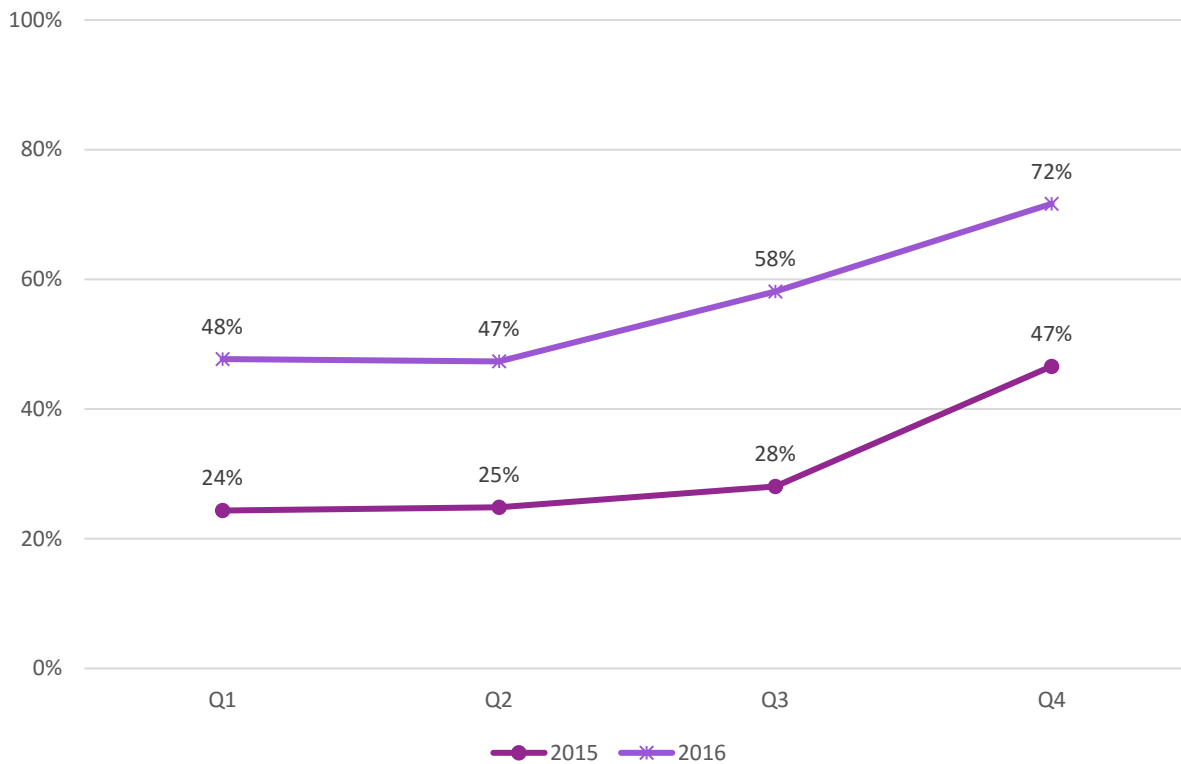
Further information on methods and data quality can be found in the background section of this report.

Since the implementation of the new recommendations, there has been an increase in vaccination coverage of pregnant women in Jersey, rising from an average of 48 per cent in the first three months of 2016 (January to March) to 72 per cent in the last quarter of the year (October to December). All four quarters in 2016 saw an increase on the corresponding period of 2015 when eligibility criteria were narrower (see Figure 6).

Table 10 compares figures from Jersey to those for England for comparable quarters. Both jurisdictions saw an increase in coverage of the vaccine throughout the year, with the quarterly coverage estimate for October to December 2016 similar in both jurisdictions, at around three-quarters of pregnant women.

Provisional data for the first quarter of 2017 shows that coverage in Jersey was 77 per cent; this is similar to coverage reported by Public Health England for the same period (74 per cent).

Figure 6: Quarterly pertussis vaccination coverage (percentage) in pregnant women in Jersey, 2015-2016



Source: Statistics Unit using data from GPCS

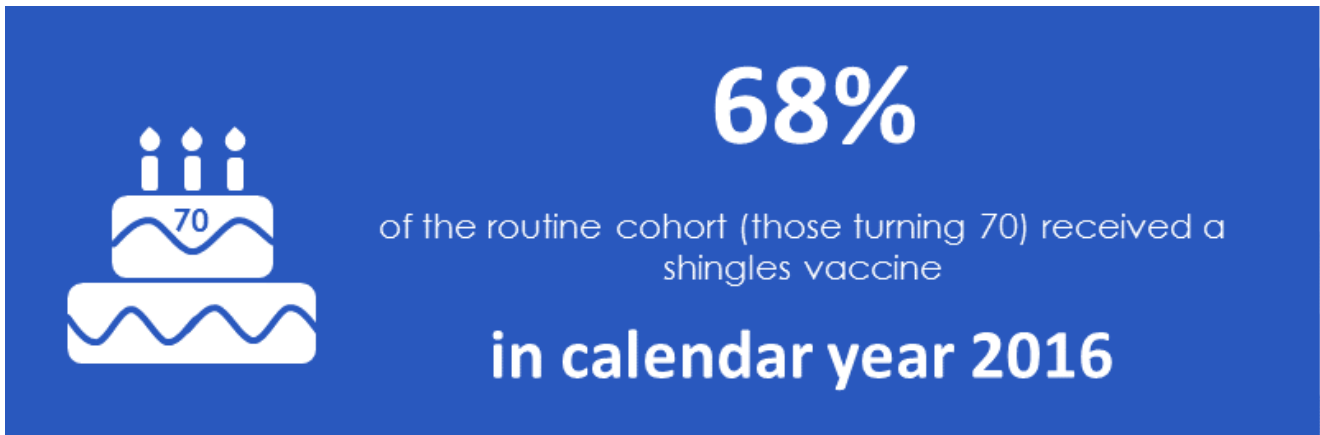
Table 10: Quarterly pertussis vaccination coverage (percentage) in pregnant women 2016, by jurisdiction

	Q1 2016 January to March	Q2 2016 April to June	Q3 2016 July to September	Q4 2016 October to December	Annual coverage estimate
Jersey (2016)	48	47	58	72	57
England (2016)	60	68	71	75*	69

Source: Statistics Unit, PHE

* based on monthly average data for October and December 2016, as November 2016 data was not complete and was not reported by PHE

Shingles vaccination



Shingles is caused by the reactivation of latent varicella zoster virus (VZV) infection, following a decline in cell mediated immunity; incidence is known to increase with age. In 2010, the JCVI recommended that a herpes zoster (shingles) vaccination programme be introduced for adults aged 70 years and a catch-up programme for those aged 71 to 79 years. The programme was introduced in Jersey in 2016, with adults born in 1946 invited by their GP as part of the routine programme and those adults born in 1937 (turning 79 in 2016) invited from September 2016 as part of the catch-up programme.

Shingles vaccination can be measured in two ways:

- **Vaccine coverage:** The proportion of those eligible who have ever received the vaccine
- **Vaccine uptake:** The proportion of those eligible who received their vaccine during the specified period (in this case calendar year 2016)

For further details on methods and data quality, see the background notes section of this report.

In the first year of the programme, 2016, almost 700 people born in 1946 and registered with a GP received the shingles vaccine, representing an uptake rate of 68 per cent of this cohort. Table 11 shows coverage figures as at October 2017 for Jersey.

England introduced a shingles vaccine programme in September 2013 and have now vaccinated three routine cohorts and three catch-up cohorts. The experience of the programme in England to date indicates that coverage in specific cohorts increases in the years following the year the cohort becomes eligible for vaccination.

Table 11: Shingles vaccine coverage (percentage), by jurisdiction and age cohort

	Routine 70 years	Catch-up cohort
Jersey (2016)	70*	64*
England (2015/16)	55	56
Scotland (2015/16)	54	51

* Coverage figures for Jersey recorded October 2017

Note: catch-up cohorts are for different age groups in each jurisdiction (1937 cohort in Jersey and 1938 in England and Scotland)

Source: Statistics Unit, PHE, ISD Scotland

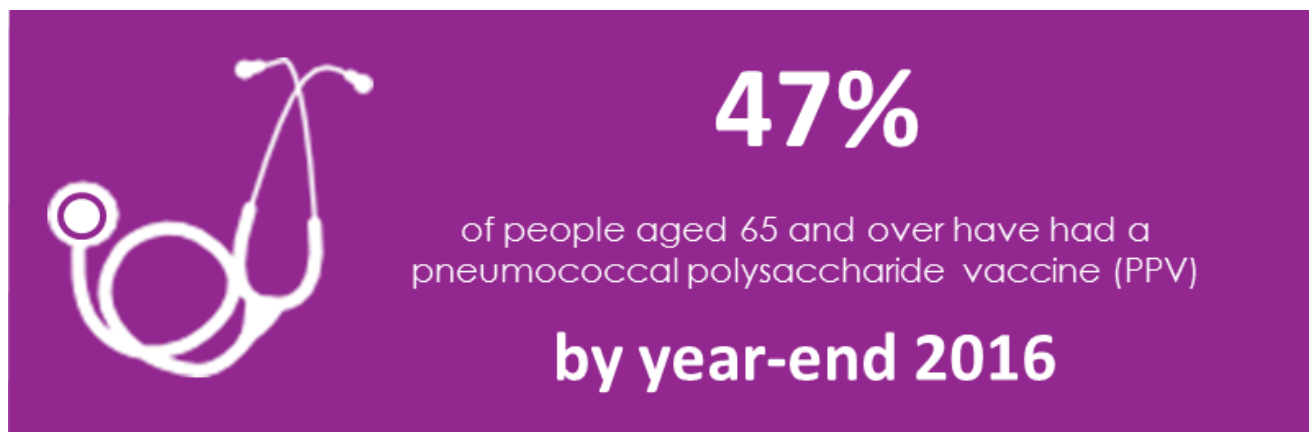
In 2016, an estimated 3 per cent of the routine and 5 per cent of the catch-up cohort fell into clinical risk groups in which shingles vaccine may be contraindicated.⁵

Among those eligible for the vaccine, 7 per cent of 70 year olds and 8 per cent of 79 year olds were recorded as having refused or declined the vaccine, a rate similar to that for England (6 per cent of the routine cohort and 7 per cent of the catch-up cohort).

Uptake and coverage in Jersey were found to be similar for males and females for both the routine cohort and catch-up cohort in 2016.

⁵ Contraindicated to receiving shingles vaccine – a patient undergoing medical treatment/taking medication which weakens their immune system to a degree that prohibits them receiving the shingles vaccination; this may be either temporary or permanent

Pneumococcal vaccination



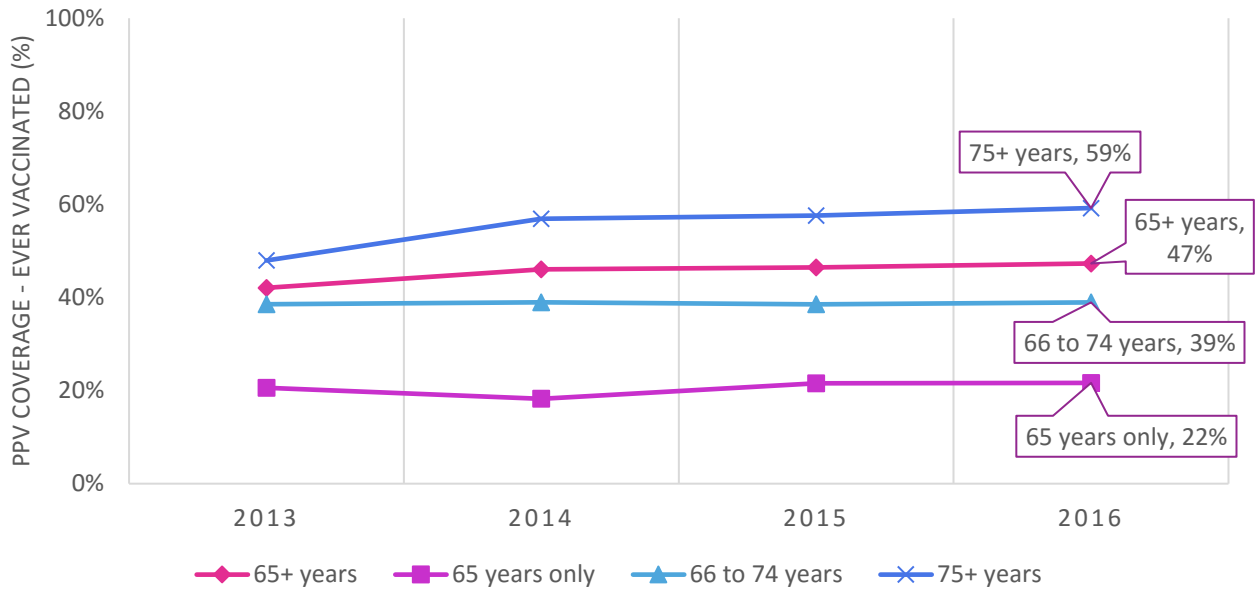
The pneumococcal polysaccharide vaccine (PPV) protects against serious and potentially fatal pneumococcal infections. A once-only single dose is recommended at age 65 and is offered by GP practices in Jersey.

The following definition is used in this report:

- **Vaccine coverage:** The proportion of those eligible who have ever received the vaccine
- **Vaccine uptake:** The proportion of those eligible who received their vaccine during the specified period (in this case calendar year 2016)

PPV coverage was 47 per cent in all patients aged 65 or over, immunised at any time up to 31 December 2016, and was 59 per cent for those aged 75 or over. A GP central server was introduced in 2013, since when information on PPV has been available; since then coverage in the 65 or over age group has remained essentially flat (Figure 7).

Figure 7: Percentage PPV coverage – ever vaccinated, by age group, calendar year 2013 to 2016



Source: Statistics Unit

Table 12 shows the comparison of Jersey coverage figures with those published by Public Health England for patients registered with GPs in England.

Table 12: Vaccination coverage for patients who received PPV anytime up to 31 December 2016 for Jersey patients and by 31 March 2017 for English patients (percentage), by age group

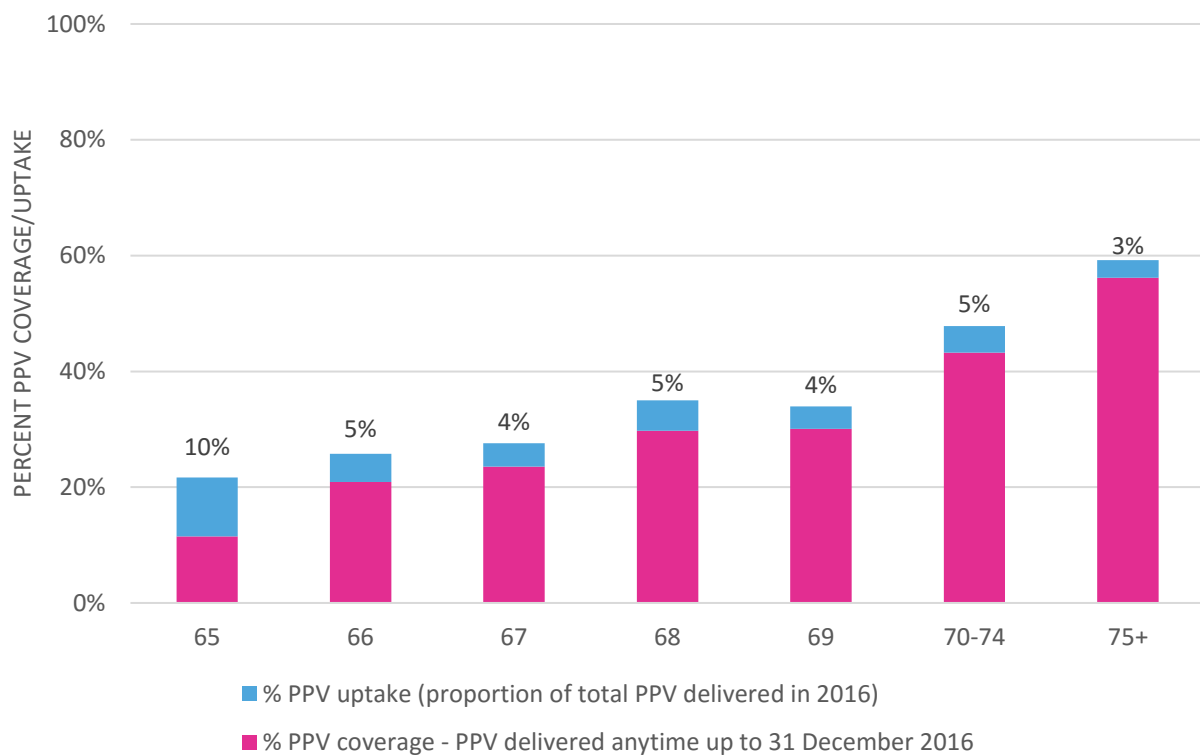
Age	Jersey (coverage to 31 Dec 2016)	England (coverage to 31 Mar 2017)
65	22	35
66	26	45
67	28	52
68	35	57
69	34	62
70-74	48	72
75 or over	59	82
Overall (Aged 65 or over)	47	70

Note: Jersey data presented for calendar year, English data presented for financial year

Source: Statistics Unit, PHE

In calendar year 2016, 4 per cent of those aged 65 or over received PPV, the same proportion as the previous year. In the 65 years only age group, uptake was 10 per cent in 2016, a similar level to the previous year (11 per cent). In addition, 12 per cent of patients in the 65 years only group had already received the vaccine at any time up to and including the 31 December 2016 as they were eligible prior to reaching 65 years of age due to inclusion in specific clinical risk groups. Data collected in 2016 shows that older age groups are still being vaccinated (Figure 8).

Figure 8: Percent patients receiving PPV (ever or in calendar year 2016), by age group



Source: Statistics Unit

Glossary

BCG	The BCG vaccine (Bacillus Calmette-Guérin vaccine) protects against tuberculosis (TB). TB is a serious infection which affects the lungs and sometimes other parts of the body, such as bones, joints and kidneys. It can also cause meningitis. The BCG vaccine is recommended for all babies up to one year of age who are born in areas where TB rates are high or have a parent or grandparent who was born in a country where there is a high rate.
CHIS	Jersey Child Health Information System
DIPHTHERIA	<p>Diphtheria is an acute infectious disease cause by the toxin-producing bacteria <i>Corynebacterium diphtheriae</i> or <i>Corynebacterium ulcerans</i> affecting the upper respiratory tract or skin. Diphtheria is spread by droplets and through contact with objects or materials contaminated by infected persons.</p> <p>An effective vaccine was introduced in 1940. A combined diphtheria, tetanus and pertussis vaccine has been in use in the UK since the 1950s. Since October 2005, diphtheria has been part of the combined '5-in-1' vaccine, consisting of diphtheria, tetanus, pertussis, polio and Hib. A booster dose is also given to children at around three years four months of age. Teenage Td/IPV booster vaccine, the reinforcing dose of diphtheria, tetanus and polio, is given around 14 years of age (in school Year 9).</p>
GPCS	General Practice Central Server
HIB (HAEMOPHILUS INFLUENZA TYPE B)	Hib (<i>Haemophilus influenzae</i> type b) is a bacterial infection that can cause a number of serious illnesses such as pneumonia, blood poisoning and meningitis, especially in young children.
HPV	Human papilloma virus (HPV) is the name of a family of viruses that affect the skin and the moist membranes that line the body, such as those in the cervix, anus, mouth and throat. Infection with some types of HPV can cause warts as well as abnormal tissue growth and other changes to cells, which can lead to cervical and other cancers.
HSSD	Health and Social Services Department
IMMUNISATION	The process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine. Vaccines stimulate the immune system to protect a person against subsequent infection or disease.
INFLUENZA (FLU)	Seasonal flu (also known as influenza) is a highly infectious illness caused by a flu virus. The virus infects the lungs and upper airways, causing a sudden high temperature and pains.
MEASLES, MUMPS AND RUBELLA (MMR)	<p>Measles is an acute viral illness spread by infected respiratory droplets. Symptoms, after a ten-day incubation, can include corzya, conjunctivitis, bronchitis, Koplik spots, rash and fever.</p> <p>Mumps is an acute viral illness characterised by swelling of the parotid glands, which may be unilateral or bilateral. It can cause permanent unilateral deafness at any age. Before vaccination, mumps was a common cause of viral meningitis.</p>

	<p>Rubella, or German measles, is a mild infectious disease. Maternal rubella infection in the first eight to ten weeks of pregnancy results in foetal damage in up to 90 per cent of infants.</p> <p>A vaccine against measles, mumps and rubella exists and since 1988 has been administered as the combined MMR vaccine.</p>
MENINGOCOCCAL GROUPS A, B, C, W AND Y (MENB, MENC AND MENACWY)	<p>The MenB, MenC and MenACWY vaccine protects against meningitis and septicaemia (blood poisoning) caused by specific strains of meningococcal bacteria – meningococcal (Men) group A, B, C, W and Y. These vaccines do not protect against meningitis caused by other bacteria or by viruses.</p> <p>The MenACWY vaccine replaced the MenC vaccine in the teenage booster immunisation programme from August 2015. The MenB vaccine was introduced into the routine childhood immunisation schedule in 2015.</p>
PERTUSSIS	<p>Pertussis, also known as whooping cough, is a highly contagious respiratory disease. It is caused by the bacterium <i>Bordetella pertussis</i>. Pertussis is known for uncontrollable, violent coughing which often makes it hard to breathe. After fits of many coughs, someone with pertussis often needs to take deep breaths which result in a "whooping" sound. Pertussis can affect people of all ages, but can be very serious, even deadly, for babies less than a year old.</p>
PHE	Public Health England
PNEUMOCOCCAL CONJUGATE VACCINE (PCV)	<p>Invasive pneumococcal disease (pneumonia, bacteraemia and meningitis), caused by infection with <i>Streptococcus pneumoniae</i> is a major cause of morbidity and mortality, especially amongst the very young, the elderly and those with impaired immunity. There are about 90 different types of pneumococci about a quarter of which cause serious illness. PCV (pneumococcal conjugate vaccine) provides some protection against one of the commonest causes of meningitis and also against other conditions such as severe ear infections (otitis media), and pneumonia caused by pneumococcal bacteria.</p>
PNEUMOCOCCAL POLYSACCHARIDE VACCINE (PPV)	<p>Pneumococcal disease can present as non-invasive or invasive infections caused by the bacterium <i>Streptococcus pneumoniae</i> (also called pneumococcus). Non-invasive disease includes middle ear infections (otitis media), sinusitis and bronchitis, whilst invasive pneumococcal disease includes septicaemia, pneumonia and meningitis. The PPV vaccine contains purified polysaccharide from 23 capsular pneumococcal types (PPV23). A pneumococcal immunisation programme for older adults was introduced in the UK in 2003.</p>
POLIO	<p>Polio, or poliomyelitis, is an acute illness caused by infection with any of the three types of poliovirus. Poliovirus invades the gastrointestinal tract and has an affinity for nervous tissue. Infection can lead to paralysis if the virus reaches the central nervous system. Routine immunisation was introduced in 1956. Since October 2005, polio is now part of the combined '5-in-1' vaccine, consisting of diphtheria, tetanus, pertussis, polio and Hib. A booster dose is also given to children at around three years four months of age. Teenage Td/IPV booster vaccine, the reinforcing dose of diphtheria (low dose), tetanus and polio, is given around 14 years of age (in school Year 9).</p>
ROTAVIRUS	<p>Rotavirus is a highly infectious virus that typically affects babies and young children, causing diarrhoea sometimes with vomiting, abdominal pain and fever.</p>

SHINGLES	Shingles is caused by the reactivation of a latent varicella zoster virus (VZV) infection and is typically characterised by a unilateral rash. The incidence and severity of shingles increase with age and an important complication is persistent pain extending beyond the rash, known as post herpetic neuralgia.
Td/IPV BOOSTER VACCINE	The Td/IPV booster vaccine completes the five-dose course that provides protection against tetanus, diphtheria, and polio (with Inactivated Polio Vaccine (IPV)). The vaccine is given around 14 years of age.
TETANUS	<p>A toxin released from a bacterium called <i>Clostridium tetani</i> causes tetanus. Spores from these bacteria are present in soil and manure. The spores can be picked up quite easily through minor scratches, puncture wounds, burns or more serious injury.</p> <p>An effective vaccine against the disease was introduced in 1961. Since October 2005, diphtheria has been part of the combined '5-in-1' vaccine, consisting of diphtheria, tetanus, pertussis, polio and Hib. A booster dose is also given to children at around three years four months of age. Teenage Td/IPV booster vaccine, the reinforcing dose of diphtheria, tetanus and polio, is given around 14 years of age (in school Year 9).</p>
TUBERCULOSIS (TB)	Tuberculosis is a bacterial infection. It is spread by inhaling tiny droplets of saliva from the coughs or sneezes of an infected person.

Background notes

Data Sources

The data for this report is derived from two computer systems accessed by the Statistics Unit:

- Jersey Child Health Information System (CHIS)
- GP Central Server (EMIS web)

Information about seasonal flu vaccinations given in school, as well as any unscheduled immunisations, are supplied by the Preventive Health team including the Immunisation Nurse Specialist.

Comparisons

Comparisons to other jurisdictions are presented in this report to enable benchmarking and comparison of trends. Data is extracted from published reports from Public Health England, NHS Digital, Public Health Wales and the Information Services Division Scotland. All data is referenced and the time periods are noted in the report sections.

Timeliness

This is the second report published by the Statistics Unit on immunisation statistics. The first report, published in January 2017, contained provisional data for 2016 alongside information on childhood vaccinations for school year 2015-2016. This latest report contains updated information for calendar year 2016 and for academic year 2016-2017 and is released shortly after Public Health England publish releases data for England which are used for comparative purposes in this report. Future editions of this report will be provisionally released in September each year containing the most recent full calendar year (some 9 months after the reporting period) and academic year (a month after the reporting period).

Methods

For children, the uptake rates are based on all children reaching a specified age who were alive and registered on the CHIS at the end of the reporting period.

For adults, the uptake and coverage rates are based on all adults of a specified age or who meet specific criteria who were alive and registered with a GP in Jersey at the end of the reporting period.

Details of the equations used to calculate uptake and coverage rates can be found in the Definitions section of this report.

Accuracy and reliability

The data is not a sample and it covers residents living in Jersey. The rates reported reflect immunisation uptake at particular points in time, based on the data recorded. Information for previous years and quarters remain unchanged in subsequent publications.

Data are recorded on CHIS for the primary purpose of facilitating the invitation of children for immunisation, therefore a high degree of accuracy of data recording is required. Data is monitored by the Child Health Team on a quarterly basis to ensure that uptake rates remain high and any additional chase up can occur while children are still of the correct age to receive any vaccinations they may have missed.

Data recorded on the GP central server is reliant on GPs and practice staff to accurately record activity happening in their individual practices. The Statistics Unit, through a data sharing agreement, is able to query the central server to allow statistical information to be monitored. This information is anonymised and as a result the data cannot be interrogated to look for errors or duplicates, therefore figures presented here should be treated with caution. The accuracy and reliability of this data is expected to improve as data is further shared and interrogated and as coding of the data improves.

The Head of Preventive Programmes, the Immunisation Nurse Specialist and the Child Health Team, who administer the data, have the opportunity to review the figures prior to publication, so that any issues affecting the reported rates can be highlighted to appropriate users.

All figures have been independently rounded to the nearest integer.

Data quality and completeness

Information on childhood immunisation coverage at ages one, two and five are collected through the Cover of Vaccination Evaluated Rapidly (COVER) data produced from the Child Health Information System. The system follows the same standards as that used in the UK.

A quality assurance process includes checks on data completeness, comparison to previous year data, comparisons to previous data for the same cohorts and investigation of any large changes.

The data quality and completeness of data extracted from the GP central server cannot be assured by the Statistics Unit; however where variation between GP practices is identified, this is fed back to individual surgeries for further checks. Figures are also compared to previous year figures; any large differences are investigated.

There are limitations to the data reported in this report for Pertussis vaccinations of pregnant women. Data completeness is reliant on the recording of delivery status in the mother's medical records and comparison of this data with that of birth registrations. The CHIS shows that in 2016, data was recorded for around 75 per cent of the population of pregnant women. Public Health England estimated that about 67 per cent of the population of pregnant women in England were represented in 2015.

Those women receiving specialist care through the Maternity Unit in the Jersey General Hospital could potentially have a pertussis vaccine delivered in this setting; such occurrences may not be captured by the GP reporting system.

The uptake of seasonal flu vaccinations for adults is likely to be an underestimate, since individuals who receive a seasonal flu vaccination provided at their place of work may not inform their GP practice.

Changes to the Jersey Immunisation Schedule

The childhood immunisation schedule changes periodically in line with advice from the UK expert advisory group, known as the Joint Committee for Vaccination and Immunisation (JCVI).

2016: On 1 July 2016, the infant dose of the MenC vaccine given at 12 weeks was removed from the routine schedule. Furthermore, the *Haemophilus influenzae* type b and meningococcal group C (Hib/MenC) vaccine offered after the first birthday is the first MenC dose in the schedule followed by MenACWY vaccine in school Year 9. The MenB booster dose at 12 months of age was given to children for the first time from May 2016. The nasal flu vaccine was extended to include children in school Year 3.

2015: MenB vaccine was added to the programme in September 2015, with a catch-up programme for children born from 1 May 2015. In addition, the MenACWY vaccine replaced the MenC vaccine at around 14 years of age. Nasal flu vaccine was extended to include children in school Years 1 and 2.

2014: The HPV schedule for 12-13-year-old girls (school Year 8) changed from three to two doses. Nasal flu vaccine was offered to children in primary school Reception classes.

2013: Rotavirus was added to the programme and the schedule for administering the MenC vaccine changed from two to one primary dose at 3 months.

Further details of the Jersey Immunisation Schedule can be found on the States of Jersey website www.gov.je

Contact details

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