



Infection report

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Pneumococcal Polysaccharide Vaccine (PPV) coverage report, England, April 2013 to March 2014

*Coverage of PPV in adults aged 65 years and over, vaccinated any time up to and including 31 March 2014, was 68.9%, compared with 69.1% in 2013. The proportion of adults aged 65 years receiving vaccine in the last 12 months was 13.7%, compared to 14.4% in 2013. **Almost a third (32.8%) of 65 year olds received the vaccine any time up to and including 31 March 2014.** For the first time coverage is presented here by NHS England Area Team, and individual Clinical Commissioning Group level data will also shortly be available.*

Introduction

Pneumococcal disease is a significant cause of morbidity and mortality. Certain groups, namely young children, the elderly and people who are in clinical risk groups, are at risk of severe pneumococcal disease.

In the UK, a pneumococcal immunisation programme for older people was introduced in August 2003 [1]. In the first year of the programme, all people aged 80 years or above were offered a single dose of Pneumococcal Polysaccharide Vaccine (PPV) and this was extended to include all people aged 75 years and over in April 2004. Since April 2005 all people aged 65 years and over have been offered the vaccine.

PPV contains purified capsular polysaccharide from each of 23 capsular types of pneumococcus (PPV23) [2]. Most healthy adults develop a good antibody response to a single dose of PPV by the third week following immunisation. (Children younger than two years of age show poor antibody responses to immunisation with PPV, hence pneumococcal conjugate vaccine [PCV] is used in the childhood immunisation programme.)

Public Health England (PHE) monitors coverage of the PPV immunisation programme through an annual survey administered via the ImmForm* website. The survey measures the proportion of those aged 65 and over who have received PPV at any time and the proportion who received PPV during the previous year, providing an opportunity to assess the delivery and evaluate the coverage of the immunisation programme.

The data presented in this report describe vaccine coverage for the ninth year of the PPV programme in adults aged 65 years and over. Data for previous years are available online [3].

* ImmForm is the system used by PHE to record vaccine coverage data for some immunisation programmes and to provide vaccine ordering facilities for the NHS (<https://www.immform.dh.gov.uk/SignIn.aspx?ReturnUrl=%2f>).

Methods

Annual PPV coverage data are automatically extracted from GP practice records to the ImmForm website, via GP IT suppliers. This is the first year that the submission of data for this programme has been completely automated. The 2014 survey opened to GP IT suppliers on the 1 April 2014 for submission of data. GP IT suppliers had 22 working days (inclusive) to submit data to end of April 2014. EMIS were only able to make a data submission on 18 August 2014 however due to the large number of submissions from this supplier, PHE agreed to accept this late submission.

Formal approval from the Review of Central Returns (ROCR) Steering Committee was obtained for the collection of this data from the NHS (under reference number ROCR/OR/0114/004VOLU.3).

The survey assessed the coverage of PPV (the number of patients registered on the date the data are extracted [denominator] and the number of patients registered who have received the pneumococcal vaccine [numerator]). These data were collected for the time period up to and including 31 March 2014 as well as within the previous 12 months only (ie between 1 April 2013 and 31 March 2014). The data are delineated by the following age bands:

- 65 years and over (overall)
- 65 years only
- 66 to 74 years
- 75 years and over

Previously data have been presented by Strategic Health Authority and Primary Care Trust. However in order to reflect the organisational change in the NHS which came into effect on 1 April 2013 [4], in this report we present data by NHS England Area Team. More detailed tables by Area Team and Clinical Commissioning Group (CCG) will shortly be available on the new GOV.UK website page "[Pneumococcal polysaccharide vaccine \(PPV\): vaccine coverage estimates](#)".

Results

In total 7,393/7,956 (92.9%) GP practices reported PPV coverage data in 2014, a slight increase on the 91.2% (7,313/8,021) of practices reporting in 2013. This proportion ranged by Area Team from 82.3% (Greater Manchester) to 99.4% (West Yorkshire).

PPV coverage for England in 2013/14 (table 1 and table 2) is in line with figures reported in preceding years (figures 1 and 2). The stable cumulative coverage of just under 70% observed in the 65+ years age group in the last five years results from; a gradual increase in coverage in the 75+ year olds, a gradual decline in coverage in the 66 to 74 years age groups, and stable coverage in the 65 year olds (figure 1).

Table 1. Percentage of GP practices reporting and vaccination coverage for patients who received PPV anytime up to 31 March 2014 by age group for each Area Team in England

Area Team (code)	% of GP practices reporting	Aged 65 and over	Aged 65 only	Aged 66 to 74	Aged 75+
Cheshire, Warrington and Wirral (Q44)	94.1	70.9	34.6	65.1	82.3
Durham, Darlington and Tees (Q45)	97.7	68.5	35.5	61.8	80.6
Greater Manchester (Q46)	82.3	68.0	33.2	62.3	79.7
Lancashire (Q47)	97.8	69.7	35.7	64.0	80.7
Merseyside (Q48)	83.0	71.7	39.4	67.4	80.7
Cumbria, Northumberland, Tyne and Wear (Q49)	90.5	72.3	37.3	66.5	83.4
N Yorkshire and Humber (Q50)	93.2	71.0	36.3	64.0	83.2
S Yorkshire and Bassetlaw (Q51)	92.6	70.7	37.0	64.5	82.2
W Yorkshire (Q52)	99.4	70.8	36.3	64.9	82.2
Arden, Herefordshire and Worcestershire (Q53)	94.4	69.8	34.2	63.5	81.7
Birmingham and Black Country (Q54)	93.5	66.1	30.2	58.9	77.6
Derbyshire and Notts. (Q55)	98.6	72.8	38.7	67.5	83.2
East Anglia (Q56)	94.2	70.4	35.6	63.8	82.1
Essex (Q57)	98.2	65.7	28.5	58.2	78.8
Hertfordshire and the S Midlands (Q58)	95.5	69.3	30.7	63.0	81.6
Leicestershire and Lincolnshire (Q59)	99.2	69.6	35.4	63.3	81.3
Shropshire and Staffordshire (Q60)	88.5	66.8	30.3	60.4	79.5
Bath, Gloucestershire, Swindon and Wiltshire (Q64)	96.4	69.7	31.8	62.8	82.1
Bristol, N Somerset, Somerset and S Gloucestershire (Q65)	95.6	69.8	32.1	63.1	81.7
Devon, Cornwall and Scilly Isles (Q66)	93.1	68.7	33.3	62.1	80.5
Kent and Medway (Q67)	84.3	69.3	28.5	63.8	81.2
Surrey and Sussex (Q68)	95.3	66.9	28.0	58.6	79.6
Thames Valley (Q69)	94.2	71.2	32.3	65.0	83.2
Wessex (Q70)	90.7	71.2	32.6	64.3	83.2
London (Q71)	92.6	63.6	27.0	56.4	76.2
England	92.9	68.9	32.8	62.4	80.8
England denominator	7,956	8,989,225	576,614	4,302,254	4,110,357

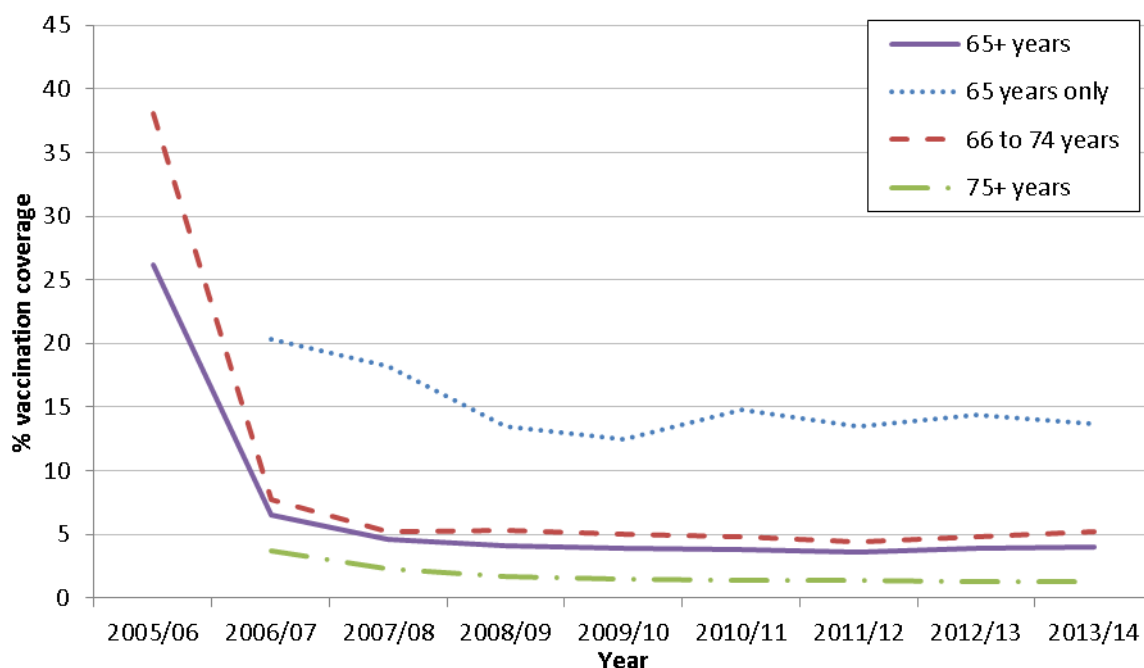
Table 2. Percentage of GP practices reporting and vaccination coverage for patients who received PPV between 1 April 2013 and 31 March 2014 by age group for each Area Team in England

Area Team (code)	% of GP practices reporting	Aged 65 and over	Aged 65 only	Aged 66 to 74	Aged 75+
Cheshire, Warrington and Wirral (Q44)	94.1	4.5	14.7	5.7	1.8
Durham, Darlington and Tees (Q45)	97.7	4.3	13.4	5.6	1.6
Greater Manchester (Q46)	82.3	3.9	10.6	5.0	1.7
Lancashire (Q47)	97.8	3.4	11.8	4.4	1.0
Merseyside (Q48)	83.0	4.2	14.8	5.3	1.5
Cumbria, Northumberland, Tyne and Wear (Q49)	90.5	4.0	14.4	5.3	1.1
N Yorkshire and Humber (Q50)	93.2	4.1	17.1	5.2	1.1
S Yorkshire and Bassetlaw (Q51)	92.6	3.8	13.5	5.0	1.1
W Yorkshire (Q52)	99.4	4.2	15.3	5.5	1.2
Arden, Herefordshire and Worcestershire (Q53)	94.4	4.4	15.9	5.8	1.3
Birmingham and Black Country (Q54)	93.5	3.4	9.1	4.7	1.5
Derbyshire and Notts. (Q55)	98.6	3.8	16.9	4.7	1.0
East Anglia (Q56)	94.2	4.4	18.7	5.6	1.2
Essex (Q57)	98.2	3.6	12.7	4.8	1.1
Hertfordshire and the S Midlands (Q58)	95.5	3.9	13.0	5.3	1.1
Leicestershire and Lincolnshire (Q59)	99.2	4.1	17.0	5.2	1.0
Shropshire and Staffordshire (Q60)	88.5	3.8	12.5	5.0	1.2
Bath, Gloucestershire, Swindon and Wiltshire (Q64)	96.4	4.1	14.4	5.3	1.4
Bristol, N Somerset, Somerset and S Gloucestershire (Q65)	95.6	3.6	13.8	4.8	0.9
Devon, Cornwall and Scilly Isles (Q66)	93.1	4.8	16.1	6.1	1.9
Kent and Medway (Q67)	84.3	3.7	11.7	5.0	1.1
Surrey and Sussex (Q68)	95.3	3.5	11.4	4.9	1.1
Thames Valley (Q69)	94.2	4.5	15.3	6.0	1.4
Wessex (Q70)	90.7	3.8	14.8	5.1	1.0
London (Q71)	92.6	3.9	9.5	5.2	1.7
England	92.9	4.0	13.7	5.2	1.3
England denominator	7,956	8,989,225	576,614	4,302,254	4,110,357

Figure 1. Percentage PPV coverage – ever vaccinated, by age group, England, 2005/06 to 2013/14



Figure 2. Percentage PPV coverage in the last 12 months, by age group, England, 2005/06 to 2013/14



The percentage of patients vaccinated in the previous 12 months has remained stable over the last five years. Almost a third (32.8%) of 65 years olds received the vaccine any time up to and including the 31 March 2014, however only 13.7% received the vaccine in the last 12 months. This is because a sizable proportion of these patients were eligible for the PPV vaccine before the age of 65 years due to their inclusion in specific clinical risk groups [2].

Coverage of PPV received anytime up to 31 March 2014 ranged by Area Team (table 1) from:

- 63.6% (London) to 72.8% (Derbyshire and Nottinghamshire) for 65 years and over
- 27.0% (London) to 39.4% (Merseyside) for 65 years only
- 56.4% (London) to 67.5% (Derbyshire and Nottinghamshire) for 66 to 74 years
- 76.2% (London) to 83.4% (Cumbria, Northumberland, Tyne and Wear) for 75 years and over.

Coverage of PPV received between 1 April 2013 and 31 March 2014 ranged by Area Team (table 2) from:

- 3.4% (Lancashire and Birmingham and the Black Country) to 4.8% (Devon, Cornwall and Isles of Scilly) for 65 years and over
- 9.1% (Birmingham and the Black Country) to 18.7% (East Anglia) for 65 years only
- 4.4% (Lancashire) to 6.1% (Devon, Cornwall and Isles of Scilly) for 66 to 74 years
- 0.9% (Bristol, North Somerset, Somerset and South Gloucestershire) to 1.9% (Devon, Cornwall and Isles of Scilly) for 75 years and over.

Data issues/limitations

Although one GP IT supplier provided data late, the 2014 survey was otherwise completed without any major problems; automated data extractions enabled data submission to take place with a minimal burden on service providers. The pneumococcal vaccine uptake collection is a snapshot of vaccine coverage among the eligible GP registered population at the time of data extraction. The data will therefore exclude patients who received the vaccine but have subsequently died and patients who have since moved. Patients who are vaccinated but have not had their electronic patient record updated by the time of data extraction, will also not be included. The data include patients who have been vaccinated by another healthcare provider (provided their electronic record is updated before the data are extracted). Vaccine uptake surveys provided by ImmForm are not designed to support GP payment schemes.

Discussion

This is the first year that the submission of data for this programme has been completely automated. Despite this, the proportion of GP practices participating in the PPV survey continues to be high, achieving levels over 90% for the third successive year.

The impact of the PPV programme on the incidence of vaccine-type invasive pneumococcal disease in patients aged 65 years and over has not been evident in surveillance data given the vaccine's modest effectiveness and its existing use in risk groups prior to the start of the programme in older adults [5]. However, there is evidence of individual protection against the serotypes covered by PPV23.

In the United States, as in the UK, PPV is offered to adults aged 65 years and over: in 2012 coverage in this age group (vaccinated any time up to survey point) was 59.9% [6], lower than the equivalent coverage (68.9%) in England.

The data presented in this report indicate that many of those eligible for PPV vaccination do not receive the vaccine in the first year that they become eligible. However, increasing vaccine coverage in the older age groups demonstrates that vaccination is being given opportunistically in primary care to those aged over 65 years.

PPV can be given at the same time as the seasonal influenza vaccine, which is also recommended for adults aged 65 years and over. Coverage of the seasonal influenza programme in this age group has been above 73% for the past three seasons [7] suggesting that at least similar coverage could be achieved for PPV, a one-off vaccine available throughout the year. A further opportunity for offering this vaccine is also now available for adults eligible for the shingles vaccine (currently offered to those who are 70 years old on the 1 September 2014, with a catch-up available for those aged 78 and 79 on 1 September 2014 [8]). The recent experience with the shingles programme has further demonstrated that is feasible to successfully deliver an additional vaccine, targeted to a specific age group, alongside the influenza programme.

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